South Eastern European Journal of Public Health

Special Volume 2015:

A Global Public Health Curriculum

1st Version (2015)

Edited by Ulrich Laaser and Florida Beluli

Jacobs Verlag

South Eastern European Journal of Public Health

Publisher
Dr. Hans Jacobs (Lage,Germany)

Editorial Office
Jacobs Verlag Hellweg 72 D 32791 Lage Germany
E-Mail: info@jacobs-verlag.de
Phone: 0049/5232/979043
Fax: 0049/05232/979045
Value added tax identification number/Umsatzsteueridentitätsnummer: DE 177 865481

Instructions to Authors
http://www.seejph.com/instructions-to-authors

Seejph

South Eastern European Journal of Public Health

www.seejph.com/

Special Volume 2015
Ulrich Laaser, Florida Beluli
Publisher: Jacobs/Germany
ISSN 2197-5248

Jacobs Verlag

ISSN 2197-5248
DOI 10.12908/SEEJPH-2014-54

Bibliographic information published by Die DeutscheBibliothek.

Die Deutsche Bibliothek lists this publication in the Deutsche Nationalbibliografie;detailed bibliographic data is available on the Internet at http://dnb.ddb.de

South Eastern European Journal of Public Health (Open AccessJournal)

TABLE OFCONTENTS

A Curriculum for Global Public Health: Introduction

Ulrich Laaser[1]

1) Association of Schools of Public Health in the European Region (ASPHER)
Section on Education for Global Public Health (SEGPH)
Working Group on Innovation and Good Practice in Public Health Education (WGIGP)

Corresponding author:
Prof. Dr. med. Ulrich Laaser DTM&H, MPH
Section of International Public Health (S-IPH)
Faculty of Health Sciences
University of Bielefeld
POB 10 01 31
D-33501 Bielefeld
E-mail: ulrich.laaser@uni-bielefeld.de; laaseru@gmail.com

A regionalized even fragmented world – as it was – is converging rapidly in our days at the beginning of the 21st century. Countries embark increasingly on global arrangements (like the World Trade Organisation) and a globalizing civil society – supported by mobile technologies - connects across borders. At the same time unprecedented waves of migration diversify the Northern societies and deplete the qualified workforce in the South. Social disruption, military conflict, and climate change create increasingly a 90/10 situation where 90% of the global disease burden affects the South but only 10% of the world‟s resources are available there. To really change this state of affairs we have to think new and to try new avenues (Panter-Brick et al. 2014).

Europe as a privileged region shares responsibility beyond its continental borders. In the ASPHER Charter (ASPHER 2013) on

> „The global dimension of education and training for public health in the 21st century in Europe and in the world‟ it is underlined that "The implementation of effective and sustainable interventions for health is a long-term endeavour where much depends on reliable global partnership, as noted in MDG 8. We, the Schools of Public Health in Europe, accept our global responsibility, which is guided by the two key principles of Solidarity and Subsidiarity. We act as part of the international community, focusing on education for practice and research to contribute to the global public goods

essential for health, the building block for our future...Both education and research are core composite parts in the development of globalization, with international students numbering 2.5 million globally and constituting 20.5% of the total enrolment of the European Schools of Public Health. Global health is an emerging topic of highest relevance in the academic public health curricula."

In conclusion a defined professional public health workforce with global experience and leadership qualification is required.

The ASPHER survey of Schools and Departments of Public Health (SDPH) in Europe (Bjegovic-Mikanovic et al. 2013) has shown that the subject of global health is taught already by 82% of SDPH with a median of 40 teaching hours per year. Details about the content of the respective modules, however, are not available. Therefore the Section on Education for Global Public Health took up the challenge to develop a standard module for Global Public Health, based on the experience of SDPH already teaching the subject The learning objectives have been defined as (1) to understand the concepts and the language of global health and be able to develop global partnerships to advance solutions for global public health challenges; (2) Acquisition of knowledge and skills needed to be part of high level public health management to implement and evaluate policies and strategies to improve health globally.

Based on recent publications (Bjegovic-Mikanovic et al. 2014; Laaser et al. 2014; Hobbs et al. 2011) the Section on Education for Global Public Health has embarked on developing a standard curriculum on Global Public Health (*appendix 1*). which should serve as a an inspiration and material source for the lecturers of Global Public Health primarily in the Master of Public Health Programmes in the SDPH in Europe and beyond.

References

ASPHER: The global dimension of education and training for public health in the 21st century in Europe and in the world. Charter of the Association of Schools of Public Health in the European Region (ASPHER) at the occasion of the 6th European Public Health Conference in Brussels, Belgium, November 13-16, 2013; at: www.aspher.org

Bjegovic-Mikanovic V, Vukovic D, Otok R, Czabanowska K, Laaser U. Education and training of public health professionals in the European Region: variation and convergence. Int J Public Health 2013;58/6:801-10; DOI: 10.1007/s00038-012-0425-2.

Bjegovic-Mikanovic V, Jovic-Vranes A, Czabanowska K, Otok R: Education for public health in Europe and its global outreach. Global Health Action 7/2014. Available at: http://www.globalhealthaction.net/index.php/gha/article/view/23570 (accessed 2 February 2015).
Hobbs S, Marstein E, Anderson S, Cockerill R. Development of a common curriculum core for doctoral training in health leadership: perspectives from an international collaboration. Work Based Learning e-Journal 2011;2/1: 303-17.
Laaser U, Brand H: Global Health in the 21st Century. Global Health Action 2014;7. Available at: http://www.globalhealthaction.net/index.php/gha/article/view/23694 (accessed 2 February 2015).
Panter-Brick C, Eggerman M, Tomlinson M. How might global health master deadly sins and strive for greater virtues. Global Health Action 2014;7. Available at: http://dx.doi.org/10.3402/gha.v7.23411 (accessed 2 February 2015).

Recommended literature

Forum for Public Health in Southeastern Europe; A Handbook for Teachers, Researchers and Health Professionals: Health: Systems – Lifestyle – Policies. Editors: Burazeri G, Zaletel Kragelj L; Assistant editor: Petrela K. Volume I, 2nd edition; Jacobs Publisher, Lage 2013, 455 p., ISBN: 978-3-89918-806-6; free of charge. See especially module 1.44 by Stikova et al. pp.435 ff.) at:
http://www.seejph.com/forum-for-public-health-in-southeastern-europe/

A Handbook for Teachers, Researchers and Health Professionals: Health Investigation: Analysis – Planning – Evaluation. Editors: Burazeri G and Zaletel Kragelj L; Assistant editors: Petrela K and Muja H. Volume II, 2nd edition; Jacobs Publisher: Lage 2013, 579 p., ISBN 978- 3-89918-807-3, free of charge. http://www.seejph.com/forum-for-public-health-in-southeastern-europe-vol-ii/:

Examples of teaching international and global public health:

http://www.lstmliverpool.ac.uk/learning--teaching/lstm-courses/msc,-pgdip,-pgcert/miph
www.europubhealth.org/index.php/en/423-globaldimensionseng
http://www.york.ac.uk/media/healthsciences/documents/student-intranet/module-descriptors/postgrad/pgglobal.pdf
https://globalhealth.duke.edu/education-and-training/graduate/master-of-science
www.smd.qmul.ac.uk/undergraduate/intercalated/globalpublichealth/index.html
www.dur.ac.uk/school.health/pg/taught/publicpolicyhealth/
http://www.fph.org.uk/media/search/learning+resources+for+international+&+global+health
http://sph.unc.edu/phlp/unc-gillings-global-online-masters-in-public-health/

Appendix:
Section on Education for Global Public Health (SEGPH): A framework for the curriculum on global public health.

ASSOCIATION OF SCHOOLS OF PUBLIC HEALTH IN THE EUROPEAN REGION (ASPHER)

Section on Education for Global Public Health (SEGPH)
Working Group on Innovation and Good-Practice in Public Health Education (WGIGP)

A FRAMEWORK FOR THE CURRICULUM ON GLOBAL PUBLIC HEALTH.

The Section on Education for Global Public Health (SEGPH) was established by the Executive Board of ASPHER subsequent to discussions during the European Public Health Conference in Brussels, November 2013. The charge was to take up the challenge of the "Charter on the global dimension of education and training for public health in the 21st century in Europe and in the world" (1).

Purpose

Public health is an increasingly relevant component of the globalizing world. Public and global health professionals have to be prepared for this paradigm (2). The ASPHER survey of Schools and Departments of Public Health (SDPH) in Europe (3) has shown that the subject of global health is taught already by 82% of SDPH with a median of 40 teaching hours per year. Details about the content of the respective modules, however, are not available.

Tasks

The main challenges for global public health have been outlined recently by Laaser & Brand (4). In the new ASPHER Strategic Plan 2016-2020 (to be adopted 2015 by the General Assembly) the SEGPH takes responsibility for the Strategic objective No. 4 (drafted as of May 2015):

The Section‟s first task will be to develop a standard curriculum for Global Public Health, based on the experience of SDPH already teaching the subject (5). The draft framework has been outlined according to Burazeri et al. (6a and b) below. In a second phase the modules will be piloted by several SDPH being members of ASPHER, assessed, and evaluated. In a third step the material will be adapted to Distance Learning, possibly as a MOOC.

Strategic objective 4: Developing the Global Dimension of Education and Training for Public Health Recognition of the global dimension of education and training for public health and leadership based on an agreed long-term strategy *(Charter of ASPHER, roadmap 2020, objectives 1 & 2)*	(4.1.) *Develop a **model curriculum on global health** at the MPH level and an adapted version for CPD, advocate and implement it as standard for all European schools of public health;* (4.2.) *Establish a **think tank on global and regional health governance** focusing on the implementation and evaluation of interventions, within the capacity of the membership network and in partnerships;* (4.3.) *Investigate the options for a **Global ASPHER Alumni Association** together with support of alumni's mobility.*

References

1) THE GLOBAL DIMENSION OF EDUCATION AND TRAINING FOR PUBLIC HEALTH IN THE 21ST CENTURY IN EUROPE AND IN THE WORLD. Charter of the Association of Schools of Public Health in the European Region (ASPHER) at the occasion of the 6th European Public Health Conference in Brussels, Belgium, November 13-16, 2013; at: www.aspher.org

2) Bjegovic-Mikanovic V, Jovic-Vranes A, Czabanowska K, Otok R: Education for public health in Europe and its global outreach. Global Health Action 7/2014 at: http://www.globalhealthaction.net/index.php/gha/issue/current

3) Bjegovic-Mikanovic V, Vukovic D, Otok R, Czabanowska K, Laaser U. Education and training of public health professionals in the European Region: variation and convergence. Int J Public Health November 2013; DOI: 10.1007/s00038-012-0425-2

4) Laaser U, Brand H: Global Health in the 21st Century. Global Health Action 7/2014 at: http://www.globalhealthaction.net/index.php/gha/issue/current

5) Hobbs S, Marstein E, Anderson, S. and Cockerill R. (2011): Development of a common curriculum core for doctoral training in health leadership: perspectives from an international collaboration. Work Based Learning e-Journal, 2, 1, 303-317

6a) Burazeri G, Mone I, Georgieva L, Laaser U (2013) Socio-economic factors – key determinants of health. In: Forum for Public Health in Southeastern Europe; A Handbook for Teachers, Researchers and Health Professionals: Health: Systems – Lifestyle – Policies. Editors: Burazeri G, Zaletel Kragelj L; Assistant editor: Petrela K. Volume I, 2nd edition; Jacobs Publisher, Lage 2013, 455 p., ISBN: 978-3-89918-806-6; free of charge. At: http://www.seejph.com/forum-for-public-health-in-southeastern-europe/: 392-397

6b) Kovacic L, Laaser U, Burazeri G, Zaletl-Kragelj L: Preface. In: Forum for Public Health in Southeastern Europe; A Handbook for Teachers, Researchers and Health Professionals: Health Investigation: Analysis – Planning – Evaluation. Editors: Burazeri G and Zaletel Kragelj L; Assistant editors: Petrela K and Muja H. Volume 1, 2nd edition; Jacobs Publisher: Lage 2013, 579 p., ISBN 978- 3-89918-807-3, free of charge. http://www.seejph.com/forum-for-public-health-in-southeastern-europe-vol-ii/:

Members(*) and authors
All professionals in the ASPHER community are welcome. Meetings take place online via Skype. A first call was sent out by the chair Ulrich Laaser (ulrich.laaser@uni-bielefeld.de) early in 2014.

Alam, Wasif M. (Dubai)* <malam@dha.gov.ae>
Aluttis, Christoph (The Netherlands)* <christoph.aluttis@maastrichtuniversity.nl>
Banoob, Samir (USA)* <sbanoob@aol.com>
Burazeri, Genc (Albania)* < gburazeri@yahoo.com>
Czabanowska, Katarzyna (Poland) < mxczaban@cyf-kr.edu.pl>
Djikanovic, Bosiljka (Serbia) < bosiljka_djikanovic@yahoo.com>
Gjorgjev, Dragan (FYR Macedonia) < dgjorgjev@gmail.com>
Grancharova, Gena (Bulgaria)* < gena_grancharova@hotmail.com>
Green, Manfred (Israel) * <manfred.s.green@gmail.com>
Haigh, Fiona (New Zealand) < ferniebabe@hotmail.com>
Hamdan, Motasem (Palestine)* < mhamdan@med.alquds.edu>
Havala Hobbs, Suzanne (USA)* <Havala@email.unc.edu>
Jankovic, Janko (Serbia) < drjankojankovic@yahoo.com>
Jasir, Aftab (ECDC)* <aftab.jasir@ecdc.europa.eu>
Kovacic, Luka (Croatia)* < lkovacic@snz.hr>
Laaser, Ulrich (Germany)* <ulrich.laaser@uni-bielefeld.de>
Lomazzi, Marta (Italy) < marta.lomazzi@libero.it>
Lueddeke, George (England) < glueddeke@aol.com>
Magana Valladares, Laura (Mexico)* <lmagana@insp.mx>
Malik, Muzzaffar (England)* < muzaffarmalik@me.com>
Marstein, Egil (Norway)* <egil.marstein@bi.no>
Miron, Ehud (Israel) < ehudmi1@yahoo.com>
Martin-Moreno, Jose (Spain) < dr.martinmoreno@gmail.com>
Nikolic, Zeljka (Serbia) < zeljkanikolic1985@yahoo.com>
Nurse, Joanna (England) < Joanna.Nurse@phe.gov.uk>
Otok, Robert (ASPHER)* <robert.otok@aspher.org>
Potter, Christopher (United Kingdom)* <cpotter999@aol.com>
Rohin, Rameswarapu (India)* <Dr.rohin.r@gmail.com>
Santric-Milicevic, Milena (Serbia) < msantric@med.bg.ac.rs>
Schroeder-Baeck, Peter (Netherlands) < peter.schroder@maastrichtuniversity.nl>
Senkubuge, Flavia (South Africa)* <fsenkubuge@gmail.com>
Stikova, Elisaveta (FYR Macedonia)* <estikova@ukim.edu.mk>
Surjadi, Charles (Indonesia)* <kotasehat@hotmail.com>
Terzic, Zorica (Serbia) < zoricaterzic37@gmail.com>
Tozija, Fimka (FYR Macedonia)* <ftozija@mt.net.mk>
Wenzel, Helmut (Germany) < HKWen@aol.com>

Modular framework

Title:	**N 1.1 GLOBAL PUBLIC HEALTH**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Section of Education for Global Public Health
Address for correspondence	ASPHER Office, Brussels
Key words	Global health challenges, essential public health functions and operations, governance, leadership, ways forward
Topics	Since the end of the 1990s, globalization has become a common term, facilitated by the social media of today and the growing public awareness of life-threatening problems common to all, such as global warming, global security, and global divides. For the main parameters of health like the Burden of Disease, Life Expectancy and Healthy Life Expectancy, extreme discrepancies are observed across the world. A globally accepted terminology of basic public health functions is essential for global health partnerships where global governance structures are growing including the civil society. In order to manage and guide this process a defined professional public health workforce with global experience
Learning objectives	Understand the concepts and the language of global health and be able to develop global partnerships to advance solutions for global public health challenges; Acquisition of knowledge and skills needed to be part of high level management to implement and evaluate policies and strategies to improve health globally;
Teaching methods	Lectures, interactive small group discussions, case studies, and international field practice
Who should apply	Those who pursue an international career in public health management, policy development, research or advocacy; entrance requirements are to be determined by the institution offering the modules
Career opportunities	Teaching and/or research careers in academic environments; leadership positions in the health care sector, policy makers, private industry and Non-Governmental Organisations; free lance consulting
Assessment of students	Test and case problem presentations as well as field visit
Assessment by students	Questionnaire on the evaluation of the module taught (see appendix below)
COMMENTS on the module by lecturers and students	Please comment:

Structure of the Curriculum on Global Public Health

1.0 Background

Introduction

Definitions of Global Public Health

2.0 Global health challenges

Demographic challenges
Burden of disease
Environmental health and climate change
Global migration and migrant health
Social determinants of health and health disparities
Gender and health
Structural and social violence
Disaster preparedness
Millennium Development Goals

Global financial crisis and health

3.0 Governance of global public health

Structures of global governance
Programme management

Informatics in global public health (follows later)

Role of the civil society
Universal health coverage

Leadership in global health

Global health ethics
The global public health workforce
Education and training of professionals for global public health

Blended learning technologies
Global health law
Human rights and health
International financial management structures
Global public health functions

Going global

- Evaluate the impact of globalisation on health locally
- Explore and analyse the reactivity of local/regional governance on the impact of globalisation
- Analyse the status of local/regional/transnational collaboration between stakeholders
- Suggest operational solutions for identified deficits and evidence based interventions

References

For the time being the way of citation is left to the authors of modules in order to facilitate their work. In a final phase of development the citations will be adapted to the Instructions to Authors of the South Eastern Journal of Public Health (SEEJPH).

Proposed Questionnaire on the evaluation of the module taught:

Module:	**...insert name of module...**	**Evaluation (1-5; 5=best)**
Lecturers:	...insert names of lecturers	
Lecturer 1	N.N.	
Lecturer 2 ...	N.N.	
Relevance of module content	-/-	
Quality of module content	-/-	
Active involvement of students		
Usefulness of supporting material	-/-	
Overall evaluation	-/-	

Title:	**N 1.2 GLOBAL PUBLIC HEALTH: DEFINITIONS, FUNCTIONS, AND SERVICES**
Module information	This module may be organized for appr. 2 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 20 contact hours and up to 40 hours assigned to voluntary work, excluding a field visit and report.
Authors	Joanna Nurse
Address for correspondence	Dr. Johanna Nurse Health and Education Unit The Commonwealth Secretariat London, United Kingdom E-mail: Jonurse66@hotmail.com
Key words	Global health challenges, essential public health functions, operations and services, public health definitions, governance, prevention, promotion, protection, workforce
Topics	This module will context setting and act as an introduction to the wider public health challenges and the need to modernise public health functions and services to respond to these challenges. It will have taught sessions on the following areas: 1. The Public Health Challenges - current and future – an overview 2. Public Health Definitions and concepts 3. An introduction to the Global Framework for Public Health Functions and Services (GPHFS), followed by sessions on the different components of the framework: 4. Governance*:* public health legislation; policy; strategy; financing; organisation; quality assurance: transparency, accountability and audit. 5. Information*:* surveillance, monitoring and evaluation; research and evidence; risk and innovation; dissemination and uptake. 6. Protection: IHR and co-ordination; communicable disease control; emergency preparedness; environmental health; climate change and sustainability. 7. Prevention*:* primary prevention: vaccination; secondary prevention: screening; tertiary prevention: evidence-based, integrated, person-centred quality health-care and rehabilitation; healthcare management and planning. 8. Promotion*:* inequalities; environmental determinants; social and economic determinants; resilience; behaviour and health literacy; life-course; healthy settings. 9. Advocacy*:* leadership and ethics; social-mobilisation and solidarity - *people-centred approach*, *voluntary community sector engagement*; communications; sustainable development. 10. Capacity*:* workforce development for public health, health workers and wider workforce; workforce planning: numbers, resources, infrastructure; standards, curriculum, accreditation; capabilities, teaching and training.
Learning objectives	• Understand the changing Public Health Challenges we face and the need to modernize PH functions and services • Knowledge of a range of public health definitions and their relative advantages • Understanding of the range of regional and country level public health operations and functions • Knowledge of the development of a global framework for public health • Understanding of the main components of the global framework for public health.

Teaching methods	Lectures, interactive small group discussions, case studies, project work and the potential for international field practice
Who should apply	Those who pursue an international career in public health management, policy development, research or advocacy; entrance requirements are to be determined by the institution offering the modules
Career opportunities	Teaching and/or research careers in academic environments; leadership positions in the health care sector, policy makers, private industry and Non-Governmental Organisations; free lance consulting
Assessment of students	Project report and case problem presentations
COMMENTS on the module by lecturers and students	Please comment:

Global public health: definitions and challenges

Global Challenges and the context for developing a Global Framework for Public Health

The Ebola outbreak demonstrates the need to have robust public health systems in place globally and within each country (Martin-Moreno et al. 2014). However, the current reality consists of fragmented, variable and incomplete public health functions and services, with little common understanding of what a good public health service looks like.

This is within the context of old and new threats to global health security, and wider public health challenges, including inequalities and a demographic and disease shift towards non-communicable diseases. These pressures act to increase costs and demand which threaten the sustainability of health systems as well as social and economic development, including the Sustainable Development Goals (United Nations 2015).

However, currently there is no global agreement on what public health functions or services consist of, and the lack of a common vocabulary in public health adversely affects the efforts of public health systems, including security and workforce development and quality standards across the world. A Framework for Global Public Health Functions and Services (GPHFS) has the potential of becoming an established, widely accepted vocabulary that would allow public health systems to communicate globally, compare capacity and improve performance through systematic action. Adoption of a GPHFS can contribute to strengthening global health security, the sustainability of health systems, including the implementation of Universal Health Coverage and contribute to the wider post 2015 Sustainable Development Goals.

A Taskforce on Global Public Health Functions and Services met the first time in Kolkata at the occasion of the 14th World Congress on Public Health in 2015 to develop a global understanding and framework for strengthening public health functions in order to advance modern public health services able to respond to the complex range of challenges, inequalities, conflict and health security issues we face today and into the future. It builds upon existing country and regional level public health functions and operations, including those from the Pan American Health Organisation (PAHO 2012) and the Regional Office for Europe (WHO EURO 2012), the USA (ASPH 2015; CDC 2015), UK (The Faculty of Public Health (2004), Australia (South Australian Public Health Act 2013), Canada (Public Health Agency of Canada 2007), and the Public Health Foundation (Public Health Foundation 2015) with a summarising comparison of the main systems in Laaser & Brand 2014). The

framework aims to bring together the best of all the existing models and provide a comprehensive, clear and flexible system that can be applied globally and within individual countries, whether low, middle or high- income[1]. An important aspect of this framework is the development of a common set of terms and an agreed definition for public health, as well as an agreed language to describe public health functions and services.

Objectives of the Framework

1. To advance adoption of a globally recognised set of Public Health functions and definitions.

2. To develop a flexible framework and tools that can be applied to different countries and settings to strengthen public health services and functions, including for assessment, planning, training, evaluation and accreditation.

3. To strengthen public health systems to improve global health security and to achieve sustainable and fair health outcomes, including the implementation of Universal Health Coverage.

4. To support wider economic growth and the post 2015 Sustainable Development Goals.

5. To strengthen leadership and governance, scale up public heath capacity building, standardise assessment and improve quality of public health services.

A definition has been developed to reflect the seven main areas in the framework and to provide clarity of the term public health and facilitate its communication and understanding, as well as aiding advocacy for the global framework for public health. The proposed definition is described below:

The present range of public health definitions (selected examples)

The framework and the definition build upon existing approaches. There are numerous definitions for public health; some are more high level, whilst others are more descriptive. The module describes a range of definitions (Marks et al, 2011) and explores the relative advantages of each definition:

Public health is the science and art of preventing disease, prolonging life and promoting health through the organized efforts of society as formulated by Sir Donald Acheson in 1988 and adopted by the World Health Organisation (e.g. WHO EURO 2012).

Public health is an organized effort by society, primarily through its public institutions, to improve, promote, protect and restore the health of the population through collective action (PAHO 2012).

Public health refers to all organized measures (whether public or private) to prevent disease, promote health, and prolong life among the population as a whole. Its activities aim to provide conditions in which people can be healthy and focus on entire populations, not on individual patients or diseases. Thus, public health is concerned with the total system and not only the eradication of a particular disease (WHO HQ 2011).

Public health is based on social justice and fairness for all, and its focus is on the collective actions of interdependent and empowered peoples and their communities. Its objectives are to protect and promote health and wellbeing, to prevent disease and disability, to eliminate

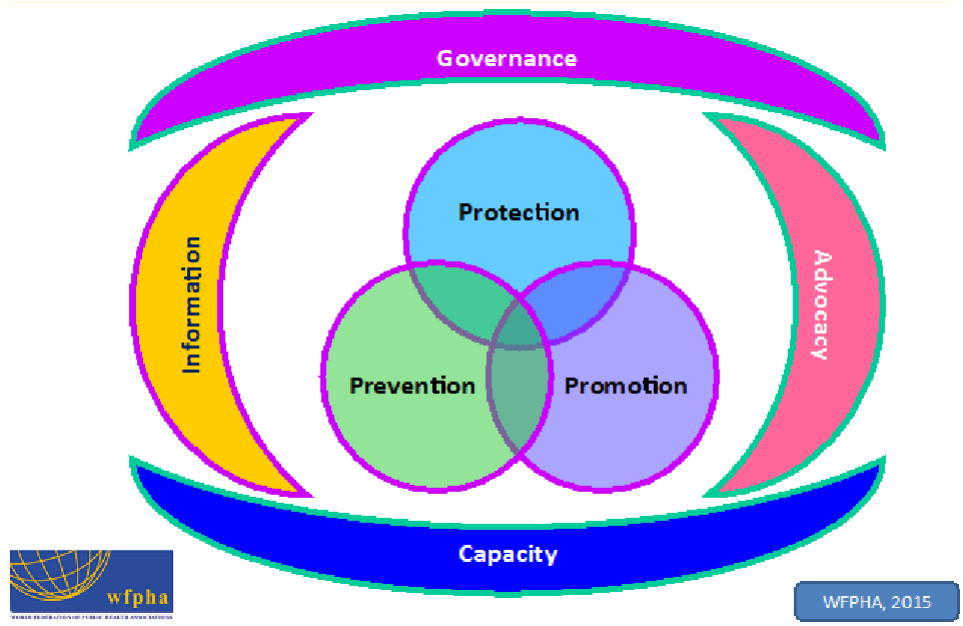
[1] For the historical development of Global Public Health Functions and Services see module NR 3.14.

conditions that harm health and wellbeing and to foster resilience and adaptation Horton et al. 2014).

Public health programs and services labelled "public health" have a focus on the determinants of health and the systematic management of these determinants (National Public Health Partnership 2000).

Public health may involve a combination of policies, programs an d safeguards designed - (a) to protect, maintain or promote the health of the community at large, including where 1 or more persons may be the focus of any safeguards, action or response; or (b) to prevent or reduce the incidence of disease, injury or disability within the community (South Australian Public Health Act 2013).

Figure: The key components proposed for the GPHFS consist of the following seven areas (WFPHA 2016)



Headings for the GPHFS
(blue: Enablers; violet: Services)

1. Governance: public health legislation; policy; strategy; financing; organisation; quality assurance: transparency, accountability and audit.
2. Information: surveillance, monitoring and evaluation; research and evidence; risk and innovation; dissemination and uptake.
3. Protection: IHR and co-ordination; communicable disease control; emergency preparedness; environmental health; climate change and sustainability.
4. Prevention: primary prevention: vaccination; secondary prevention: screening; tertiary prevention: evidence-based, integrated, person-centred quality health-care and rehabilitation; healthcare management and planning.
5. Promotion: inequalities; environmental determinants; social and economic determinants; resilience; behaviour and health literacy; life-course; healthy settings.

6. Advocacy: leadership and ethics; social-mobilisation and solidarity - people-centred approach, voluntary community sector engagement; communications; sustainable development.
7. Capacity: workforce development for public health, health workers and wider workforce; workforce planning: numbers, resources, infrastructure; standards, curriculum, accreditation; capabilities, teaching and training.

Finally the valid European list of competences to perform public health functions has been published in the context of the Association of Schools of Public Health in the European Region (Birt & Foldspang 2011).

References:

Association of Schools of Public Health (ASPH, US) (2015) Competencies to Curriculum Toolkit: integrates core and discipline-specific competencies. Available at: http://www.asph.org/userfiles/Competency-to-Curriculum-Toolkit08.pdf (accessed 6 February 2015).

Birt C, Foldspang A. ASPHER's European Public Health Core Competences Programme. Volumes 5 and 6. ASPHER 2011. Available at: http://www.aspher.org/repository/#1 (accessed 6 February 2015).

Center for Disease Control and Prevention (CDC) National Public Health Performance Standards. Available at: www.cdc.gov/od/ocphp/nphpsp (accessed 6 February 2015).

Horton R, Beaglehole R, Bonita R, Raeburn J, McKee M, Wall S. From public to planetary health: a manifesto. The Lancet 2014; 383:847.

Laaser U, Brand H: Global Health in the 21st century. Global Health Action 7 (2014). Available at: http://www.globalhealthaction.net/index.php/gha/article/view/23694 (accessed 6 February 2015).

Marks L, Hunter D, Alderslade R. Strengthening Public Health Capacity and Services in Europe. Copenhagen: WHO Regional Office for Europe; Durham University: A Concept Paper, 2011. Available at: http://www.who.int/workforcealliance/knowledge/resources/Health2020_policy.pdf (accessed 6 February 2015).

Martin-Moreno J, Ricciardi W, Bjegovic-Mikanovic V, Maguire P, McKee M on behalf of 44 signatories: Ebola: an open letter to European governments. The Lancet 384/9950; 2014: 1259; doi:10.1016/S0140-6736(14)61611-1. Available at: http://www.thelancet.com/journals/laninf/article/PIIS0140-6736%2814%2961611-1/fulltext (accessed 6 February 2015).

National Public Health Partnership (2000) A planning framework for public health practice. Available at: http://www.nphp.gov.au/publications/phpractice/planfrwk.pdf (accessed 6 February 2015).

PAHO (2012) Health systems strengthening: Essential Public Health Functions - what are the EPHF? Washington DC. Available at: www.paho.org/english/dpm/shd/hp/EPHF.htm (accessed 6 February 2015).

Public Health Agency of Canada. Core Competencies for Public Health in Canada. Ottawa: Public Health Agency of Canada, 2007. Available at: http://www.phac-aspc.gc.ca/php-psp/ccph-cesp/about_cc-apropos_ce-eng.php (accessed 6 February 2015).

Public Health Foundation (2015) Council on Linkages Between Academia and Public Health Practice. Available at: http://www.phf.org/resourcestools/Pages/Competency_Based_Workforce_Development_Plans.aspx (accessed 6 February 2015).

South Australian Public Health Act (2011) Information Paper 1 Public Health explanatory paper. What is Public Health? June 2013. Available at: https://www.lga.sa.gov.au/webdata/resources/files/LGA-101438_Information_paper_1_Public_health_explanatory_paper_June-13.pdf (accessed 6 February 2015).

The Faculty of Public Health of the Royal College of Physicians of the United Kingdom (2004) Public Health Capacity: the challenges for public health. Available at: http://www.fph.org.uk/uploads/public_health_capacity.pdf (accessed 6 February 2015).
United Nations: Sustainable Development Goals, adopted September 2015. Available at: http://www.undp.org/content/undp/en/home/mdgoverview/post-2015-development-agenda.html (accessed 18 November 2015).
WFPHA (2016): A Global Charter for the Public's Health (in print)
WHO EURO (2012) Regional Committee for Europe Resolution. EUR/RC62/12 Rev.1 European Action Plan for Strengthening Public Health Capacities and Services. Sixty-second session: Malta. Available at: www.euro.who.int/publichealth (accessed 6 February 2015).
WHO HQ (2011) Glossary. Available at: http://www.who.int/trade/glossary/story076/en/ (accessed 6 February 2015).

Additional reading:

Czabanowska K, Laaser U, Stjernberg L. Shaping and Authorising a Public Health Profession (Short report). SEEJPH 2014, posted: 31 May 2014. DOI 10.12908/SEEJPH-2014-23
Laaser U: The full Spectrum of Public Health (editorial). JOPH 17 (2009): 69-70
Lomazzi M, Theisling M, Tapia L, Borisch B, Laaser U (2013) MDGs – A public health professional's perspective from 71 countries. Journal of Public Health Policy, Federations' Pages Online Supplement, 34/1, e1–e22; doi:10.1057/jphp.2012.69
Lomazzi M, Borisch B, Laaser U: The Millennium Development Goals: experiences, achievements and what's next. Global Health Action 7 (2014). Available at: http://www.globalhealthaction.net/index.php/gha/article/view/23695 (accessed 08.01.2015)
Lomazzi M, Laaser U, Theisling M, Tapia L, Borisch B: Millennium development goals: how public health professionals perceive MDG achievements. GHA 2014. Available at: http://www.globalhealthaction.net/index.php/gha/article/view/24352
WHO EURO (2012): Review of public health capacities and services in the European Region, by Jo Nurse, Stephen Dorey, Mary O'Brien, Casimiro Dias, Jordan Scheer, Charmian Møller-Olsen, Maria Ruseva, Jose Martin-Moreno, and Hans Kluge, www.euro.who.int/publichealth
WHO EURO (2012): Preliminary review of institutional models for delivering essential public health operations in Europe, by Bernd Rechel and Martin McKee, Jo Nurse, Casimiro Dias, Stephen Dorey, Richard Alderslade, Maria Ruseva, Jose Martin-Moreno and Hans Kluge, www.euro.who.int/publichealth
WHO EURO (2012): Public health policy and legislation instruments and tools: an updated review and proposal for further research, by Carlos Dias and Rita Marques, Maria Ruseva, Jo Nurse and Casimiro Dias, Snezhana Chichevalieva Jose Pereira Miguel, Jose Martin-Moreno and Hans Kluge, www.euro.who.int/publichealth

Title:	**N 2.1 DEMOGRAPHIC CHALLENGES, POPULATION GROWTH, AGING, AND URBANISATION**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Luka Kovacic & Muzaffar Malik
Addresses for correspondence	Prof. Luka Kovacic, Andrija Stampar School of Public Health, Rockefeller str. 4, 10000 Zagreb, Croatia E-mail: lkovacic@snz.hr Dr. Muzaffar A. Malik Senior Lecturer, Postgraduate Medicine Brighton and Sussex Medical School University of Brighton, UK E-mail: muzaffarmalik@me.com
Key words	Population, birth, death, migration, cities, countries, census.
Topics	There is growing interest in demography, among the public, politicians, and professionals as "demographic change" havs become the subject of debates in many developed and developing countries. This is because it impacts on all aspects of people`s life, social relations, economy, and culture. The world population will continue to grow in the 21st century, but at a slower rate compared to the recent past. The annual growth rate reached its peak in the late 1960s, when it was at 2% and above. Better health, economic and social conditions resulted in longer life and an ageing population. It is projected that by 2025 more than 20% of Europeans will be 65 or over. Better living conditions in cities lead to higher urbanisation, more than 54% of the world"s population residing in urban areas in 2014.
Learning objectives	To understand key issues and trends of demography, population growth, urbanisation and aging and their consequencesto people"s health.
Teaching methods	Lectures, interactive small group discussions.
Who should apply	Candidates for a career in international public health management, policy development, research, or advocacy; candidates in the public health and similar disciplines at the national level.
Career opportunities	Teaching and/or research careers in academic environments; leadership positions in the health care sector, policy makers, private industry and Non-Governmental Organizations; free-lance consulting; Public Health Analysts/Information Specialists.
Assessment of students	Students should analyse, write, and present to the student`s group one problem in the area of demography, population growth, urbanisation or aging. For the student"s assessment the student"s self-assessment method could be used.
COMMENTS on the module by lecturers and students	**???**

Demographic challenges, population growth, aging, and urbanization

Although demography is usually considered as a field of sociology, public health professionals and researchers are deeply interested to gain the knowledge and know-how required to answer the questions related to processes of population dynamics, aging, and urbanisation. These processes are closely interlinked, directly or indirectly, with people‟s health and possible interventions to improve their health.

Population dynamics at a global level are the function of birth and death. The population of a smaller area (region, country, city, etc.) will depend in addition on migration (immigration and emigration).
There is growing interest among the public, politicians and professionals in demography, as "demographic change" has become the subject of intense debates in many developed and developing countries. This is because it impacts on all aspects of people‟s lives, social relations, economy, and culture.

Demography
Demography is the science of populations. In order to analyse population dynamics it is important to determine birth rate (natality), migration, and death rate (mortality). The interplay of these three components results in demographic change. The main instrument for collection of demographic information is the population census, recommended by the United Nations Organisation to be taken every ten years (usually on the first year of a decennium). Population census is the total process of collecting, compiling, evaluating, analysing and publishing or otherwise disseminating demographic, economic, and social data pertaining, at a specified time, to all persons in a country or in a well delimited part of a country (United Nations 1998). Data collected by the population census could provide information on population counts, sex and age structure, migration, housing and dwellings, employment etc. For the interval between two censuses, demographers typically undertake interim population analysis, basing their projections on the most recent census available.

The average population change (increase) in the world is currently estimated at around 80 million per year and growing at a rate of around 1.14% per year (Worldometers 2014). The annual growth rate is currently declining and is projected to continue to decline in the coming years. This means that the world population will continue to grow in the 21st century, but at a slower rate compared to the recent past. The world population has doubled within 40 years from 1959 (3 billion) to 1999 (6 billion). It is now estimated that it will take a further 43 years to increase by another 50% to become 9 billion by 2042. The annual growth rate reached its peak in the late 1960s, when it was at 2% and above. The rate of increase has therefore almost halved since its peak of 2.19 percent, which was reached in 1963. The latest United Nations projections indicate that world population will nearly stabilize at just above 10 billion persons after 2062. The 2012 Revision of World Population Prospects represents the latest global demographic estimates and projections prepared by the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. The full results of the 2012 Revision are presented in a series of two PDF volumes. In addition to online data and on CD/DVD, the first volume provides comprehensive tables displaying key demographic indicators for each development group, major area, region, and country for selected periods or dates within 1950-2100. The second volume contains demographic profiles presenting time series and plots covering the period from 1950 to 2100 for selected indicators for each country with at least 90,000 inhabitants in 2012 as well as for development groups, major areas, and regions. Key findings of the 2012 Revision are also included in each volume together with the projection assumptions; a wall chart provides summary indicators for the most recent period (United Nations 2012).

Population dynamics deals with the way populations are affected by birth and death rates, and by immigration and emigration, and studies topics such as ageing populations or population decline.
Population dynamics has traditionally been the dominant branch of mathematical biology, which has a history of more than 210 years, although more recently the scope of mathematical biology has greatly expanded. The first principle of population dynamics is widely regarded as the exponential law of Malthus, as modeled by the Malthusian growth model (Turchin 2003).

In the past 30 years, population dynamics has been complemented by evolutionary game theory, developed first by John Maynard Smith (Smith 1993). Under these dynamics, evolutionary biology concepts may take a deterministic mathematical form. Population dynamics overlap with another active area of research in mathematical biology: mathematical epidemiology, the modelling of infectious diseases affecting populations. Various models of viral spread have been proposed and analyzed, and provide important results that may be applied to health policy decisions.

The Pardee Center published the series of five volumes of Patterns of Potential Human Progress (PPHP) as the forecast and prospects for human development worldwide since 2060. Each volume in the series contains a key aspect of human development: Reducing Global Poverty (2009), Advancing Global Education (2010), Improving Global Health (2011), Building Global Infrastructure (2013), and Strengthening Governance Globally (2014). The volumes are available for free download (Frederik S. Pardee Senter 2014).

Using the IFs model, version 6.32 from June 2010, it could be found that in the world will be: 6815 million people in 2010, 8477 million in 2035, and 9407 million in 2060. According to this projection the highest increase will be in Africa (+141.3%), whereas a decrease will be observed in Europe (-18.4%). The Americas will show an increase of 29.5% and Asia with Oceania an increase of 24.8%. The world in total according to this projection will have an increase of 38.0%.

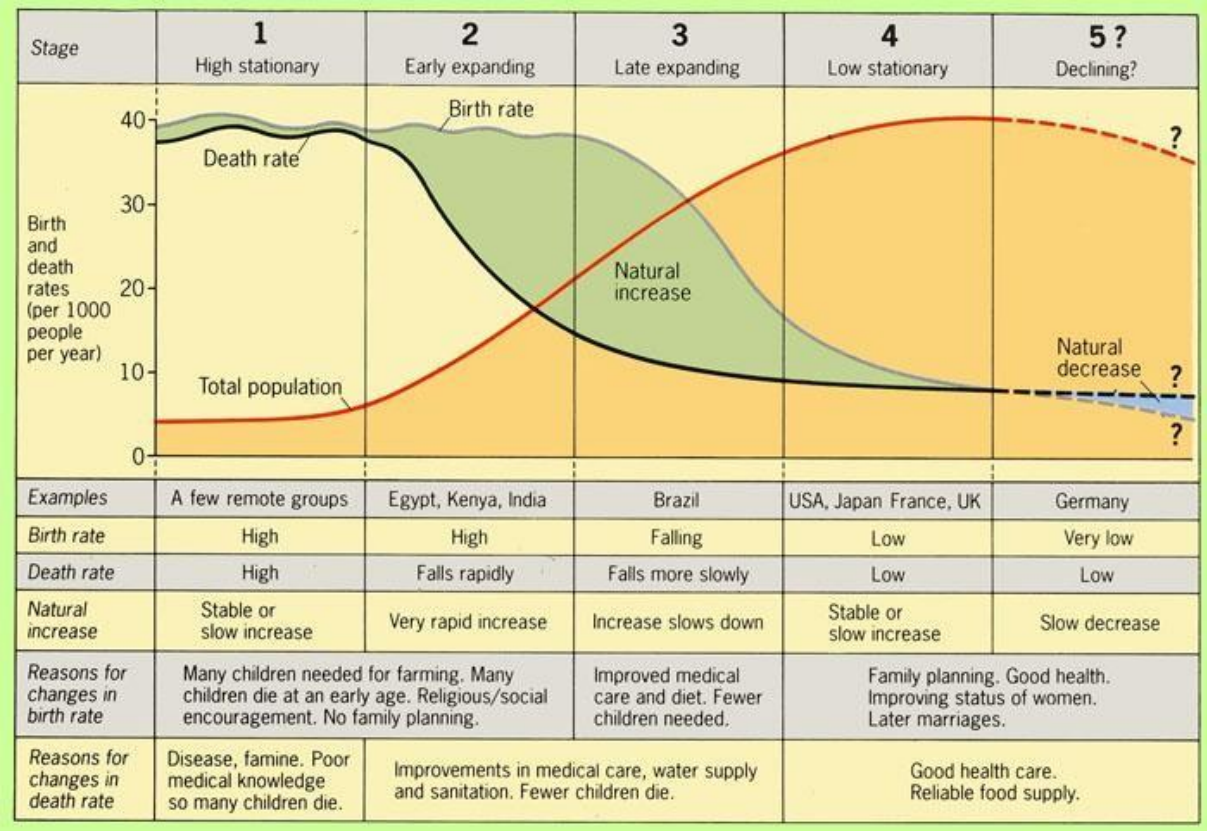


Figure 1. Demographic transition model
(downloaded fromhttp://igcse-geography-lancaster.wikispaces.com/1.+POPULATION/)

Ageing

Ageing is one of the greatest social and economic challenges of the 21st century for the world and particular for European societies. It will affect all EU countries in the European Union (EU). By 2025 more than 20% of Europeans will be 65 or over. Because older people have different healthcare

requirements, health systems will need to adapt to provide adequate care and remain financially sustainable.

In the "demographic transition" we are seeing in present times, there has been first a decline in mortality followed by a decline in fertility from higher to lower levels. Decreasing fertility along with longer life expectancy has reshaped the age structure of the population in most regions of the planet by shifting relative weight from younger to older groups. The role of international migration in changing age distributions has been far less important than that of fertility and mortality (Lesthaeghe 2000).
The Population Division, Department of Economic, and Social Affairs of the United Nations prepared the report World Population Ageing: 1950-2050 providing a description of global trends in population ageing, including a series of indicators of the ageing process by regions, areas and countries. The text and tables could be downloaded free of charge (United Nations 2013).

The EU population, like that of most other world regions, is living longer and in better health. Since 1960, life expectancy has climbed up by eight years, and demographic projections foresee a further five-year increase over the next forty years. It means however that, combined with low birth rates of the past decades, Europe's population is ageing fast, something that is happening all over the world with the exception of the poorest countries. The number of people aged 85 years and older in Europe is projected to rise from 14 million to 19 million by 2020 and to 40 million by 2050. The European Statistical Office projects that by 2060 there will be only two people of working age (15-64) in the European Union for every person aged over 65, compared to a ratio of four to one today. The strongest push in this direction is expected to occur during the period 2015-35 when the „baby boomers", which were born in the two decades after World-War II, start to retire. This is why the EU decided to designate 2012 as the "European Year for Active Ageing and Solidarity between Generations" (European Commission 2012).

The European Commission in co-operation with Member States started the project European Longitudinal Ageing Survey, „SHARE", which has become a role model for several ageing surveys worldwide (European Commission 2014).

Urbanisation
Today, globally more people live in urban areas than in rural areas (Cornelius-Taylor et al. 2001). In 2007, for the first time in history, the global urban population exceeded the global rural population. In 2014, 54% of the world"s population resided in urban areas. In 1950, 30% of the world"s population was urban and by 2050, 66% of the world"s population is projected to be urban. Today Northern America has 82% population living in urban areas, Latin America and the Caribbean 80% and Europe 73%. Africa and Asia still remain mostly rural (Africa 40% and Asia 48% urban). All regions are expected to further urbanize in the future, Africa and Asia faster than the other regions. It is projected that by 2050 the urban population in Africa will be 56% and in Asia 64% (United Nations 2014). About half of the world"s urban dwellers reside in relatively small settlements of less than 500,000 inhabitants. There are 28 mega-cities with more than 10 million inhabitants. Tokyo is the world"s largest city with an agglomeration of 38 million inhabitants, followed by Delhi with 25 million, Shanghai with 23 million, and Mexico City, Mumbai and São Paulo, each with around 21 million inhabitants. By 2030, the world is projected to have 41 mega-cities with more than 10 million inhabitants. Tokyo is projected to remain the world"s largest city in 2030 with 37 million inhabitants followed by Delhi where the inhabitants are projected to be around 36 million (United Nations 2014).

Urbanisation has been a historic process which has increased in its rate of growth. Predominantly rural culture is being rapidly replaced by predominantly urban culture. Village culture is characterized by common bloodlines, intimate relationships, and communal behavior whereas urban culture is characterized by distant bloodlines, unfamiliar relations, and competitive behavior.

Urbanisation improves opportunities for jobs, education, housing, and transportation. Living in cities has advantages of opportunities of proximity, diversity, and marketplace competition. These

advantages of urbanisation are however weighed against alienation, stress, increased daily life costs, and negative social aspects that result from mass marginalization (Borowiecki 1998).

Economic opportunities are the main reasons that people move into cities. In rural areas, often on small family farms or collective farms in villages, it has traditionally been difficult to access manufactured goods, though overall quality of life is very variable, and may certainly surpass that of the city on some measures. Farm living has always been susceptible to unpredictable environmental conditions, and in times of drought, flood or pestilence, survival may become extremely problematic (Borwiecki 1998).

People located in cities are more productive than those working outside dense agglomerations. An important question for the policy makers as well as for urban dwellers deals with the causality of this relationship, that is, whether people become more productive in cities due to certain agglomeration effects, or are cities simply attracting those who are more productive. Economists have recently shown that there exists indeed a large productivity gain due to locating in dense agglomerations (Glaeser 1998).

Besides the economic effects, urbanisation also has major environmental effects. In cities, where there is less vegetation and exposed soil, the majority of the sun‟s energy is absorbed by urban structures and asphalt developed greater production and retention of heat. Vehicles and factories release additional city heat, as do industrial and domestic heating and cooling units. As a result, cities are often 1 to 3 °C warmer than surrounding landscapes. Impacts also include reducing soil moisture and a reduction in re-uptake of carbon dioxide emissions (Eckert & Kohler 2014).

While urbanisation is associated with improvements in public hygiene, sanitation and access to health care, it also entails changes in occupational, dietary and exercise patterns. It can have mixed effects on health patterns, alleviating some problems and accentuating others. For instance, in children, urbanisation is associated with a lower risk of undernutrition but a higher risk of overweight. Body mass index and cholesterol levels increase sharply with national income and the degree of urbanisation. In general, major risk factors for chronic diseases are more prevalent in urban environments (Tellnes 2005). It can therefore be concluded that urbanisation in the world today is an ongoing process that has a profound impact on people's living conditions and health status (Tellness 2005). Directions of further research are outlined by Laaser (2001).

Case Studies:

1. Students should form groups of 4-5 students. Each group will have one task and work on it an hour. Each group has to elect the rapporteur who will report the group conclusions in plenary. Each report should take 15 to 20 minutes.

Tasks for the groups:

A. Students from group A should find the definitions of the terms related to demography, aging, and urbanisation in the databases and discuss their meaning.

B. Students of the group B should identify and analyze the major influences on population dynamics in their country or region.

C. Group C should describe the problems associated with the growth of the population, aging and rapid urbanisation.

D. Students from the group D should identify and suggest reasons for different types of population structure as shown by age and sex pyramids.

2. Each student should calculate how big the world‟s population and population of her /his country were when she/he was born.

3. Are the directions of further research on urbanization as indicated by Laaser more than a decade ago (2001) are followed in the research as of today (Eckert & Kohler 2014)?

References:

Borowiecki KJ. Geographic Clustering and Productivity: An Instrumental Variable Approach for Classical Composers, Journal of Urban Economics 2013;73/1:94-110.

Cornelius-Taylor B, Handajani YS, Jordan S, Köhler G, Korff R, Laaser U, Qureshi AF, Rabbani F, Rizvi N, Surjadi C. Urbanisation and Public Health: A Review of the Scientific Literature. In: StrohmeierKP, Köhler G, Laaser U (eds.): Urban Violence and Health. Determinants and Management. A Study in Jakarta, Karachi and Conurbation Ruhrgebiet. Lage/Germany: Hans Jacobs-Verlag, 2001: 31-77.

Eckert S, Kohler S. Urbanisation and health in developing countries: a systematic review. World Health & Population 2014;15/1:720.

European Commission, Directorate-General for Employment, Social Affairs, and Inclusion. Active Ageing. Report.: Special Eurobarometer 378. Available at: http://ec.europa.eu/public_opinion/index_en.htm (accessed: 11 November 2014).

European Commission. The Survey of Health, Ageing, and Retirement in Europe (SHARE). Available at: www.share-project.org/ (accessed: 11 November 2014).

Frederick S. Pardee Center for International Futures. Patterns of Potential Human Progress series. Denver, US: University of Denver. Available at: https://undp.unteamworks.org/node/456794 (accessed 13 December 2014).

Glaeser E. Are Cities Dying? The Journal of Economic Perspectives 1998;12/2:139–60.

Lesthaeghe R. Europe‟s demographic issues: fertility, household formation, and replacement migration. New York: United Nations: Working paper, United Nations Expert Group Meeting on Policy Decline, New York, 16-18 October 2000.

Laaser, U. Directions of Further Research and Development on Important Health Related Issues. In: Strohmeier, K.P., G. Köhler, U. Laaser (eds.): Urban Violence and Health: Determinants and Management. A Study in Jakarta, Karachi and Conurbation Ruhrgebiet. Hans Jacobs-Verlag, Lage: 2001: 273-9

Smith MJ. The Theory of Evolution. London: Penguin Books, 1993.

Turchin P. Complex Population Dynamics: A Theoretical/Empirical Synthesis (MPB-35). Princeton University Press, 2003.

United Nations. Principles and Recommendations for Population and Housing Censuses, Revision 1. New York: United Nations, 1998.

United Nations. Department of Economic and Social Affairs, Population Division. The 2012 Revision of World Population Prospects. New York: United Nations, 2012. Available at: http://esa.un.org/wpp/ (accessed 11 November 2014).

United Nations. Department of Economic and Social Affairs, Population Division. World Population 4th Report on Ageing: 1950-2050. New York: United Nations, 2013. Available at: http://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeing2013.pdf (accessed 13 December 2014).

United Nations. Department of Economic and Social Affairs, Population Division. World Urbanisation Prospects: The 2014 Revision, Highlights (ST/ESA/SER.A/352). New York: United Nations, 2014.

Tellnes G (ed.). Urbanisation and health. New challenges in health promotion and prevention. Oslo: Oslo Academic Press (UniPub), 2005.

Worldometers. World Population Clock, 2014. Available at: http://www.worldometers.info/world-population/ (accessed 13 December 2014).

Additional reading:

Czabanowska K, Laaser U, Stjernberg L. Shaping and Authorising a Public Health Profession (Short report). SEEJPH 2014, posted: 31 May 2014. DOI 10.12908/SEEJPH-2014-23

Laaser U: The full Spectrum of Public Health (editorial). JOPH 17 (2009): 69-70

Lomazzi M, Theisling M, Tapia L, Borisch B, Laaser U (2013) MDGs – A public health professional‟s perspective from 71 countries. Journal of Public Health Policy, Federations‟ Pages Online Supplement, 34/1, e1–e22; doi:10.1057/jphp.2012.69

Lomazzi M, Borisch B, Laaser U: The Millennium Development Goals: experiences, achievements and what‟s next. Global Health Action 7 (2014). Available at: http://www.globalhealthaction.net/index.php/gha/article/view/23695 (accessed 6 February 2015).
Lomazzi M, Laaser U, Theisling M, Tapia L, Borisch B: Millennium development goals: how public health professionals perceive MDG achievements. GHA 2014 (in print)
WHO EURO (2012): Review of public health capacities and services in the European Region, by Jo Nurse, Stephen Dorey, Mary O‟Brien, Casimiro Dias, Jordan Scheer, Charmian Møller-Olsen, Maria Ruseva, Jose Martin-Moreno, and Hans Kluge, www.euro.who.int/publichealth
WHO EURO (2012): Preliminary review of institutional models for delivering essential public health operations in Europe, by Bernd Rechel and Martin McKee, Jo Nurse, Casimiro Dias, Stephen Dorey, Richard Alderslade, Maria Ruseva, Jose Martin-Moreno and Hans Kluge, www.euro.who.int/publichealth
WHO EURO (2012): Public health policy and legislation instruments and tools: an updated review and proposal for further research, by Carlos Dias and Rita Marques, Maria Ruseva, Jo Nurse and Casimiro Dias, Snezhana Chichevalieva Jose Pereira Miguel, Jose Martin-Moreno and Hans Kluge, www.euro.who.int/publichealth

Title:	**N 2.2 BURDEN OF DISEASE AND INJURIES**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Milena Santric-Milicevic & Zoric Terzic-Supic
Address for correspondence	Dr. Milena Santric-Milicevic and Dr. Zoric Terzic-Supic University of Belgrade, Medical Faculty, Centre-School of Public Health and Health Management Institute of Social Medicine 15 Dr Subotica Street, 11000 Belgrade, Serbia E-mail: msantric@med.bg.ac.rs and zoricaterzic37@gmail.com
Key words	Global Burden of Disease Study, setting priorities in health care, disability-adjusted life years, year of life lost, years lived with disability, premature mortality, non-fatal health outcomes, social preferences.
Topics	Health systems today face serious challenges in management of available resources. It is not rare that many people argue the imposed set of interventions and the criteria used for resource allocation. During reforms and in particular due to tough squeezing of resources, it is crucial to understand a proposed health plan and to have it supported by the public, health professionals, policy makers from other relevant sectors, and the international community. However, data on health and mortality in populations are not as comprehensive and consistent nor relevant as professionals require, rather are fragmentary and sometimes heterogeneous. The framework of burden of disease and injury study provides information and tools for integration, validation, exploration and distribution of consistent and comparative descriptors of the burden of diseases, injuries and attributed risk factors, over time and crosswise different health systems. As of 1992, when the first Global Burden of Diseases Study began, many national burden of disease studies have been undertaken and this framework is currently refining and updating.
Learning objectives	To understand the concepts and the rationale of studying burden of disease, injuries and health risks; To acquire knowledge and skills needed for undertaking a local burden of disease study; To upgrade/develop skills for the critical analysis of data and actionable information; To advance strategic thinking for setting health interventions based on burden of disease evidence;
Teaching methods	Lectures, interactive small group discussions, case studies and field practice
Who should apply	Those who pursue an international career in public health management, policy development, research or advocacy; entrance requirements are to be determined by the institution offering this modules.
Career opportunities	Teaching and/or research careers in academic environments; policy administration of public institutions, non-governmental organizations and in consulting companies
Assessment of students	Test and case studies as well as a field visit and report
COMMENTS on the module by lecturers and students	**???**

Burden of Disease and Injuries

The Rationale of Studying Burden of Disease and Injuries

Health systems today face challenges in management of available resources. It is not rare that many people argue the imposed set of interventions and the criteria used for resource allocation. During reforms and in particular due to tough squeezing of resources, it is crucial to understand a proposed health plan and to have it supported by the public, health professionals, policy makers from other relevant sectors and international community. Comprehensiveness and objectivity of the health statistics, ethics and transparency are standard conditions for setting health priorities, upon which strategy is creating, approving, implementing and evaluating. However, data on health and mortality in populations are not as comprehensive and consistent nor relevant as professionals require, rather are fragmentary and sometimes heterogeneous. Such baseline can likely result in deficient actions, and hinder or mislead objectives and operations.

In a professional arena, despite the notion of substantial data gaps and uncertainties, the issue becomes not only to provide evidences and actionable information that will help setting the priorities in health, but also to translate them successfully into policy and practice.

An example of such endeavour was the global burden of disease and injury study. As of the first Global Burden of Disease (GBD) Study in 1992 done by Murray and associates (Murray and Lopez 1996a), many national burden of disease (BOD) studies have been undertaken (at least 37 countries and sub national studies in eight countries) and this framework is currently refining and updating. The GBD Study provides a framework and tools for integration, validation, exploring and distribution of consistent and comparative descriptions of the burden of diseases and injuries and attributed risk factors, over time and crosswise different health systems (Mathers et al. 2001; Santric-Milicevic et al. 2009). From the perspective of a public health worker, the BOD study that includes trend analysis, projections and economic evaluations can be used as a treasure trove of ideas, information and knowledge for decision makers in each country. In that sense, it provides for policy-makers the basis for relevant and feasible future options. This belief supports number innovative approaches to solving health problems undertaken for certain issues or in some countries. For instance, the Institute for Health Metrics and Evaluation (2014) has found gaps between development assistance and disease burden particularly with respect to non-communicable diseases, while Longfield and associates (2013) have showed that adoption of burden of disease metrics has shifted the organization strategic direction and have doubled its positive health impact. For more examples, please refer to web pages of IHME Acting on Data, Disease Control Priorities Projects, the World Bank and IHME Policy reports.

Theoretical Groundwork of the Burden of Disease and Injuries Study

The first Global Burden of Disease study was a five year project that applied pragmatic approach in order to develop as much as possible objective estimates of the mortality and disability from a condition, than, to emphasize the importance of non-fatal health outcomes for health policy making, and to quantify the burden of disease and to analyse cost-effectiveness of health interventions with a corresponding summary measures (Murray and Lopez 1996a).

Between the first Global Burden of Disease (GBD) Study that quantified the health effects of more than 100 diseases and injuries for eight regions of the world (Murray and Lopez 1996b), there were the updated estimates for 291 diseases and injuries in GBD Studies for 1999-2002, 2004 and for 2008 for 21 regions of the world composed on countries on the basis of two criteria: epidemiological homogeneity, and geographical contiguity (Murray et al. 2012), while the last available study has developed new methods and updated estimates for the period of 2000-2011 (WHO 2013).

The impact of disabilities (approximately 500 disabling sequelae), such as disease- and injury-specific sequelae or impairments that cause limitations or problems in the performance of actions of a treated and untreated person, were approximated together with the comorbidity and risk factors (WHO 2013). To avoid overestimation of the total loss of health, the GBD 2010 study assumed the independence of

comorbidities, thus summed YLDs for an individual reflects the functional total lost health regardless of whether it came from one or several contributing conditions.

Acknowledging aforementioned estimates as important input to health decision-making and planning processes, this endeavour is continuing to capture more of the remaining health distinctions in the analysis and validations in order to address contemporary challenges. If *ad hock* adjustments are necessary, their logic should be justified and scrutinized by experts to gain credibility, plausibility, and representativeness. The GBD study framework has provided guidelines and designed software tool for addressing key data limitations and large methodological variation between data sources and to examine different scenarios (DisMod, DisMod-MR), that help assessment of comparative importance of burden of diseases and injuries in different populations.

A priority for national health and statistical offices would be improvement of primary data so to get highly plausible estimation of the prevalence of disease- and injury-specific impairments, disabilities, sequelae, and costs.

Cost-effectiveness analysis (CEA) is one of economic evaluation methods. It compares the relative costs of the outcomes (effects) of two or more interventions or programmes which have common health outcomes (e.g. mmHg of blood pressure reduction, percentages of serum cholesterol reducation, years of life gained). Also, CEA is used in providing useful information for decision-making about resource allocation from developed to less developed areas. Information is obtained by the comparison of the costs and outcomes of all possible types of health interventions. This requires that the CEA uses an outcome indicator that measures the change in health, taking into account both fatal and non-fatal outcomes. These indicators are: Disability-Adjusted Life Years (DALYs), Healthy Year Equivalents (HYEs), or Quality-Adjusted Life Years (QALYs). It is important to stress that DALY is positive concept in cost-effective analysis (DALYs averted) while DALY is a negative concept in burden of disease calculations (DALYs lost) (WHO Guide to Cost-effectiveness Analysis Group 2002).
During the research of allocation of fixed health budget between interventions that lead to maximize health in a society, sectoral CEA has been applied. There is only a few applications of this CEA in the literature in order to obtain a comparison of the applied preventive, curative and rehabilitative interventions on different population groups. The aim is to get optimal combination of interventions that should be implemented. Examples include the work of the Oregon Health Services Commission (Dixon et al. 1991), World Bank Health Sector Priorities Review (Jamison et al. 1993) and the Harvard Life Saving Project. Only the World Bank (Tengs et al. 1996) tried to make an international or global sectoral CEA using the Disability Adjusted Life Year, DALY.

In the past ten years, the number of CEA studies has been increased especially where cost-effectiveness was defined as a cost per DALY or QALY units. These studies are in the field of communicable and non communicable diseases or health technology assessment (Bjegovic et al. 2007; Fox et al. 2007; Vassall et al. 2014; Langley et al. 2014, Tran et al. 2014, Bae et al. 2014).

Global Burden of Disease Study classification system for diseases and injuries and risk factors
The GBD study classifies disease and injury, causes of death and burden of disease into three broad groups of cause (Murray and Lopez 1996a):

Group I – communicable, maternal, perinatal, and nutritional conditions
Group II – non-communicable diseases
Group III – injuries, intentional and unintentional.

Group I consists of conditions that decline at a faster pace than all causes of mortality. As a result, in low mortality populations, these causes account for only a small proportion of deaths and they are responsible for under 1/3 of death in both males and females. The most important health problems, non-communicable diseases are in the Group II and they account for about 6 out of 10 deaths globally. Injures because of their etiology which is different from most other diseases and lack of generalized

form of mortality change, are classified in Group III (injures accounting for almost 1 in 8 male deaths and 1 in 14 female deaths) (WHO 2010).

This is the first disaggregation. The second disaggregation refers to sub-categories of disease and injury within each group. Group I has been divided into 5 sub-categories, Group II in 14 and Group III into 2 sub-categories, unintentional and intentional injuries. The third level of disaggregation is used to identify more specific causes of death within each of 21 sub-categories in the second level. The fourth level of disaggregation is provided for some diseases (e.g. for sexually transmitted diseases – syphilis, chlamydia and gonorrhoea). The criteria for disaggregated causes were based on: magnitude of the disease or injury as a cause of death or disability, the level of health services provided for the cause and current health policy.

In the first GBD, ICD-9 was used as classification system, as well as Basic Tabulation List (BTL) for store data coded according to ICD-9 until the International Classification of Diseases, Tenth Revision (ICD-10) has not been accepted. Before ICD-10 has been included in the study, there was the Short List codes (the A-list) for the Sixth, Seventh and Eighth Revision of the ICD. The GBD study followed the principles of the ICD classification which is: there can be a single cause of death in the primary tabulations. Also, it is possible to modify the GBD list (which require careful consideration of reasons for codes) if codes or causes of death are not in the list important at local level.

Risk factors have different mechanisms influencing the health (Murray and Lopez 1996a). It is important to make difference between BOD attributable to past exposure to a risk factor and the future burden as consequence of current exposure to risk factor. Calculation of future burden is more complicated, but it is more important for public health planning and prevention than current burden due to earlier exposures. Population exposure to the risk factor is calculated by comparing current level of exposure to reference level (zero exposure for the entire population; a population distribution of exposure achieved in a real population; an arbitrary reference distributional; an arbitrary reference point). Tobacco, alcohol, physical inactivity, unsafe sex and air pollution are real exposure risk factors. Other risk factors are physiological states (blood pressure or nutritional status). Other risk factors are related to social status (e.g. unemployment, poverty, social inequality).There is different methodological approach of the analyses of burden of risk factors. Selection of risk factors in BOD depends on different criteria. Some of them are: potential for a global impact, risk causes each associated disease, potential for modification, being neither too broad nor too specific, and data are available for that risk (WHO 2009). The number of risk factors used in BOD studies depends on country or region in which studies were run. For example, 24 risk factors were included in WHO report (2009), while in Serbia were used only 10 risk factors (Atanackovic-Markovic et al. 2003).

Quantifying the burden of disease and injuries

BOD summary measures were created to combine information on mortality and non-fatal health outcomes as a single number in order to represent the relative importance of the risk factors and causes of death, disease, injuries and disabilities of a particular population (Murray and Lopez 1996a). They were also designed to quantify health inequalities and evaluate economics of health interventions with regard to population health outcomes (Murray and Lopez 1996a). Therefore, systematic assessments of the available data were undertaken with aim to generate comprehensive and internally consistent estimates of mortality and morbidity indices, duration and severity of disease by age, sex and region. The GBD framework contains 18 distinct but interconnected components, thus with each update, rescaling happens on several levels (Institute for Health Metrics and Evaluation 2013).

Final outputs of the BOD study are summary measures that are classified in two complementary measures in order to assess the impact of mortality and non-fatal health outcomes (Mathers et al. 2001). BOD summary measures are health expectancies (e.g. disability-free life expectancy, disability-adjusted life expectancy) and health gaps (e.g. disability-free life years, healthy life years). More specifically, those metrics assess time lived in health states or time lost through premature death, disease and disability (WHO 2013).

If understood that a person‟s life span consists of years spent both in optimal and suboptimal health, life expectancy (LE) can be represented as a sum of time lived in optimal health (A) and time lived in suboptimal health (B) (formula1).

Accordingly, health expectancies (HE) represent estimated the average time (in years) that a person could expect to live in a state of health, defined for example, as disability free life expectancy (DFLE), disability- adjusted life expectancy (DALE) and active-life expectancy (formula 2). In contrast to DFLE, which is not sensitive to differences in the severity distribution of disability in populations (it incorporates a dichotomous weighting scheme in which time spent in any health state categorized as disabled is assigned arbitrarily a weight of zero - equivalent to death), DALE, which is more common used, adds up expectation of life for different health states with adjustment for severity weights.

$$LE = A + B \qquad \text{formula 1}$$

$$\textit{Health expectancy (HE)} = A + f(B) \qquad \text{formula 2}$$

f represents a weight for years lived in suboptimal health, where a weight for optimal health is 1

Health gaps is the time difference between the actual health and some specified norm or goal (i.e. age chosen to define the period before which death or disability is considered premature). It extends the notion of mortality gap that is commonly presented as years of life lost due to premature mortality (Dempsey 1947).Therefore, it is calculated as the sum of the estimated *years lost due to mortality* (C) and years spent in suboptimal health (B) (formula 3).

$$\textit{Health gap} = C + g(B) \qquad \text{formula 3}$$

g represent a weight to health states lived during time B,
where death is weighted 1

The disability-adjusted life year (DALY) is the best known health gap measure developed for quantifying the burden of disease and injuries by Murray and Lopez (1996). „One DALY can be thought of as one lost year of "healthy" life, and the burden of disease can be thought of as a measurement of the gap between current health status and an ideal situation where everyone lives into old age, free of disease and disability"(WHO 2009). Mathematically, DALY for a specific cause (c), age (a), sex (s) and year (t) is the sum of the time lost through premature death Years of life lost (YLL) and time lived in states of less than optimal health Years lost due to disability (YLD) (formula 4).
For the purpose of international comparisons, in addition to numbers of DALYs, YLLs and YLDs, BOD studies use YLD/YLL ratios and age-standardization of rates per 1000 population, and their projections. Projected changes may reflect changes in age-specific disease and injury death rates (epidemiology change), alteration in population growth and / population aging (demographic changes) or both.

$$DALY = YLL + YLD \qquad \text{(formula 4)}$$

The YLLs for a cause are essentially calculated as the number (N) of cause-specific deaths *(c) for the given age (a) and sex (s) in year t* multiplied by a *standard loss function (L) specifying years of life lost for a death at age a for sex s* (formula 5):

$$YLL = N \times L \qquad \text{(formula 5)}$$

The loss function is based on the premise that even for the lowest observed death rates there are a proportion of deaths that are preventable or avertable. For calculation of *L* the standard life tables are used. "The standard reference life table represents the potential maximum life span of an individual in good health at a given age, who is not exposed to avoidable health risks, or severe injuries, and

receives appropriate health services" (WHO 2013). For example in the first GBD study, it is set at the highest observed life expectancy for females (82.5 years) and for males (80.0 years) based on the observed male-female gap in life expectancy in the best-off communities within high-income countries (Japan). For 2050 projections, 91.9 years are projected to be achieved at birth by women in Japan and the Republic of Korea (WHO 2013).

The cause of death information largely relies on one data source, but regions with limited coverage of death registration (vital events registration) have wide data uncertainties and deficiencies, in particular for deaths from specific diseases: "all-cause mortality estimates were with uncertainty ±1% for high-income countries to ±15-20% for sub Saharan Africa" (WHO 2008). To overcome gaps with cause-specific mortality data, estimates in GBD studies were based on simulation methods and expert judgments. Statistical techniques are used predominately to assess variations across observations. More research is needed to obtain a consensus on a potential of verbal autopsy method for quantification of systematic bias in assigning underlying cause of death.

Estimating the years lived with a disability (YLD) is the more difficult then estimating YLL due to inconsistencies, uncertainty and gaps in the available data. The estimation of YLD includes analysis of a wide range of different date sources specific to each disease and of different plausibility. It requires judgment based on a good understanding of the epidemiology of the disease and how the context influence expected variation of the disease epidemiology in the community such as access to treatment across variant income/ wealth of population groups or national screening programme implementation and similar. By contrast to YLL, using an incidence perspective because death rates are incidence rates, there are at least two ways of estimating the total time lived with disability. The approach may be the prevalence of disease *times* one year (formula 6), or by multiplying the incidence of disabilities and the average duration of each disability (formula 7) (WHO 2013).

$$YLD = I \times DW \times L \qquad \text{(formula 7)}$$

where
I: the number of incident cases for cause c, age a and sex s in period t
DW: a disability weights that reflect the severity of the disease on a scale from 0 (perfect health) to 1 (dead)
L: the average duration of the disease until remission or death

Across countries, the prevalence data for many health conditions are primarily collected data, while data on incidence and average duration of disease sequelae are with more limitations. Following informal experts,, consultations a simpler form of DALY calculation has been adopted, which included a prevalence-based YLDs without age-weighting and time discounting and adjustments for independent comorbidity (Murray et al. 2012).

As originally designed, methods for estimation health expectancies and health gaps incorporate social values of a health status and of the value of averting different diseases. A list of social values included:

- value of a loss of life expectancy that is based on the LE at each age that is usually "standard" and less often local expected LE, or arbitrary cut-off LE (for details see the Annex Table B of WHO 2013)
- discount rate of averting diseases in future (by 3% and 6%), or without discount rate since there is no intrinsic reason to value a year of health as less important simply because it is in the future (Tsuchiya 2002);
- age-weights (or no age weights). In conceptualization of DALYs as purely a measure of population health loss rather than broader aspects of social welfare it was difficult to justify the inclusion of non-uniform age weights that give less weight to years lived at young and older ages (Murray et al. 2012b; Jamison et al. 2006).
- health state valuations are classified by severity seven classes of disability weights injury (referred also as quality-adjusted life year weights, health state valuations, utilities or health

state preferences). To assess disability weights, in the first GBD Study the person-trade-off (PTO) method was used to ask small groups of health professionals to make a composite judgment on the severity distribution of the condition and the social preference for time spent in each severity level (Murray 1996). Seen unethical, PTO was replaced in the GBD study 2010 with a discrete choice comparisons of "health" for pairs of 220 health states described with brief and lay descriptions (WHO 2013). Severity levels of health status were summarized using on Euroqol 5D+ (six domains of health status) (Brooks 1996). Though these data were collected from over 30,000 people in surveys conducted in five countries and different cultural environments, Salomon and associates (2012) concluded that disability weights were highly consistent across the samples (for details see the Annex Table C of WHO 2013).

Projected burden of disease

There are projections of mortality and burden of disease to 2000, 2010, 2020 and 2030 (Mathers et al. 2006; WHO 2009). There are two projection models. The first method "aggregate models" are based on time-series analysis and use historical trends in mortality rates. Also, it counts in the previous trend of variable of interest as the basis for predicting its future value. These methods are limited to countries with good death registration data. The second method is "structural models". This is based on the relationship between mortality and group of independent variables and its projections. The "structural models" offer more robust predictions.

The GBD projections use structural models for set of major cause groups and cause- composition models for detailed causes within these groups. The original GBD projections forecast cause-specific mortality. The change in the projected numbers of deaths globally, from 2004 to 2030 is influenced by: population growth (increase in deaths), population aging (additional increase in deaths) and epidemiological change (increase or decrease in number of deaths by age- and sex- specific death rate). According to updated projections, the four leading causes of death globally in 2030 will be ischeamic heart disease, cerebrovascular disease (stroke), chronic obstructive pulmonary disease and lower respiratory infection (mainly pneumonia). Total tobacco-attributable deaths are projected to increase. Lower respiratory infection and three other communicable diseases, diarrhoeal diseases, HIV/AIDS and TB were and will be the tenth leading cause of death in 2004 and 2030. HIV/AIDS deaths are projected to decrease by 2030 although stay as tenth leading cause of death. Deaths caused by injures represented as road traffic accidents will arise from the ninth leading cause of death in 2004 to the fifth in 2030. Generally in this period of time, projection decline for Group I, increase for Group II, and in Group III, traffic fatalities increase in comparison with unintentional injuries which decrease.

Exercises

Questions for small group discussions:

- Look at the DALY estimates for the period of 2000-2011 at a country level per WHO regions. In a world region, find a country with the lowest number of DALYs per 1000 population in the last estimated year and compare it with a country with the highest number of DALYs that year.
- What can you assume by looking at its YLL and YLD components?
- In a further step, look at their projection by 2050 and try to explain how does observed difference appear in 2050?
- Did you come to valuable findings?
- What additional information would you look for?
- What for all that information can be used?

Case studies

1. How Malawi used DCP2 in planning its Health Sector Strategic Program - See more at: http://www.dcp-3.org/resources/malawi-dcp2-case-study#sthash.4IQ85D72.dpuf
2. Tobacco Taxes: A Win-Win Measure for Fiscal Space and Health - See more at: http://www.dcp-3.org/resources/tobacco-taxes-win-win-measure-fiscal-space-and-health#sthash.3fR4x9cU.dpuf
3. van Ginneken N, et al. Non-specialist health worker interventions for the care of mental, neurological and substance-abuse disorders in low- and middle-income countries. Cochrane Database Syst Rev. 2013 Nov 19;11:CD009149.
4. Policy Instruments to Improve Intervention Uptake and Provider Quality - See more at: http://www.dcp-3.org/resources/policy-instruments-improve-intervention-uptake-and-provider-quality#sthash.hC21qni3.dpuf
5. Chronic Disease Prevention and Control - See more at: http://www.dcp-3.org/sites/default/files/resources/Chronic%20Disease_Challenge_Final%20Edits_1.pdf?issu
6. Universal Public Finance of Tuberculosis Treatment in India: An Extended Cost-Effectiveness Analysis - See more at: http://www.dcp-3.org/resources/universal-public-finance-tuberculosis-treatment-india-extended-cost-effectiveness-analys-0#sthash.WA1NLbfO.dpuf
7. Cardiovascular disease and impoverishment averted due to a salt reduction policy in South Africa: an extended cost-effectiveness analysis - See more at: http://www.dcp-3.org/resources/cardiovascular-disease-and-impoverishment-averted-due-salt-reduction-policy-south-africa#sthash.AyhkulSD.dpuf
8. Hoy D, Roth A, Viney K, Souares Y, Lopez AD. Findings and Implications of the Global Burden of Disease 2010 Study for the Pacific Islands. Prev Chronic Dis 2014;11:130344.

References

Atanackovic-Markovic Z, Bjegovic V, Jankovic S, Kocev N, Laaser U, Marinkovic J, et al. (2003). The burden of disease and injury in Serbia. Belgrade: Ministry of Health of the republic of Serbia.

Bae YH, Mullins CD (2014). Do value thresholds for oncology drugs differ from non-oncology drugs? Journal of Managed Care Pharmacy, 20(11):1086-92.

Bjegovic V, Terzic Z, Marinkovic J, Lalic N, Sipetic S, Laaser U (2007). The burden of type 2 diabetes in Serbia and the cost-effectiveness of its management. Eur J Health Econ 8(2):97-103.

Brooks R (1996). EuroQol: the current state of play. Health Policy.37(1):53–72.

Dempsey M (1947). Decline in tuberculosis: the death rate fails to tell the entire story. American Review of Tuberculosis, 56: 157-164.

Dixon J, Welch HG (1991). Priority setting: lessons from Oregon, Lancet, 337(8746):891–894.

Fox M, Mealing S, Anderson R, Dean J, Stein K, Price A, et al (2007). The clinical effectiveness and cost-effectiveness of cardiac resynchronisation (biventricular pacing) for heart failure: systematic review and economic model. Health Technological Assessment, 11(47):iii-iv, ix-248.

Institute for Health Metrics and Evaluation (2013). The Global Burden of Disease: Generating Evidence, Guiding Policy – European Union and European Free Trade Association Regional Edition. Seattle, WA: IHME.

Institute for Health Metrics and Evaluation (2014). *Financing Global Health 2013: Transition in an Age of Austerity*. Seattle, WA: IHME.

Jamison DT, Mosley WH, Measham AR, Bobadilla JL (1993). Disease control priorities in developing countries. New York: Oxford University Press.

Jamison DT, Shahid-Salles SA, Jamison J, Lawn JE, Zupan J (2006). Incorporating deaths near the time of birth into estimates of the global burden of disease. In: Lopez AD, Mathers CD, Ezzati M, Jamison DT, Murray CJL, editors . Global burden of disease and risk factors. Washington DC: World Bank and New York: Oxford University Press. p427-463.

Joshi R, Lopez AD, MacMahon S, Reddy S, Dandona R, Dandona L, Neal B (2009). Verbal autopsy coding: are multiple coders better than one? Bull World Health Organ, 87(1): 51–57.

Langley I, Lin HH, Egwaga S, Doulla B, Ku CC, Murray M, et al. (2014). Assessment of the patient, health system, and population effects of Xpert MTB/RIF and alternative diagnostics for tuberculosis in Tanzania: an integrated modelling approach. Lancet Glob Health, 2(10):e581-91.

Longfield K, Smith B, Gray R, Ngamkitpaiboon L, Vielot N (2013). Putting health metrics into practice: using the disability-adjusted life year for strategic decision making. BMC Public Health, 13(Suppl 2):S2.
Mathers CD, Vos T, Lopez AD, Salomon J, Ezzati M (ed.). *National Burden of Disease Studies: A Practical Guide. Edition 2.0. Global Program on Evidence for Health Policy*. Geneva: World Health Organization, 2001.
Mathers CD, Vos T, Stevenson C (1999). The burden of disease and injury in Australia. Canberra: Australian Institute of Health and Welfare.
Mathers CD, and Loncar D (2006). Projections of global mortality and burden of disease from 2002 to 2030. PLOS Medicine, 3(11):e422: 2011-2029.
Murray CJL, Lopez, AD, eds. (1996a). *The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries and risk factors in 1990 and projected to 2020*. Global Burden of disease and Injury Series, Vol. 1. Cambridge: Harvard University Press; 1996.
Murray CJL, and Lopez A (1996b). Global Health Statistics. Cambridge, Harvard University Press (Global Burden of disease and Injury Series, Vol. 2).
Murray CJL, Ezzati M, Flaxman AD, Lim S, Lozano R, Michaud C et al (2012). GBD 2010: design, definitions, and metrics. Lancet, 380: 2063-2066.
Murray CJL,Vos T, Lozano R, Naghavi M, Flaxman AD, Michaud C, et al (2013). Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. Lancet, (380)9859: 2197–2223.
Salomon JA, Vos T, Hogan DR, Gagnon M, Naghavi M, Mokdad A et al (2012). Common values in assessing health outcomes from disease and injury (Supplementary appendix). Lancet, 380:2129–43.
Santric Milicevic M, Bjegovic V, Terzic Z, Vukovic D, Kocev N, Marinkovic J, Vasic V (2009). Serbia within the European context: An analysis of premature mortality. Popul Health Metr. 2009 Aug 5;7:12.
Tengs TO, Meyer G, Siegel JE (1996). Oregon's Medical ranking and cost-effectiveness: is there any relationship? Medical Decision Making, 16: 99-107.
Tran BX, Nong VM, Maher RM, Nguyen PK, Luu HN (2014). A systematic review of scope and quality of health economic evaluation studies in Vietnam. PLoS One, 14;9(8):e103825.
Tsuchiya A (2002). Age weighting and time discounting: technical imperative versus social choice. In: Summary measures of population health: concepts, ethics, measurement and applications. Geneva: World Health Organization.
Vassall A, Chandrashekar S, Pickles M, Beattie TS, Shetty G, Bhattacharjee P, et al (2014). Community mobilisation and empowerment Interventions as part of HIV prevention for female sex workers in Southern India: a cost-effectiveness analysis. PLoS One, 21, 9(10):e110562.
WHO Guide to Cost-effectiveness Analysis Group (2002). Methods for Generalized cost-Effectiveness Analysis. In: Tan-Torres Edejern T, Baltussen R, Adam T, Hutubessy R, Acharya A, Evans DB and Murray CJL eds. WHO Guide to Cost-effectiveness Analysis Group. Geneva: World Health Organization.
WHO (2013). World Health Organization, N., 2008. The Global Burden of Disease: 2004 update WHO Department of Health Statistics and Information Systems.
WHO (2009). Global health risks: mortality and burden of disease attributable to selected major risks. Geneva: World Health Organization.
WHO methods and data sources for global burden of disease estimates 2000-2011 (2013). Geneva (Global Health Estimates Technical Paper WHO/HIS/HSI/GHE/2013.4).

Links

- Institute for Health metrics and Evaluation – IHME: http://www.healthdata.org/
- World Health Organization: Global Burden of Disease: http://www.who.int/topics/global_burden_of_disease/en/
- IHME Acting on Data: http://www.healthdata.org/acting-on-data
- IHME Policy Reports: http://www.healthdata.org/results/policy-reports
- GBD Country profiles: http://www.healthdata.org/results/country-profiles
- Health, Nutrition and Population, The World Bank eLibrary: http://elibrary.worldbank.org/topic/t011

Title:	**N 2.3 ENVIRONMENTAL HEALTH AND CLIMATE CHANGE**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Dragan Gjorgjev & Fimka Tozija
Address for correspondence	Prof. Dragan Gjorgjev and Prof. Fimka Tozija Institute of Public Health, Skopje, Republic of Macedonia 50 Divizija 6, Skopje, 1000, Republic of Macedonia
Key words	Environment and health, ecological public health, climate change, vulnerability, health risks, adaptation measures
Topics	Ecological concept of health, ecological public health – reshaping the conditions for good health. From demographic to democratic transitions to be addressed by public health; different DPSEEA models of environmental health assessment; conceptual framework of environmental health and well being; environmental and climate change; burden of diseases, DALY, YLL; environment and health inequalities. Essentials of environment and health risk assessment studies; environmental health indicators to assess health effects of climate change; climate change and health; threats and challenges; assessment of health risks in CC; vulnerability, mitigation and adaptation of the health sector.
Learning objectives	Understand the concepts and models of modified and enriched DPSEAA and climate change adaptation tools in regard to different social and health determinants and challenges. Acquisition of knowledge and skills needed to be part of high level management to implement and evaluate environmental, health and well being aspects of policies and strategies. Applying national and regional approach perspective in climate change vulnerability, impact assessments and adaptation measures.
Teaching methods	Lectures, interactive small group discussions, case studies, regional and international field practice.
Who should apply	Those who pursue an international career in environment and public health management, policy development, research or advocacy; entrance requirements are to be determined by the institution offering the modules.
Career opportunities	Teaching and/or research careers in academic environments; policy makers and advisers; private, industry and Non-Governmental Organizations; free lance consulting.
Assessment of students	Test and case problem presentations.
COMMENTS on the module by lecturers and students	**???**

Environmental health and climate change

New Environmental health – the concept of ecological public health

Public health thinking today needs and overhaul, a return to and modernization around ecological principles. Ecological public health thinking should fit the twenty-first century's challenges. It integrates the four dimensions of existence: the material, biological, social, and cultural dimension. Public health becomes the task of transforming the relationship between people, their circumstances, and the biological world of nature and bodies. This is also about facing different numbers of long-term transitions, such as Demographic, Epidemiological, Urban, Economic, Biological, Cultural, and also relating to Energy, Nutrition, and Democracy itself. Identifying large scale transitions such as these refocuses public health actions onto the conditions on which human health and eco-system interact (Ryener G. & Lang.T. 2012).

Traditionally the relationship between environment and health was presented as the relation between a hazardous state of the environment and its effect on health and wellbeing. The DPSEEA model, Driving Force-Pressure-State-Exposure-Effect-Action (Corvalan et al. 1996), adopted by the WHO to configure an environment and health information system, shows this link between an environmental State though an Exposure to a health Effect. It also makes explicit that environmental States result from Pressure on the environment caused by higher level (often anthropogenic) Drivers. Additionally it made clear that Actions (including policies) could be directed towards any point on the causal chain with the aim of influencing the health Effect. The modified DPSEEA model (or mDPSEEA) is a refinement of the earlier DPSEEA model. It recognises whether an individual or group within society was exposed to an environmental state or indeed, whether they went on to experience health effects, is influenced by social and economic factors (Morris et al. 2006). Thus, mDPSEEA further expands the environment and health perspective by recognising that the social and behavioural context may also be a target for policy. mDPSEEA has potential to represent relationships between 'good' environments (such as green and natural spaces) and positive effects on health and wellbeing. Accordingly, mDPSEEA better represents the complex interaction of social, behavioural, economic, physical etc. factors with individual characteristics, giving the model greater policy relevance (Morris et al. 2006). The modified DPSEEA model has proven to be useful as a tool to think about health and the environment, but also as a tool to communicate in a policy arena dominated by complexity.

At the moment, there is no integrated model available that includes all the relevant factors for environment, (human) health, and well-being in relation to a sustainable society, but on subtopics important steps have been made. For example, there is the ecosystem enriched DPSEEA that incorporates human health with ecosystems health or the framework for integrated environmental health impact assessment of systemic risks that focuses on the broad range of questions decision makers are facing.

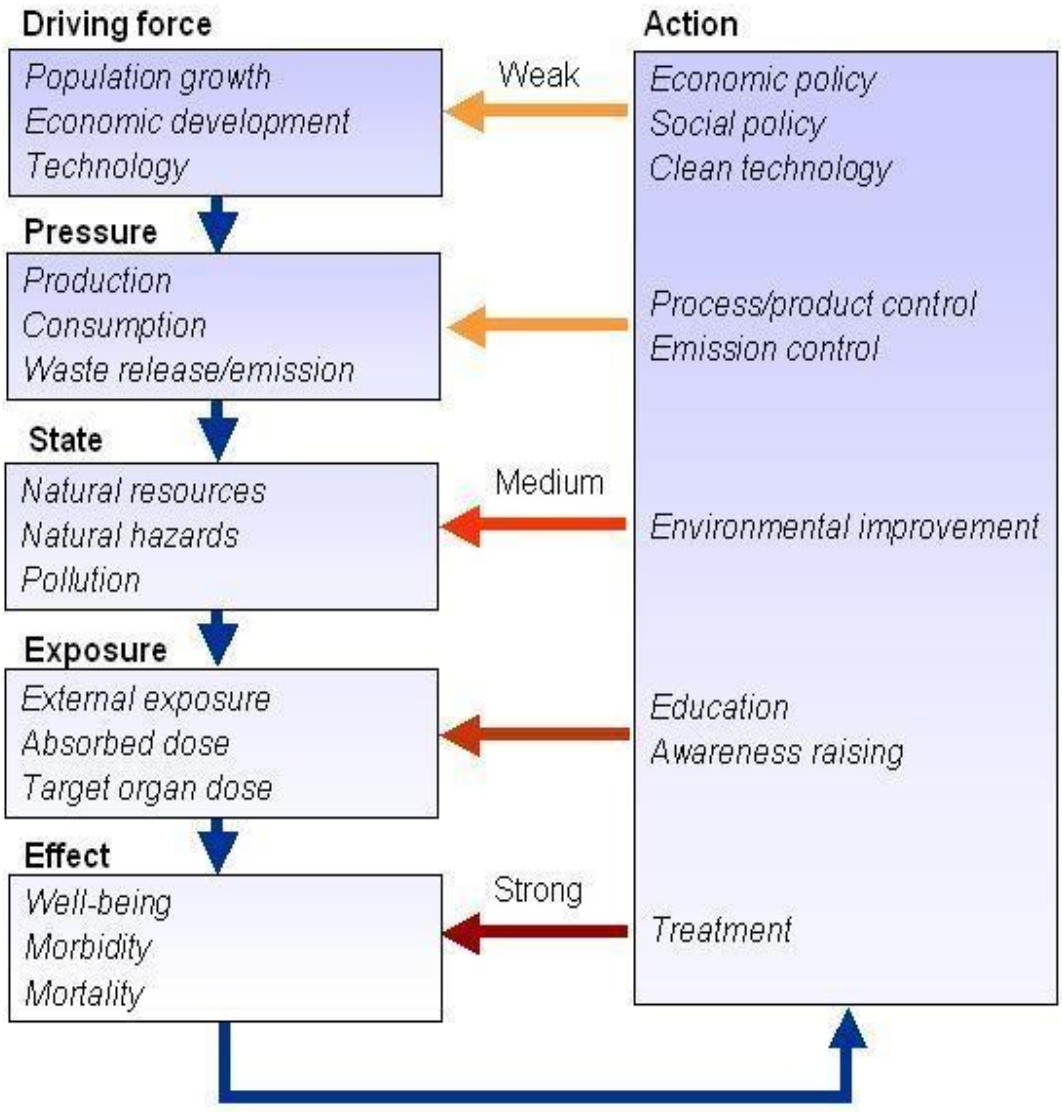
Climate change and health

All climate and weather variables have some influence on human health. The effect may be either direct on the human body or indirect through effects on disease-causing organisms or their vectors. Direct effects involve mostly physical impacts that act to cause physiologic stress (e.g. temperature) or bodily injury (e.g. storms, floods). Direct effects tend to be observed soon after the causative weather event, and are generally more easily modeled and understood than indirect effects.

On the other hand, indirect effects, such as climate impacts on food supplies and the outbreak of vector-borne diseases, may operate through diverse pathways involving multiple variables. People with chronic diseases, especially the elderly, are very susceptible to aggravation of the disease state from both excessively cold and excessively hot weather. Temperatures in warmer temperate zones are ideal for the survival and propagation of causative agents for some bacterial, viral, and parasitic diseases. Temperature also affects human health by affecting agriculture, fisheries, and water resources. The effects of high temperatures on human health are modified by the amount of moisture in the air. Climate change could

affect human health through increases in heat-stress morbidity and mortality, tropical vector-borne diseases, urban air pollution problems and allergies, and cold-related illnesses. Human health will continue to be affected directly and indirectly by climate change, and health systems will need to act to prevent and manage the impacts on populations. At the same time, health services will face various other complicating challenges such as rising costs of health care and an ageing society, making effective preventive strategies even more necessary.

Figure 1: The DPSEEA Framework (WHO 2012)



Much of the influence of climate change including health effects could be diminished or be avoided with different adaptabilities. The primary goal of adaptation is to decrease the burden of diseases, injuries, disabilities, suffering, and mortality. Key determinants of health and solutions also, are primarily out of direct control of the health system. Important mechanisms for disease prevention, originating from water and food, are traceability, microbiological risk assessment, risk communication, and risk management.

The number of cases of salmonella infections could be diminished by the control and monitoring of the entire food chain. A high level of control measures should be reached alongside with the potential climate risk and storage information, and by strengthening measures of food processing.

Proposed alert and reporting systems for possible health impacts by weather changes aim to assess health risks and attempt to diminish them. Suitable instruments would contribute to the promotion and on time alarming the population, particularly vulnerable groups, for extreme weather events before their appearance. NGOs play an important role in this regard, particularly regarding access to information of populations with social risk factors. The data obtained will provide the extrapolation to future expected climate changes. Strengthening of capacities is an essential step towards preparedness developing sustainable strategies as well as palliative ones. That includes education, raising awareness, creation of legal frameworks, as well as institutions which will inform people on decisions providing higher long term benefits.

Both, by strengthening and implementing 'Weather Early Warning Systems' as well as by preparedness and response of health services, and also by adequate physical planning and housing, a reduction of mortality in catastrophic situations can be achieved. The system should include the implementation of prevention and action plans for heat waves, and inclusion of strategies for vulnerable group identification. In addition public health monitoring and public health promotion campaigns are essential. Financial estimates of risk reduction cost should be explained together with an argument that inactivity is the most expensive alternative. The instruments for risk reduction shall contribute to promotion and timely warning and forecasting of extreme weather events.

Capacity building is an essential step in preparing sustainable adaptation and mitigation strategies. It includes education, awareness raising and the creation of legal frameworks, institutions, and an environment that enables people to take well-informed decisions for the long-term benefit of their communities.

Because of the complexity of actions, a Handbook was introduced for national vulnerability, impact and adaptation assessments, which stresses a methodology that involves as many different stakeholders as is feasible, to identify potential vulnerabilities. Among others it describes the current situation including demographic and socio-economic factors, health systems, epidemiologic factors, and information from non-health sectors. The findings can than inform public health adaptation programs that strategically leverage existing strengths and mitigate the future weaknesses of health systems. (ECDC 2010,WHO 2012).

Environmental health indicators provide information about a scientifically based linkage between the environment and health, enabling the conversion of data to information by summarizing these complex relationships, and presenting them in a form that is more easily interpreted by the end-user. Therefore, the European Health Interview Surveys (EHIS) can be used as a tool to assess, quantify, and monitor ecosystem health vulnerability from a sustainability perspective and can be utilized to inform adaptations and policy development and measure the effectiveness of climate change adaptation and mitigation activities. In addition, they provide baseline information for assessing and monitoring temporal and spatial variability of risks with respect to climate change, enabling projection scenarios (e.g. epidemics, cost/benefits of interventions) of how the current situation may evolve. Monitoring of human disease surveillance data has the potential to act as a warning system for ecosystem disruption and may be used to identify interventions for the preservation of ecologic and human health. Such an approach means that interventions can be applied higher up the causal chain than would have been possible based on environmental monitoring or health surveillance alone. Implementation of such interventions can improve ecological well-being which in turn will reduce the resultant burden of disease in humans. (Hambling T et al. 2011).

Case studies:
Case studies of Environment and health risk assessment studies (Gjorgjev D et al. 2010).
Drafting DPSEEA illustrative models for transport, climate change, and housing, etc.
Conducting Climate Change, Health Vulnerability and Adaptation assessment in South East Macedonia (Ministry of Environment and Physical Planning, 2014).

References:
Corvalán C, Briggs DJ, Kjellstrom T (1996) Development of environmental health indicators. In: Briggs D, Corvalán C, Nurminen M (eds.): Linkage methods for environment and health analysis. General Guidelines. Geneva: UNEP, USEPA, and WHO.
ECDC Climate Change and communicable diseases in the EU Member States – Handbook for national vulnerability, impact and adaptation assessments (2010). Available free of charge at: www.ecdc.europa.eu (accessed 13.01.2015).
Gjorgjev D, Kendrovski V, Tozija F (2010) Enviromental Health Risk Assesment Studies. In: Methods and Tools in Public health. Editors: Zaletel Kragelj L, Bozikov J, Bardehle D, Kovacic L. Hans Jacobs Publishing Company, Lage, Germany; 2010:525-546. Available at: http://www.snz.unizg.hr/ph-see/Documents/Publications/PH-SEE_Book6_Full_MethodsAndToolsInPH.pdf (accessed 21.03.2015).
Hambling T, Weinstein P, Slaney D. A Review of Frameworks for Developing Environmental Health Indicators for Climate Change and Health. Int. J. Environ. Res. Public Health 2011**:** 8
Ministry of Environment and Physical Planning MoEPP (2014) 3-rd National Communication on Climate Change. ISBN 978-9989-110-89-40; Available free of charge at: http://unfccc.org.mk/content/Documents/TNP_ANG_FINAL.web.pdf (accessed 1501.2015).
Ryener G, Lang T. Ecological Public Health – Reshaping the conditions for good health. Routledge, New York: 2012.
Morris GP, Beck SA, Hanlon P, Robertson R (2006) Getting strategic about the environment and health. Public Health 120: 889–907.
WHO (2012) Guidance to support the implementation of the Health National Adaptation Process.

Title:	**N 2.4 GLOBAL MIGRATION AND HEALTH**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Muhammad Wasiful Alam & Vesna Bjegovic-Mikanovic
Address for correspondence	Dr. Muhammad Wasif Alam, MD (USA); MSPH (USA) Director Public Health and Safety Department Dubai Health Authority-Head Quarter E-mail: MAlam@dha.gov.ae Dr. Vesna Bjegovic-Mikanovic University of Belgrade, Medical Faculty, Centre-School of Public Health and Health Management Institute of Social Medicine 15 Dr Subotica Street, 11000 Belgrade, Serbia E-mail: bjegov@gmail.com
Key words	Migration, brain drain, health
Topics	Nowadays, global migration is considered even more important than in the past. The main reason for that is the number of migrants, which is steadily increasing at the end of the 20th century and will continue to grow in the twenty-first. In general, migrants are supposed to have bad opportunities for health as a consequence of their migrant status. The most important issue in analytical models for the health effects of migration is the type of migration – whether it is voluntary, involuntary, or irregular migration. Usually, migration does not bring improvement in social well being and health. The wide variety of health conditions and consequences is associated with the profile of the mobile population: "what migrants bring, what they find, and what they build in the host country". Many authors stress three temporal and successive phases associated with individual movements: the pre-departure phase, the journey phase, and the post-journey phase. Though different in many ways they suffer from globally dominant health problems: tuberculosis, trauma/rape/torture/PTSD, HIV/AIDS, cardiovascular disease etc. Prevention of the public health consequences is particularly relevant and important among the migrants and classified in three levels: primary, secondary, and tertiary. A clear strategy at the local, regional, and international levels is needed for efficient interventions. There is human right of migrants to be treated properly.
Learning objectives	After completing this module students and public health professionals should have • increased their understanding of international and national migration; • identified key factors influencing the health of migrants; • explored the current health problems and health care needs of voluntary, involuntary, and irregular migrants; • improved their knowledge in prevention of public health problems in migrant populations; • understood the main trends influencing the health and the required interventions in these population groups.
Teaching methods	Lecture, Focus group discussion, Case studies
Who should apply	Those who pursue an international career in public health management, policy development, research or advocacy; entrance requirements are to be determined by the institution offering this module.
Career opportunities	Teaching and/or research careers in academic environments; policy administration of public institutions, non-governmental organizations and in

	consulting companies.
Assessment of students	Multiple choice questionnaires, short presentation of a national case study.
COMMENTS on the module by lecturers and students	**???**

Global migration and health

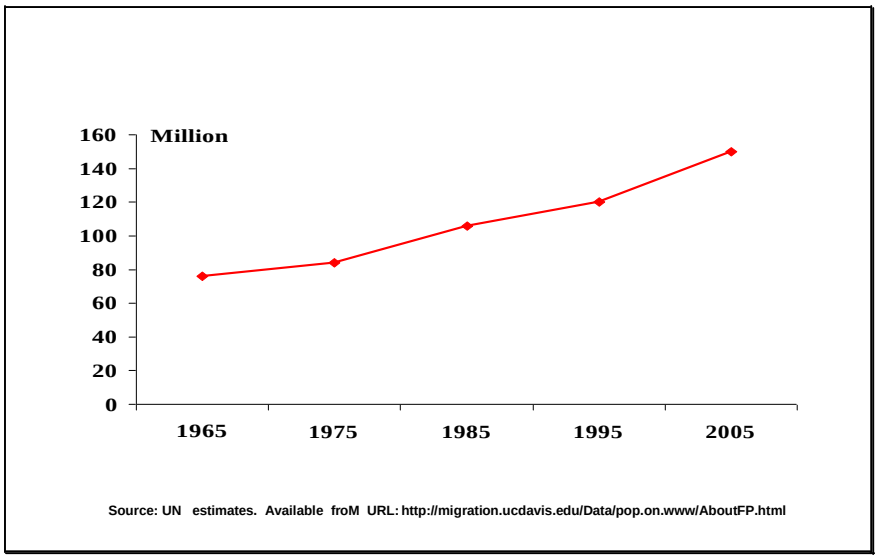
"Immigration is not a solution. It is not a problem. It is a reality. Our societies need immigration. Policies should be made responsive to such a need…" Antonio Vitorino, 2001, EU Home Affairs Commissioner

Background

Migration is a global phenomenon. There is widespread recognition of the issue and its implications. Nowadays it is considered even more important than in the past. Though people have moved throughout the history to find new opportunities, more people migrate today than ever before, both voluntary and involuntary (Schatzer 2001). At the same time, while the effects and consequences of migration are visible all over the world, it is difficult to quantify this phenomenon (Stalker 1997).

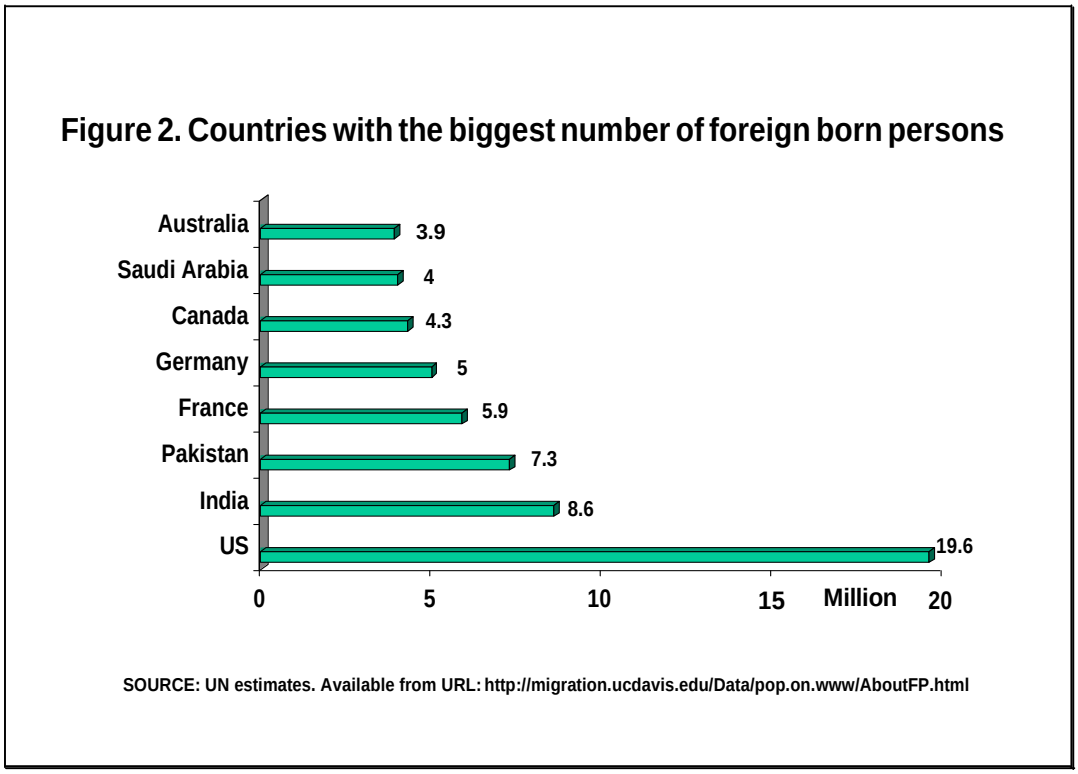
The number of migrants steadily increased at the end of the twenty-century and will continue with large-scale movements of people in the twenty-first century. According to UN data, there were about 76 million international migrants in 1965 but 150 in 2005 (UN 2001). The available estimates of people taking residence and living outside their country of origin, together with those internally displaced, however varies significantly depending on the source of information (Schatzer 2001, WHO 2001, UNHCR 2001). The last figure means that the share of migrants in the world"s population is about 2,5% including more than 200 countries and territories (Figure 1).

Figure 1: International migrants - the world situation



Today, it is estimated that more than 15 million people per year seek political asylum or become refugees in various parts of the world (CDC 2001). The largest number of international migrants settles in Asia, Europe, and North America followed by Africa, Latin America, and Oceania. More then half of them are living in developing countries. At least one million and more foreign-born persons live in only 28 countries and the share of those living in these countries represents 77% of all foreigners in the world (UN 2001). The biggest numbers live in US, followed by India, Pakistan, France, Germany, and Canada (Figure 2).

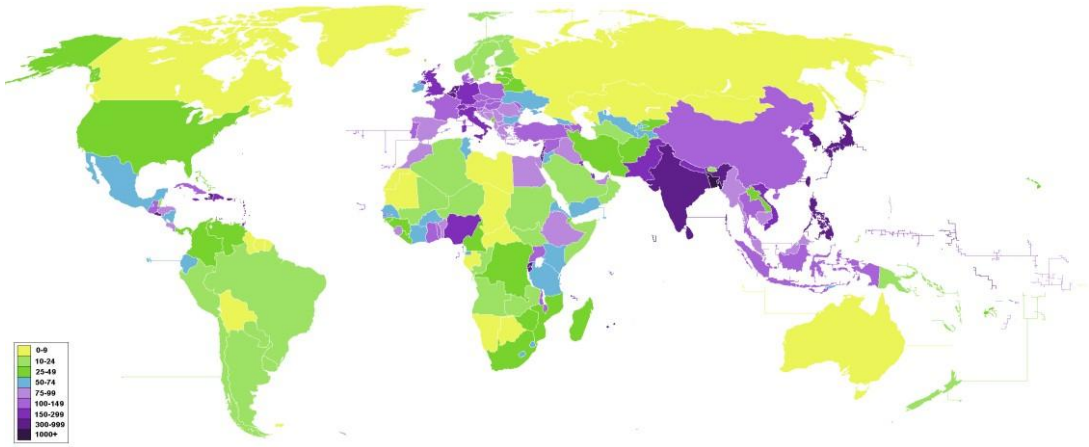
Figure 2. Countries with the biggest number of foreign born persons



Migration and Recruitment (cited from Laaser & Epstein 1010)

The divide between poor and wealthy populations leads to previously unseen mass migration within and between countries, aggravated by violent conflicts as noted above. There are now about 200 million international migrants or 3 percent of the world‟s population living outside of their country for at least one year. More than half are in developed countries and there are in addition close to 26 million internally displaced persons (IDPs) and estimated 16 million refugees (2007), 4.6 million of them Palestinians under the responsibility of the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA 2007). Remittances to developing countries have raised dramatically and now total $337 billion, over twice the level of official development assistance (UN 2005; World Bank 2007). The map in figure 02 displays the gross imbalance of global population densities, i.e. the potential for migration especially from Southeastern Asia.

Figure 3: Population density (people per km2) by country with a population above 10 million, 2012



Source: http://en.wikipedia.org/wiki/Population_density

Rank	Country/Region	Population	Area (km²)	Density (Pop. per km²)
1	Bangladesh	157,457,000	147,570	1067
2	Taiwan (R.O.C)	23,361,147	36,190	646
3	South Korea	50,219,669	99,538	505
4	Rwanda	10,718,379	26,338	407
5	Netherlands	16,760,000	41,526	404
6	India	1,263,680,000	3,185,263	397
7	Haiti	10,413,211	27,750	375
8	Belgium	11,007,020	30,528	361
9	Japan	127,290,000	377,944	337
10	Philippines	100,271,800	300,076	334

As a consequence of the present economic downturn, opportunities for migrants have diminished in industrialised and industrialising countries alike. The gloomier prospects trigger return migration, in particular of temporary migrants, including irregular migrants. A consequence will be that migrant workers who lose their jobs will no longer be able to remit to their home regions and countries, and because some regions, countries and numerous families heavily rely on these remittances this will add to their difficulties.

Within countries a movement from rural to urban zones can be observed worldwide. In 2025 about two thirds of the world‟s population will live in cities. In Europe already today about 90 percent of its population lives in cities of various sizes but only two European cities – London and Paris – can be considered megacities with more than 10 million inhabitants. Megacities, however, are common in the so-called third world: more than 20 megacities will emerge worldwide by 2015. To cite some examples, Lagos will increase from 0.3 million in 1950 to an estimated 24.6 million in 2015, Mexico City from 3.1 to 20.3 million and Beijing from 3.9 to 15.6 million. In the list of top urban growth rates only Seoul, Tokyo, Los Angeles, and New York represent industrialized countries. Urbanization is not necessarily bad itself. It becomes a problem when the rate of growth of the urban population exceeds the capacity of the infrastructure to absorb and support it (Seeger 1995). Urbanisation certainly alleviates several problems, e.g. over-population, land shortages, reduction of rural areas. On the other hand, there are costs in terms of increased poverty, the rise of slum and squatter areas, extremely unequal distribution of resources, overburdening of the urban infrastructure and difficulties to supply mega-cities with the necessary resources such as air and water (Gurgand 2006; Ravallion et al. 2007).

Indeed, the urban poor are the main group affected by an unequal distribution of resources, and they have to live in quarters characterized by the worst environmental conditions like overcrowded slums and squatter settlements close to polluting industries or congested roads. The physical conditions and population density make the planning and provision of appropriate health care an extremely difficult or impossible task. This certainly recalls the 1971 "Inverse Care Law" as defined by Tudor Hart (1971) referred to previously. However, cities and metropolises have turned into the new centres of a polycentric world. As centres of an emerging global society, problems and conflicts become concentrated as well as solutions (Cornelius-Taylor et al. 2001).

Rural-urban migration changes the demography of countries and continents not only quantitatively but also qualitatively, increasing differentials of health, education, and wealth. The more aggressive and better schooled workers in rural areas are often the first to move to urban places, reducing the social capita in the communities they left. This is the case even more so for the professional education when the well educated upper class move from their less developed home countries to North America, the developed areas of the Western Pacific, or Europe to find a better life. In 2005 the World

Federation of Public Health Associations (WFPHA) adopted a resolution requesting ethical restrictions on international recruitment of health professionals from low-income countries (WFPHA 2005) acknowledging that the developed countries have 33.4 percent of the world‟s population, but they contain 74 percent of the world‟s physicians and 89 percent of the world‟s migrating physicians, and the vast majority of the 14,000 nurses moving across national boundaries each year (Mejia 2004). For example there are only 750,000 health workers in all of sub-Saharan Africa, a region that serves 682 million people and suffers from 25 percent of the world‟s burden of disease, whereas it has been estimated that Africa needs about 1 million more doctors, nurses and midwives (as well as pharmacists and other categories of health professionals) to achieve the Millennium Development Goals (World Bank 2004; Chen et al. 2010). There is of course the right to leave the country of origin under the 1948 Universal Declaration of Human Rights, on the other hand low-income countries should be compensated for the loss of health professionals as they have invested into upbringing and schooling and higher education (United Nations; Friedman 2004).

The WFPHA recommends therefore that health worker employers in developed countries, including public and private hospitals, long-term care facilities, and outpatient facilities, adopt a corresponding code of ethics comprising as a key request that health care facilities incorporating workers from abroad are strongly encouraged to manage recruitment and incorporation of health care workers from those countries in such a way that the sending country receives something in return (WFPHA). Reciprocal strategies of this nature could include sending developed country health workers in an exchange program, remunerating the source government for its investment in a workers‟ education program, or offering continuing education that a foreign health worker could apply in the home country. Therefore higher income countries that receive significant numbers of health professionals from lower income countries shall invest in training and skills development in the sending countries, as a means of providing compensation for the loss of trained personnel (Whelan et al. 2004; Mensah et al. 2005). Since the WFPHA resolution was published in 2004 the international discussion took pace, leading to the draft WHO code of practice on the international recruitment of health personnel, though with softened requests for compensation to sending countries (WHO 2008).

According to an annual report of the Occupational Health Centre in Qatar it was observed that about 30% of the workers who came for routine periodic medical checkup and were diagnosed having high blood pressure, did not know having hypertension. A similar proportion was also noted for the first time to have Diabetes.These expatriate workers for labour work in the Gulf Arab countries are majorly from India, Bangladesh, Nepal and Philippines. Typically migrant workers are seen at the health care facility, commonly at the emergency department, for injuries and accidents. They are usually not followed up as most of them do not carry health insurance cards. Therefore, they are usually left unaware of their chronic disease occurrence such as hypertension or diabetes, and if they were identified as diseased they are not followed up, risking disease complications.

The most rapid growth in the number of international migrants occurs as a result of refugees‟ crises and forced migration (Schatzer 2001). Conflicts, including wars and civil strife, and disasters affect a large number of people and result in problems. Forced migration, the breakup of families and communities, hostile new environments, and the lack of security and provision for survival continue to take a devastating toll on people affected by war (Levy & Sidel 1997). According to official data published 2001, UNHCR has reported 21.793.300 refugees in more than 150 countries, in Europe alone there are 5.571.700 of persons of concern who fall under the mandate of UNHCR (UNHCR 2001). To this figure it should be also added more than 24 million of internally displaced people pushed from their homes under the different kinds of oppression. Children constitute between one-third and one-half of the world‟s refugees and IDPs population (Levy & Sidel 1997). According to the World Health Organization, number of refugees, expelled and displaced persons in the Balkan region are estimated to about 4 million people at the end of the twenty-century.

Migrants are supposed to have bad opportunities for health as consequences of their migrant status. But important issue in analytical model for the health effects of migration is the type of migration – whether it is (Friis et al. 1998):
1. voluntary migration,

2. involuntary migration, or
3. Irregular migration.

Voluntary migration

When people voluntary migrate they are leaving their home and moving from the country (place) of their origin in searching for personal development, better opportunity for education, employment, living, and economic condition. Some authors call these "pull factors" (Winter 1996). Voluntary immigrants are usually able to choose their new place of residence. They are generally healthy and younger individuals. Several authors have pointed out that the historical time of migration within a particular group needs to be considered (Friis et al.1998). Later immigrants during the twenty-century history may differ in social, educational, and other demographic characteristics from earlier immigrants. Looking at the various literatures it is obvious that for the later voluntary migrants the main reason for leaving their countries of origin are the bad economic conditions, while for the earlier migrants it was the political situation in their countries. The effects of voluntary movements are present on both the countries of origin and host countries. Their impact cannot be characterised as solely positive or negative (Schatzer 2001). Typical example is migration of highly skilled migrants, which is a loss for their country of origin. However, sometimes both countries may benefit, such as in the case when migrants help link companies in the home country with business in the new country.
The legal status of voluntary immigrants includes persons granted asylum and permanent residents. Despite the fact that they are usually healthy and young they immigrate in the host country with their different personal life experience and behaviour that could influence their health in the host country. They are coming into contact with a different host culture and start with changes in behaviour, values, and attitudes. This process of integration obviously can cause bigger stress which could damage their health. They need a certain level of social support to overcome such situation (Burnett & Peel 2001).

Involuntary migration

Individuals and families under involuntary migration can be broadly divided into two categories: refugees and internally displaced persons. The United Nations‟ High Commission for Refugees (UNHCR) defines refugee as "a person who, owing to a well-funded fear of being persecuted for reasons of race, religion, nationality, membership in a particular social group, or political opinion … is outside of the country of his nationality." (UNHCR 2001). Another large group of people under involuntary migration are internally displaced persons (IDPs). They are basically refugees, who never crossed the border of their home country, because they are either unable or unwilling to cross the border. Some consider that their position is even worse than that of official refugees. Their own government very often accepts them as an additional burden to the national economy, a political problem, and even as some kind of enemy. That means that both refugees‟ and IDPs‟ motivations for migration are different from those of voluntary immigrants. Refugees and IDPs may not want to leave their homes, but they are being pushed by circumstances: often violence, persecution, and human rights abuses, usually by the hands of their government. Many consider that refugees and IDPs are a unique phenomenon within the broader context of migration. Today, there are more than 20 million recognized refugees in the world and even 24 million or more internally displaced people (Winter 1996) with little change over the recent decades.

Irregular migration

Irregular migration is special type of migration, which is rapidly increasing in the recent time. In many parts of the world possibilities for legal migration have decreased whilst demand for foreign labor has remained constant. This together with poverty, lack of opportunities, political and social violence in the country of origin, may force potential migrants to turn to criminal networks (IOM 2000). As a consequence, new trafficking routes are regularly established and the market for travel documents, transportation, and border crossing has developed worldwide. UN Convention Against Transitional Organized Crime defines "trafficking" as the following: "The recruitment, transportation, transfer, harboring, or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power, or of a position of vulnerability or of the giving or receiving of payments and benefits to achieve the consent of a person having control over another person for the purpose of exploitation. Exploitation includes at least the exploitation of the prostitution of others or other forms of sexual exploitation, forced labor or services,

slavery or practices similar to slavery, servitude or the removal of organs". A distinction should be made between trafficking and smuggling of migrants. Smuggling means: "The procurement, in order to obtain, directly or indirectly, a financial or other material benefit, of the illegal entry of a person into a state party of which is not a national or a permanent resident".

According to the International Organisation for Migration (IOM) study, there are an estimated 15 to 30 million irregular migrants in the world today (IOM 2001). At the same time migrant trafficking and smuggling has become a global business generating huge profits for those involved. Trafficking exposes migrants to extremely vulnerability. They lack valid travel documents and they are considered as subjects of deportation in many countries. The most important, because of their irregular status, they do not have access to legal assistance and medical care. From all the mentioned above it is obvious that the health of irregular migrants is seriously jeopardized. The USAID estimates that 4 million persons become the victims of international trafficking each year, out of which 700.000 are women or children (USAID 1999).

The facts about migration and health

Migration is a major life event and has important impacts on physical, mental, and social health (Friis et al. 1998). Usually, migration does not bring improved social well being and health. Consistent with the WHO definition, that health is "complete physical, mental, and social well being and not simply the absence of disease or infirmity". Bearing in mind this definition it is clear that health is influenced by many determinants related to social, political, economic and environmental conditions (education, employment, adequate standard of living, participate in public and cultural life, freedom of movement, treatment in the case of illness) (Batchelor 1995). "In many countries, the gap between the health of advantaged and disadvantaged groups is widening, even though measures such as average life expectancy indicate that the health of the population as a whole is improving" (Woodward & Kawachi 2001). It is obvious that the migrants are among the disadvantaged group. The wide mixture of health conditions and consequences might be also associated with the profile of a mobile population. It is important to consider, as Haines has written, "what migrants bring, what they find and what they build in the host country" (Haines 1996). Migrants bring with them the general population characteristics of their home country, among which age and sex are the most important. For example elderly refugees may find adapting to new ways particularly difficult. On the other hand, children adapt more quickly and completely to new customs. Women, because of their roles as wives and mothers, may remain more confident with their homes that would help them to adapt to a new society. Additionally migrants also bring their occupational and educational background, life experiences, values and expectations, family and kinship, experience with exodus and transit. All of these could have both positive and negative influence on their health. "What they find" in the host country is related to the general country situation, problems in resettlement, employment and different level of social support. Once migrants have adjusted to their new environment, or have simply survived the inevitable problems and traumas of dislocation, they move forward in their new lives often successfully. Haines points out that in this stage it is important "what they build" in the host country and that is the economics of a new life, relationship between family and community, as well as rebuilding meaning.

In general, many authors stress that three temporal and successive phases associated with individual movements of people should be considered as substantial for migrants" health (MacPherson 2001; Gavagan & Brodyaga 1998):

- the pre-departure phase,
- the journey phase and
- the post-journey phase.

The first phase is connected to the health determinants such as genetic, cultural, environmental, and existing health behaviour of the migrant in his country of origin. This represents the existing and potential disease risks, or health benefits, that the migrant brings to the activity of movement. Expectation of the regional risks for certain disease usually includes thinking about typical infectious diseases, cancer, cardiovascular diseases, and stroke. The second phase of migration may be

associated with acquisition or transmission of illness or disease as a direct consequence of the journey. The health factors and influences that are relevant during travel may be directly predicted by the migrants‟ pre-existing health conditions. In high-risk movement, such as trafficking, the risks of travelling are substantial. The third phase can be the most variable for the migrant. Factors important in post-journey phase include "what they find" in the host country: health care accessibility and availability, acquired health risks and exposures to health risks at a differential level than at the home country, different attitudes to health and behaviours, and other social risks and new mobility events. That means that impact on health related to mobility is not limited to that moment of entering and being received by the host country. The positive and negative effects to the health of both immigrants and the general population may persist for many generations (MacPherson 2001).

In an analytical model for the health effects during different phase of migration it is worthwhile to look at the sources of stress, mediating factors, visible and invisible manifestations (Figure 4).

Figure 4: Analytical model for the health effects of migration (source: Friis et al. 1998).

SOURCES OF STRESS ⇨ (Precursive factors)	**MODIFIERS ⇨ (Mediating factors)**	**MANIFESTATIONS (Outcomes)**
Life events Acculturation	Social support Life style	Physical health Mental health Social health Health care Utilization

Public health consequences of migration and possibilities for prevention

It has been already mentioned that the physical and psychological effects of migration on the refugees depend on the reason for migration (war, natural disaster, religious or political persecution) (Gavagan & Brodyaga 1998). Due to well-known circumstances many of positive health influences are missing in the real life environment of this population, furthermore their health is very often seriously jeopardized by the consequences of their traumatic experience. Their health problems differ depending on geographic region, however they suffer from global health problems: tuberculosis, trauma/rape/torture/PTSD, HIV disease, measles, mumps and rubella, diphtheria, pertussis, and tetanus, hepatitis B, intestinal parasites, malnutrition/growth delay, neonatal tetanus and rheumatic heart disease. In general, the major public health problems of refugees and internally displaced persons are similar in nature. Many authors consider the following (Toole & Waldman 1997; Gavagan & Brodyaga 1998; Burnett & Peel 2001; Hodes 2001):

- mortality,
- demographic risk factors,
- causes of mortality and morbidity
- infectious diseases,
- nutritional deficiencies,
- chronic non-infectious diseases,
- mental disorders,
- other public health effects.

Public health problems related to migration are confirmed in numerous research. Evidence from the United Kingdom has been reported that one in six refugees has a physical health problem severe enough to affect their life and two thirds have experienced anxiety and depression (Burnett, Peel, 2001). Additionally their health is affected by poverty, dependency, and lack of cohesive social support (Connelly & Schweiger 2000). There is growing evidence that lack of social cohesion is

leading to social isolation when "socially isolated people die at two or three times the rate of people with a network of social relationships and sources of emotional and instrumental support" (Kawachi & Kennedy 1997).

Very often health care service is less accessible for migrants. For example, in a study of refugee children in Buffalo it was found that only 39 percent of the children had adequate evidence of vaccination. Frequent findings in these children included anemia, parasites, and tuberculosis (Meropol 1995). Also, in the United States evidence has been shown that 5 percent of Koreans and 15 percent of Cambodians were found to be positive for hepatitis B surface antigen. In a study from Spain, 21% of migrants from Sub-Saharan Africa were chronic carriers of hepatitis B. Although screening for tuberculosis is not regularly carried out, several studies indicated that refugees suffer from it more frequently too (Walker & Jaransan, 1999; Ormerod 1990; Fassil 2000).

Many of refugees, expelled and displaced persons in the Balkan region, suffer from diabetes, hypertension, and coronary heart disease (WHO 2001). Some of refugees and IDPs experienced episodes of malnutrition and poor hygiene and sanitation. Many of them are at high risk of substance abuse as a coping strategy. Out of all, approximately 20% suffer from severe Post-Traumatic Stress Disorder (PTSD) with need for emergency psychosocial help. Magnitude and consequences of war traumas are far more complex than it appears at first sight. Disorders that emerge as a reaction to war stress often have long latency periods and a chronic course. Psychological trauma has a significant role in the development of psychiatric and somatic disorders, usually followed by family, social and professional dysfunction. That is especially emphasised in the population of refugees and displaced persons, with accent on those accommodated in collective centres. PTSD is very complex condition in terms of its etiology, psychobiology, epidemiology, co-morbidity and treatment (Friedman 1997).

Prevention of the public health consequences is particularly relevant and important as we approach migrants‟ population. Central to prevention is the concept of reducing the risk of occurrence of disease, injury, and disability. Prevention among this underserved population can be also classified into three levels: primary, secondary and tertiary together with an integrated approach (Toole & Waldman 1997).

Primary prevention is the basic strategy and includes provision of adequate food and water, shelter, sanitation, and immunization. When migration is consequence of war and armed conflicts it includes stopping the violence and reconstruct peaceful negotiations and sustainable development.

Secondary prevention involves the early detection of health problems through examination and screening and prompt treatment with consideration of specific characteristics of the migrants‟ population and common refugee profiles. The examination usually includes a standard medical history with questions about disabilities, substance abuse and mental health issues, as well as a physical examination. Some countries require specific testing for tuberculosis, syphilis and HIV (CDC 2001). Some specific diseases should be expected depending on the situation in the migrants‟ home country. For example, cervical cancer is more frequent in some countries because of infrequent or absent Papanicolaou screening programs. Several countries have developed specific guidelines for early detection of diseases or unwanted phenomena among migrants. An example of specific screening recommendations in the US is presented in the Table 1.

Tertiary prevention involves prevention of excess mortality, morbidity, and consequences once disease or unwanted phenomena have occurred. Most deaths in refugee and displaced populations are preventable using current and affordable technology. The challenge is to institutionalise health intervention within the major relief organisations and to ensure management and logistical systems to support key sustainable intervention with active participation both of migrants and local community.

Table 1: Recommendations for Health Screening in Refugees (lightly modified; source: Gavagan & Brodyaga 1998).

Area	**Specific screening recommendation**
General history	Family status, trauma, anxiety, depression
Nutritional status	Dietary history, health habits (including use of tobacco and illicit substances), hemoglobin or hematocrit, height and weight
Physical examination	Blood pressure, oral and skin examination, signs of trauma
Infectious disease, review of previous immigrations	Check stool for ova and parasites, hepatitis serology, VDRL and HIV (as indicated)
Chronic diseases like cancer, hypertension or diabetes	Age-appropriate screening for cancers and other chronic diseases that are often not screened for in Third World countries (e.g. Papanicolaou smears)

Contemporary trends related to global migration

It is well known that many complex causes push international migration movement: bad economic situation in the country of origin, searching for better life, educational opportunities, escaping from political and physical oppression and torture. On the other side, Schatzer has summarized the following contemporary trends in international migration (Schatzer 2001):

- growing economic integration and globalization;
- changing geopolitical interests post Cold War brought nationalist/religious background of conflict to forefront;
- changing demographic trends and gender roles affects international migration;
- trans-nationalism;
- increasing technological innovation (transport, information);
- growing involvement of smugglers / traffickers; and
- harmonisation of policies through regional cooperation.

Given these contemporary trends, the maintenance and improvement of migrants‟ physical, mental and social health as well as their quality of life is of utmost importance. Because of the modern transportation system, health interventions targeting migrants are difficult to introduce and monitor (CDC 2001). That should be evidence based, but there is not enough and appropriate research to direct health promotion and intervention. Therefore, health disorders of this population are an important public health issue meriting investigation of their causes so as to inform preventive action in the future. The complex interaction of these causes includes investigation of migrants‟ socio-economic status, knowledge, attitudes and different aspects of behavior, health care needs, health status, and their experience with health care utilisation. A clear strategy on local, regional, and international levels is needed for proper implementation and evaluation of health interventions targeting this population.

Problems of the migrant population test the public health response and resources of the nation and expose weaknesses. “Public health workers increasingly appreciate the fragile interaction between individual host, environment, and infectious agents capable of producing disease. The consequences of these relationships, including the real and potential vulnerability of populations, are becoming increasingly important indicators of national security” (CDC 2001).

Case studies:

Short presentation of a national Case Study
The student will be required to pick a country or a region of interest to evaluate the health effects of migration in that specific region. He/she will be required to make a presentation to the class in form of a seminar (citing recent publications where needed) which should highlight:

- understanding of international and national migration;
- identifying key factors influencing the health of migrants;
- exploring the current health problems and health care needs of voluntary, involuntary, and irregular migrants;
- knowledge of prevention of public health problems in migrant populations;
- understanding the main trends influencing the health and the required interventions in these population groups.

Suitable ountries or regions are (but not necessarily limited to):

- North America (USA and Canada)
- Mexico and Cuba
- South Africa
- French North Africa (Algeria, Morocco, Tunisia)
- Countries of European union, United Kingdom and Turkey
- The Arab GCC countries (Saudi Arabia, Kuwait, United Arab Emirates, Qatar, Bahrain, Oman)
- Other middle Eastern countries (Iran, Iraq, Syria, Jordan, Israel)
- India
- Thailand
- China
- Malaysia
- Australia

References in support of the case study:
Frank AL1, Liebman AK, Ryder B, Weir M, Arcury TA. Health care access and health care workforce for immigrant workers in the agriculture, forestry, and fisheries sector in the southeastern US. . Am J Ind Med. 2013 Aug;56(8):960-74. Available at: http://onlinelibrary.wiley.com/doi/10.1002/ajim.22183/pdf
Joshi S1, Simkhada P, Prescott GJ. Health problems of Nepalese migrants working in three Gulf countries. BMC Int Health Hum Rights. 2011 Mar 28;11:3. doi: 10.1186/1472-698X-11-3. Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3073876/
Lee W, Neo A, Tan S, Cook AR, Wong ML, Tan J, Sayampanathan A, Lim D, Tang SY, Goh WL, Chen MI, Ho C. Health-seeking behaviour of male foreign migrant workers living in a dormitory in Singapore. BMC Health Serv Res. 2014 Jul 10;14:300. Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4097050/
Peng Y, Chang W, Zhou H, Hu H, Liang W. Factors associated with health-seeking behavior among migrant workers in Beijing, China. BMC Health Serv Res. 2010 Mar 19;10:69. Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2848137/
Schmalzried HD1, Fallon LF Jr. Reducing barriers associated with delivering health care services to migratory agricultural workers. Rural Remote Health. 2012;12:2088. Epub 2012 Jul 24. Available at: http://www.rrh.org.au/articles/subviewnew.asp?ArticleID=2088
Sönmez S1, Apostolopoulos Y, Tran D, Rentrope S. Human rights and health disparities for migrant workers in the UAE. Health Hum Rights. 2011 Dec 15;13(2):E17-35.
Universal health coverage in „One ASEAN": Are migrants included? Glob Health Action. 2015; 8: 10.3402.
Wagner KS1, Lawrence J, Anderson L, Yin Z, Delpech V, Chiodini PL, Redman C, Jones J. Migrant health and infectious diseases in the UK: findings from the last 10 years of surveillance. J Public Health (Oxf). 2014 Mar;36(1):28-35. doi: 10.1093/pubmed/fdt021. Epub 2013 Mar 21. Available at: http://jpubhealth.oxfordjournals.org/content/36/1/28.long

References:

Burnett A, Peel M (2001). Health needs of asylum seekers and refugees. BMJ; 322: 544-547.
Batchelor C (1995). UNHCR and issues related to nationality. Refugee. Survey Quarterly; 14(3): 112.
Blochligerc C, et al (1998). Asylum seekers and refugees with the general practitioner: main areas and venues for improvement. Social Preventive Medicine; 43: 18-28.
CDC – Centers for Disease Control and Prevention (2001). Immigrant and Refugee Health. (cited 2001, October 21). Available from URL: http://www.cdc.gov/ncidod/eid/vol4no3/cookson.htm
Chen L, Evans T, Anand S, Boufford JI, Brown H, Chowdhury M, et al. Human resources for health: overcoming the crisis, Lancet. 2004, 364:1984-90 Available from: URL: http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(04)17482-5/fulltext (Accessed 30 March, 2010).[1] Cornelius-Taylor B, Handajani YS, Jordan S, Köhler G, Korff R, Laaser U, et al. Urbanisation and public health: a review of the scientific literature. In: Strohmeier KPG, Köhler G, Laaser U, editors. Urban violence and health: determinants and management. A Study in Jakarta, Karachi and Conurbation Ruhrgebiet. Lage: Hans Jacobs-Verlag; 2001: 31-77. Available from URL: http://whqlibdoc.who.int/publications/2002/3932136829_(part1).pdf#page=31 (Accessed 24 April, 2010).
Connely J, Schweiger M (2000). The health risks of the UK‟s new Asylum Act. BMJ; 321: 5-6.
Department of Social and Economic Affairs, Population Division. Trends in total migrant stock: the 2005 revision. New York: United Nations; 2005. Available from URL: http://www.un.org/esa/population/publications/migration/UN_Migrant_Stock_Documentation_2005.pdf (Accessed 24 April, 2010).
Fassil Y (2000). Looking after the health of refugees. BMJ 2000; 321: 59.
Folkman S. & Lazarus R.S. (1988). The relationship between coping and emotion: implications for theory and research. Social Science and Medicine; 26: 309-317.
Friedman MJ (1997). Posttraumatic stress disorder. J Clin Psychology; 58 (suppl 9): 33-36.
Friedman E. An action plan to prevent brain drain: building equitable health systems in Africa. Boston MA: June, 2004. Available from URL:http://physiciansforhumanrights.org/library/documents/reports/report-2004-july.pdf (Accessed 30 March, 2010).
Friis R, Yngve A, Persson V (1998). Review of social epidemiological research on migrants‟ health: findings, methodological cautions, and theoretical perspectives. Scand J Soc Med; 26(3): 173-180.
Fuller K.L (1993). Refugee mental health in Aalborg, Denmark: Traumatic stress and cross-cultural treatment issues. Nord Journal of Psychiatry, Oslo.
Gavagan T, Brodyaga L (1998). Medical Care for Immigrants and Refugees. Chicago, Harlingen: American Academy of Family Physicians.
Gurgand M. Book review: Zhang M. China‟s poor regions. rural-urban migration, poverty, economic reform and urbanization: London : Routledge/Curzon;2003. China Perspectives. 2006; September-October: no.67. Available from URL: http://chinaperspectives.revues.org/document1055.html (Accessed 23 April, 2010).
Gushulak BD, MacPherson D (2000). Health issues associated with smuggling and trafficking of migrants. Journal of Immigrant Health 2: 67-78.
Haines D (1996). Refugees in America. A Reference Handbook. Westport, Connecticut – London: Greenwood Press. pp. 28-59.
Hart JT. The inverse care law. Lancet. 1971;297:405-12. Horowitz (1993). Stress-Response Syndromes. A Review of Posttraumatic Stress and Adjustment Disorders. In International Handbook of Traumatic Stress Syndromes. Wilson J.P., Raphael B., Ed. Ch 4, Plenum Press, New York.
Hodes M (2001). Health needs of asylum seekers and refugees: Specific treatments are effective in cases of post-traumatic stress disorder. BMJ; 323: 229.
IOM (International Organization for Migration). Trafficking. (cited 2001, November 10). Available from URL: http://www.iom.int
Kawachi I, Kennedy BP (1997). Socioeconomic determinants of health: Health and social cohesion: why care about income inequality? BMJ; 314: 1037.
Levy BS, Sidel VW (1997). War and Public Health. New York, Oxford: Oxford University Press. pp. 12-23.
MacPherson DW (2001). Human health, Demography and Population Mobility. IOM Migration and Health, Newsletter; 1: 1-4.

Marsella A., Friedman M.J., Gerrity E., & Scurfield R, Ed (1996). Ethno cultural variation in Trauma and PTSD. New York: American Psychological Association Press.
Mejia A. Migration of physicians and nurses: a world wide picture. Bull World Health Organ.2004;82:8 (reprinted with permission of International J. Epidemiol. (Available from URL: http://www.who.int/bulletin/volumes/82/8/626.pdf
(Accessed 25 April, 2010)
Meropol SB (1995). Health status of pediatric refugees in Buffalo, N.Y. Arch Pediatric Adolesc Med 1995; 149: 887-92.
Mensah K, Mackintosh M, Henry L. The „skills drain" of health professionals from the developing world: a framework for policy formulation. London: Medact; February 2005. Available from: URL: http://www.medact.org/content/Skills%20drain/Mensah%20et%20al.%202005.pdf (Accessed 31 March, 2010).
National Center for Geographic Information and Analysis. The global demography project. Available from: URL:http://www.ncgia.ucsb.edu/pubs/gdp/pop.html (Accessed 30 March, 2010).
Ormerod L (1990). Tuberculosis screening and preventikon in new immigrants 1983-8. Respir Med; 84: 269-271.
Ravallion M, Chen S, Sangraula P. New evidence on the urbanization of global poverty. Popul Devel Rev. 2007; 33:41:557-701. Available from URL: http://www.jstor.org/pss/25487618 (Accessed 24 April, 2010).
Stalker P (1997). Refugees and Migration. (Cited 2001, November 10). Available from URL: http://www.oneworld.org/guides/migration/index.html
Schatzer P (2001). Global Migration trends – An Era of International Migration. Statement at OSCE PA Conference on Migration. Penha Longa 2001. (cited 2001, November 20). Available from URL: http://www.iom.int/en/archive/Schatzer_osce_penhalonga_101001.shtml
Seeger JR. Research on urban health – the priorities and approaches. In: Harpham T. and Tanner M., editors.: Urban health in developing countries. Progress and prospects. London: Earthscan; 1995. pp. 64-81
Toole MJ, Waldman RJ (1997). The Public Health Aspects of Complex Emergencies and refugee situations. Annu Rev Public Health; 18: 283-312.
United Nations. The universal declaration of human rights. Available from: URL:http://www.un.org/en/documents/udhr/ (accessed 30 March, 2010). Friedman E. An action plan to prevent brain drain: building equitable health systems in Africa. Boston MA: June, 2004. Available from URL:http://physiciansforhumanrights.org/library/documents/reports/report-2004-july.pdf (Accessed 30 March, 2010).
UN (2001). Foreign and foreign-born residents. (cited 2001, December 04). Available from URL: http://migration.ucdavis.edu/Data/pop.on.www/AboutFP.html
UNHCR (2001). (cited 2001, December 04). Available from URL: http://www.unhcr.ch/cgi-bin/texis/vtx/home
UNRWA 2007Global trends: refugees. Asylum-seekers, returnees, internally displaced and stateless persons. Country data sheets, 16 June 2009. UNRWA-UNHCR. Available from URL: http://www.unhcr.org/4a375c426.html (Accessed 30 March, 2010).
USAID (1999). Gender Reach Project. Washington: USAID Office on Women in Development.
Walker PF, Jaranson J (1999). Refugee and immigrant health care. Med Clin North Am; 83: 1103-1120.
Whelan A, Arkles R, Dewdney J, Zwi A. International movement of skilled health professionals: ethical policy challenges for developed nations, Harvard Health Policy Review. 2004;5:2. Available from URL: http://www.hcs.harvard.edu/~epihc/currentissue/fall2004/whelan_arkles_dewdney_zwi.pd (Accessed 23 April, 2010).
WHO (2001). World Health Report 2001. Conflicts and disasters. (cited 2001, October 10). Avaliable from URL: http://www.who.ch/
World Health Organization. International recruitment of health personnel: draft global code of practice. Report by the Secretariat. Geneva: World Health Organization; 2008. Available from URL:http://www.who.int/gb/ebwha/pdf_files/EB124/B124_13-en.pef (Accessed 31March, 2010).
Woodward A, Kawachi I (2001). Why should physicians be concerned about health inequalities? West J Med; 175: 6-7.

World Bank. High level forum on the MDGs. Addressing Africa‟s health workforce crisis: an avenue for action. Abuja, December 2004. Available from: URL: http://info.worldbank.org/etools/docs/library/206812/AfricasWorkforceHLF%20Abuja.pdf (Accessed 9 April, 2010).
World Bank. Migration and remittances data: migration and development brief 5: Revisions to remittance trends, 2007. Available from URL: http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1110315015165/MD_Brief5.pdf (Accessed 30 March, 2010).
World Federation of Public Health Associations. Resolution. Ethical restrictions on international recruitment of health professionals from low-income countries. Geneva: World Federation of Public Health Associations; 2005. Available from: URL: http://www.wfpha.org/Archives/05_policy_Recruitment.pdf (Accessed 24 April, 2010).
World Federation of Public Health Associations. (Available from URL: http://www.wfpha.org/Archives/05_policy_Recruitment.pdf (Accessed 25 April, 2010).

Recommended readings

Blochligerc C, et al (1998). Asylum seekers and refugees with the general practitioner: main areas and venues for improvement. Social Preventive Medicine; 43: 18-28.
Burnett A, Peel M (2001). Health needs of asylum seekers and refugees. BMJ; 322: 544-547.
IOM (International Organization for Migration). Trafficking. (cited 2001, November 10). Available from URL: http://www.iom.int
Levy BS, Sidel VW (1997). War and Public Health. New York, Oxford: Oxford University Press.
Toole MJ, Waldman RJ (1997). The Public Health Aspects of Complex Emergencies and refugee situations. Annu Rev Public Health; 18: 283-312.
UNHCR (2001). (cited 2001, December 04). Available from URL: http://www.unhcr.ch/cgi-bin/texis/vtx/home
WHO (2001). World Health Report 2001. Conflicts and disasters. (cited 2001, October 10). Avaliable from URL: http://www.who.ch/

Title:	**N 2.5 SOCIAL DETERMINANTS OF HEALTH INEQUALITIES**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Author	Janko Jankovic
Address for correspondence	Dr. Janko Jankovic Faculty of Medicine, University of Belgrade Centre-School of Public Health and Health Management Institute of Social Medicine Dr Subotica 15, 11000 Belgrade, Serbia E-mail: janko.jankovic@mfub.bg.ac.rs
Key words	Social determinants of health; gender; health inequalities; social inequalities; social conditions; social environment.
Topics	The largest contribution to health inequalities both within and between countries around the world is attributable to the social circumstances in which people live and work, i.e. to the social determinants of health. Educational attainment, income, occupational category and social class are probably the most often used indicators of current socioeconomic status in studies on social inequalities in health which present differences in health that are unnecessary, avoidable, unfair and unjust. They are also systematic (not distributed randomly) and socially produced and therefore modifiable. The fairest way to combat against social inequalities in health is to improve the health of the most disadvantaged faster than that among the rich.
Learning objectives	After completing this module participants will: - be aware that health is not only a medical, but also a social issue - be familiar with the concept of social determinants of health, including gender - understand how social determinants operates at different levels (individual, household, community, national and international) - acquire the skills to apply the social determinants and gender framework to shape and inform health policies and interventions - advance strategic thinking on tackling health inequalities
Teaching methods	Lectures, interactive small group discussions, case studies, exercises.
Who should apply	Those who pursue an international career in public health management, policy development, research or advocacy; entrance requirements are to be determined by the institution offering the module.
Career opportunities	Teaching/research careers in academic environments; policy administration of public health institutions, non-governmental organisations and consulting companies
Assessment of students	Multiple choice questionnaire, presentation of case study and exercise performed, a field visit and report.
COMMENTS on the module by lecturers and students	**???**

Social determinants of health inequalities

Introduction

The largest contribution to health inequalities both within and between countries around the world is attributable to the social circumstances in which people live and work, i.e. to the social determinants of health (Marmot, 2005).

According to WHO's Commission on Social Determinants of Health (WHO 2008) these circumstances are shaped by the distribution of money, power and resources at local, national and global levels.
Social determinants of health affect the health of individuals and communities throughout life and determine the degree to which a person possesses the physical, social, and personal resources to identify and achieve personal aspirations, satisfy needs and cope with the environment (Raphael 2004). Tarlov (1996) summarized the concept of social determinants as ―the social characteristics within which living takes place‖.

There are many different determinants considered to be among social determinants of health (Regidor 2006). In the publication ―Social determinants of health: the solid facts‖ by Wilkinson and Marmot (Wilkinson and Marmot 2003) a strong evidence was found for the relation between socioeconomic status and health, i.e. for 10 social determinants of health named the social gradient, stress, early life, social exclusion, work, unemployment, social support, addiction, food, and transport. The organizers of the 2002 York University conference (Raphael 2009) identified the following 14 social determinants of health: aboriginal status, disability, early life, education, employment and working conditions, food insecurity, health services, gender, housing, income and income distribution, race, social safety net, social exclusion, unemployment, and job security.

In the last two decades we are witnesses of major developments in public health policies. Determination and dedication to reduce health inequalities between population groups have been added to traditional focus of improving the overall health of the population. The term ―social determinants‖ plays a pivotal role in these new policies (Graham 2004).

An historical perspective

In the middle of the 19th century German social scientist Friedrich Engels (Engels 1845/1987) studied health conditions of the working class in England and pointed out that some factors like poverty, poor housing, inadequate diet, and day-to-day stress were main generators to social class inequalities in health and directly led to infections and diseases among the worst-off.

Rudolf Virchow (Virchow 1848/1985), known as the ―father of modern pathology‖ investigated the epidemic of typhus in Upper Silesia in 1848 and stressed social conditions as underlying determinants.
There are numerous British researchers whose inquiry related to social determinants of health and health inequalities. Edwin Chadwick in his report paid special attention to social determinants influencing health (Flynn 1965). According to him, disease is directly related to living conditions.

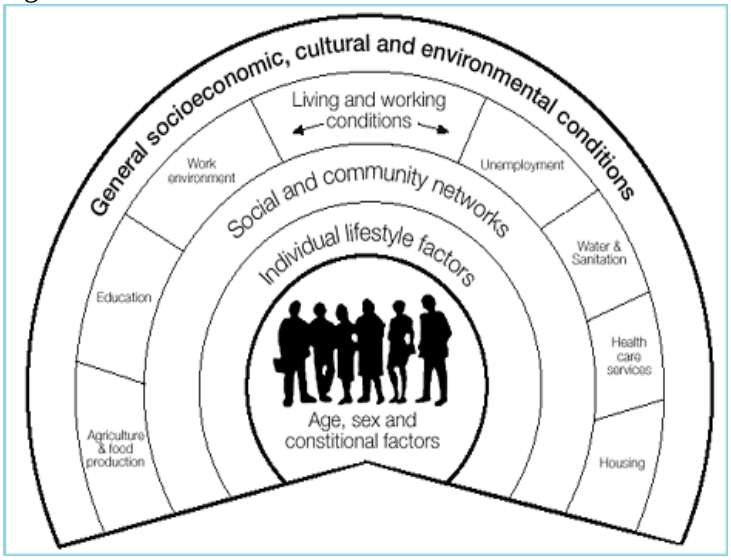
The *Black report* represents another important document published in the United Kingdom in 1978 by a research working group led by Sir Douglas Black (Department of Health and Social Security 1980). The results suggest that social class affiliation is important for health and mortality of certain diseases, mainly chronic non-communicable diseases. A constant social gradient was present for almost all causes of mortality. Those on the lowest incomes had higher death rates, and worse ill health, at every stage of life.
Like previously mentioned reports on health inequalities in the UK, the more recently published *Acheson report* (Acheson 1998) demonstrates the existence of health inequalities and their relationship to social class.

Models of social determinants of health

Many models have been developed to show the mechanisms by which social determinants of health influence health outcomes of the population. They also explain the relationships between different types of health determinants and locate strategic points for policy action.

The most commonly used model is Dahlgren and Whitehead's model (1991) which represents social inequalities in health as a result of interactions between different levels of causal conditions, from individual lifestyle factors via social and community networks to the level of national health policies (Figure 1). In the center of this so called ―rainbow-like model‖ are individuals arranged by sex, age, and genetic characteristics that undoubtedly have an impact on their health and that are largely fixed. Surrounding them are determinants that are theoretically modifiable. For example, poor standards of living in a society affects individual's choice related to housing, work, social interactions, as well as eating habits in a negative sense. In addition, cultural beliefs about women's position in society or attitudes towards ethnic minorities influence their standard of living, social status and consequently their health.

Figure 1. Determinants of health



Source: Dahlgren and Whitehead (1991).

Mackenbach's model (WHO 2005) of selection vs. causation stresses the mechanisms by which health inequalities are generated. Social selection implies that health selects people to different socioeconomic strata, while social causation explains how social position determines health.

Brunner, Marmot and Wilkinson's model (Brunner and Marmot 1999) also known as multiple influences across the life-course explains how behavioural, psychological, and material factors mediate the relationship between social determinants and health outcomes. Early life, hereditary and cultural factors have strong influence at all stages of life.

Underlying social determinants of health including gender

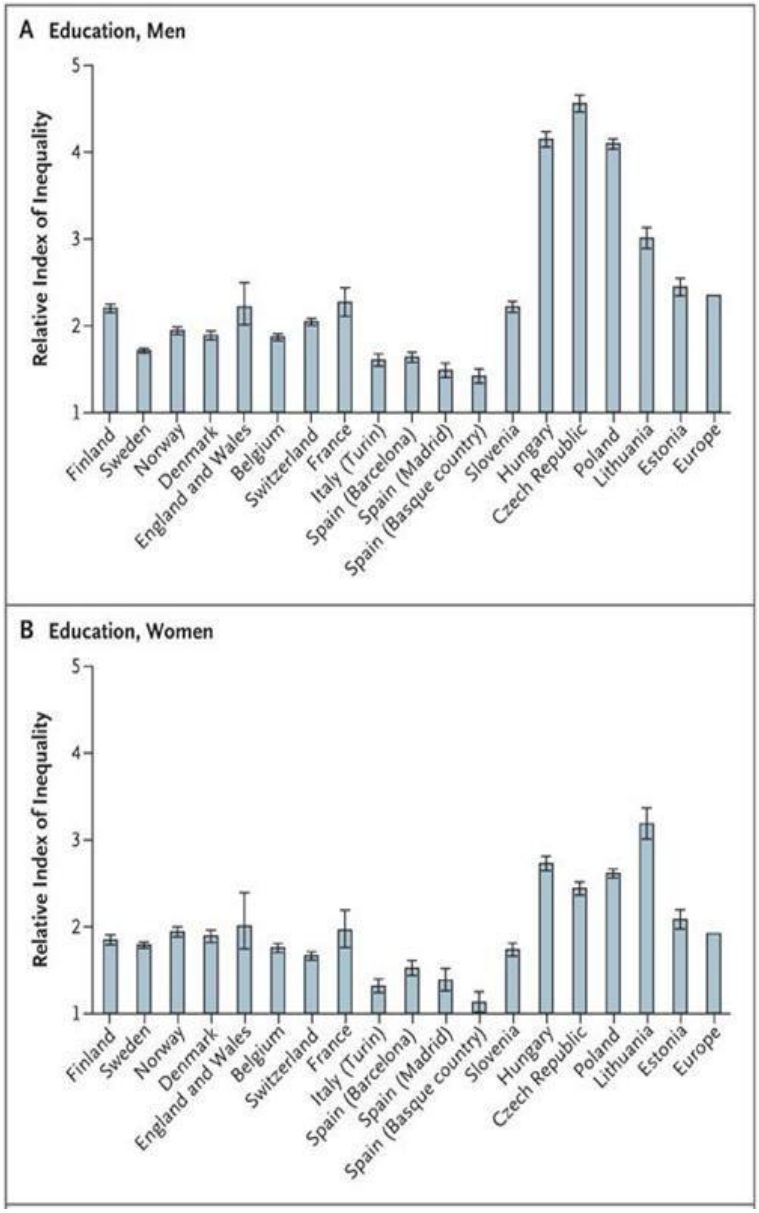
Educational attainment, income, occupational category and social class are probably the most often used indicators of current socioeconomic status in studies on social inequalities in health (Solar and Irwin 2010).

Education

Education is very important social determinant of health and is strongly interrelated with income and occupation. People with higher educational attainment are far more likely to be employed and to find more lucrative and better paid job and consequently to be healthier. It also enables people to acquire necessary

skills for identification and solving both individual and group problems. Educational level influence morbidity and mortality of numerous diseases. In Sweden Erikson (2001) observed that men with primary education have two times higher mortality rate than man with doctoral degree. The more surprising is the fact that men with PhD had two times lower mortality than those with tertiary education like lawyers and doctors. It can be concluded that health inequalities are present among people of all levels of education and not merely among those with low and high education. The study conducted in 22 European countries (Mackenbach et al. 2008) also found higher mortality rates among people with low education. The magnitude of educational inequalities from any cause of death varies substantially across Europe in both men (Figure 2A) and women (Figure 2B). Education-related inequalities are smaller than the average for Europe in all Southern European populations and larger than average in most countries in the Eastern and Baltic regions. For example, in Sweden and Denmark the relative index of inequality for men is less than 2, indicating that mortality among those with the least education is less than twice that among those with the most education, while in the Czech Republic, Hungary, and Poland, the relative index of inequality for men is 4 or higher (Mackenbach et al. 2008).

Figure 2. Educational inequalities from any cause of death in European countries



Source: Mackenbach et al. (2008).

Income

There is a clear association between income and ill health. A high income level reflects a lower mortality rate. One US study (McDonough et al. 1997) clearly shows that higher household income implies lower mortality. People belonging to the poorest households are exposed to four times higher mortality risk than those from the richest households. Gradient was also found between income and health: those who were second household category according to income had higher mortality than the most affluent while third household category had worse health compared to the second. American sociologist Samuel Preston (1975) explained the relationship between income and health as curvilinear. The famous ―Preston curvǁ shows strong positive correlation between Gross Domestic Product (GDP) per capita and life expectancy in poor countries (e.g. Nigeria, Pakistan, and India), i.e. not much wealth is needed to live longer. Conversely, in developed countries (United Kingdom, Germany, and Japan) life expectancy is less sensitive to GDP fluctuations.

Employment status

Unemployment has detrimental effect on health. Unemployed people have worse health and higher risk of premature death compared to those employed (Wilkinson and Marmot 2003). Sudden job loss is a main cause of stress, cardiovascular and mental diseases, as well as, fatal outcome (Ziglio et al. 2002). Unsecure job position, little control over one's work and high demands all matter for health, especially mental health.

There is negative correlation between type of occupation and morbidity and mortality measures (Wilkinson and Marmot, 2003). According to the Black report (Department of Health and Social Security 1980) inhabitants of England and Wales were classified into five social classes by the occupation of the household head. Mortality rates for unskilled class (labourer, cleaner) were two and half times higher compared to professional class (doctors, engineer). The same ratio was found among women affiliated in social classes by the occupation of their spouses.

Social gradient

The lower the socioeconomic position, the poorer health, and the higher morbidity and mortality rates. People at the bottom of social hierarchy run at least twice the risk of serious illness and premature death as compared to those at the top. Social gradient in health is not confined to the poor. It is present across society, so even among middle class office workers, staff with lower rank are sicker and die earlier compared to higher ranking staff (Wilkinson and Marmot 2003). Differences were also found among civil servants with stable jobs in the famous Whitehall study (Ferrie 2004). Men with low-paid jobs had a mortality rate three times higher than that of men with high-paid jobs and also suffered much more disease. Both material and psychosocial factors contribute to these differences (Wilkinson and Marmot 2003). Autonomy, i.e. control people have over their lives and possibility of active inclusion and participation in social activities are key factors for health, wellbeing and longevity (Marmot, 2007). They are foundation of the link between health and socioeconomic position.

Gender

Gender is a socially constructed concept, while sex refers to inevitable and unavoidable biological differences between men and women. Gender arises from differences in socially constructed gender roles related to different attitudes, behaviours, characteristics, values and inequalities in relative power and influence that shape relations between women and men, and boys and girls. In many societies, women and girls have lower social status, they are less participative in decision making and suffer more systematic discrimination in access to power, prestige and resources compared to men and boys (WHO 2002; Annandale and Hunt 2000). They are often limited in obtaining education and access to respected and well paid occupations (Solar and Irwin 2010). Women are also more likely to work in informal sector like housework and street vending and take lower ranks in the professional hierarchy (WHO 2004). As Doyal

(2000) noted, fight against gender inequalities in access to resources would be one of the highest priorities on political agenda towards gender equity in health. Therefore, as a consequence of the aforementioned facts, women and girls are at highest risk of negative health effects from gender-based social hierarchies.

Social inequalities in health

A burgeoning volume of research identified social determinants of health as root causes and main generators of health inequalities (Marmot 2005; Jankovic 2010; WHO 2008; WHO 2013a). Furthermore, members of minority groups such as migrants and Roma populations or patients suffering from socially stigmatised diseases like mental or HIV/AIDS, are additionally exposed to health inequalities (Janevic 2012; European Union 2014).

Social inequalities in health are an important and ongoing public health issue in the world and a major challenge for adoption and implementation of health policies (Siegrist 2004; Ministry of Health 2000; WHO 2013a). They present differences in health that are unnecessary, avoidable, unfair and unjust (Whitehead 1990). They are also systematic (not distributed randomly) and socially produced and therefore modifiable (Whitehead and Dahlgren 2006a).

There is no country in the WHO European Region, regardless of wealth state, that is immune to social inequalities in health and tackling them should be a public health priority for policy decision makers (WHO 2013a).

Social inequalities in health lead to an increased vulnerability of the population, as well as, the growing differences in health behavior and outcomes between different population groups. They are measured by various indicators of health such as life expectancy, mortality rates, incidence, and prevalence of various diseases and self-perceived health (WHO 2010).

Europe is a region with marked inequalities in life expectancy at birth and 16 years difference is present between countries with the highest and lowest life expectancy. Inequalities are also found within countries. Those better-off live longer than the most deprived people (UCL Institute of Health Equity 2011). Health divide can be also observed by looking at the mortality rates in EU countries. In Lithuania and Latvia age-standardized death rate for men in 2010 was almost 1400 per 100.000, while the lowest one was 561 for Greece. A similar pattern was noticed for females, but less pronounced (European Commission 2013).

Influence of social inequalities on morbidity has been studied in many European countries, and the results of the studies showed a clear association between social determinants and health status of the respondents (Dalstra et al. 2005; Cavelaars et al. 1998; Mackenbach et al. 1997; Siegrist and Marmot 2006; Kunst et al. 2005; Kaikkonen et al. 2009, Jankovic et al. 2011). The worse socioeconomic status the higher probability of assessing poorer health and the higher presence of medical symptoms and chronic conditions (Domínguez-Berjon et al. 2006; Reijneveld 1998; Van Lenthe et al. 2004; Jankovic et al. 2012). Compared to men women are more likely to report their general health as poor or the presence of a long-standing illness. This can partly be explained by women's lower socioeconomic position in the society (EU 2013). It is also more likely that people with lower education, lower income, unemployed and people who are engaged in lower paying occupations evaluate their health as poor (McFadden 2008; Louckx 2001; Broom 2006).

Nowadays social inequalities in health are widening both between and within countries, despite improved technology, applied best evidence based interventions and available resources. Faced with this challenge policy decision makers have been searching for the ways of shifting focus from disease to people bearing in mind conditions of their daily lives (WHO 2006). One solution to address and tackle social inequalities in health is to put more effort for controlling major killer diseases and to improve health systems. But,

improved health systems are not sufficient to solve major health threats. A second belated reaction is to deal with poverty, which is already the objective of the first Millennium Development Goal (United Nations 2012). To decrease social inequalities in health across the world there is an eminent need for poverty reduction which is complementary to health system's development: to take action on the social determinants of health, i.e. to improve the conditions in which people live, work, grow and age (Marmot 2005). WHO's Commission on Social Determinants of Health indicated a broad range of policies (social, labour, environmental, health) for reducing social inequalities in health according to existing scientific knowledge. In their final report: ―Closing the gap in a generation: health equity through action on the social determinants of health‖ (WHO 2008) three overarching recommendations were proposed: improvement of daily life conditions, getting to grips with inequitable distribution of power, money and resources and measurement and understanding the problem and assessing the impact of action.

Polices should strive to level up the health of the poor. The fairest way to combat against social inequalities in health is to improve the health of the most disadvantaged faster than that among the rich. The success in that fight is the only valid indicator of reduced social inequalities throughout the whole population (Whitehead and Dahlgren 2006b).

Exercise:
Discussing the social determinants of health

Give to every participant a handout with the following questions:

1. What are the determinants which contribute to good health and ill health? List them.
2. Distinguish between biological and social determinants of health, from the list.
3. What are the differences between sex and gender? Give examples.
4. Are there differences in health status across different social groups? If yes, quote them and the reasons for these differences?
5. List differences in health status between different countries and within your own country.

Participants will work in small groups and will write down their responses on a flip chart. After that whole group discussion facilitated by lecturer will be performed.

Case studies:
Source: Blas E, Sommerfeld J, Sivasankara Kurup A (Eds.) (2011). Social determinants approaches to public health: from concept to practice, a collection of 13 case studies addressing social determinants of health. World Health Organization. Available at:
http://www.who.int/social_determinants/tools/SD_Publichealth_eng.pdf?ua=1 (accessed 14 November, 2014).
The thirteen case studies contained in this publication document the real-life challenges in implementing health programmes using a social determinants approach, including the challenges in scaling up, managing policy changes, managing intersectoral processes, adjusting design and ensuring sustainability:

1. Heidi Bart Johnston, Anna Schurmann, Elizabeth Oliveras and Halida Hanum Akhter.Scaled up and marginalized: a review of Bangladesh's menstrual regulation programme and its impact, p 9.
2. Stephanie Sinclair, Amanda Meawasige and Kathi Avery Kinew Youth for Youth—a model for youth suicide prevention: case study of the Assembly of Manitoba Chiefs Youth Council and Secretariat, Canada, p 25.
3. Irene Agurto, Lorena Rodriguez and Isabel Zacarías. Food and vegetable promotion and the 5-a-day programme in Chile for the prevention of chronic non-communicable diseases: across-sector relationships and public–private partnerships, p 39.

4. Su Xu, Jia Cheng, Chanjuan Zhuang, Shaokang Zhan and Erik Blas. Dedicated delivery centre for migrants in Minhang District, Shanghai: intervention on the social determinants of health and equity in pregnancy outcome for internal migrants in Shanghai, China, p 49.
5. Siswanto Siswanto and Evie Sopacua Reviving health posts as an entry point for community development: a case study of the Gerbangmas movement in Lumajang district, Indonesia, p 63.
6. Sara Javanparast. Child malnutrition—engaging health and other sectors: the case of Iran, p 77.
7. Yeşim Tozan, Joel Negin and James Ogola Wariero. The Millennium Villages Project: improving health and eliminating extreme poverty in rural African communities, p 91.
8. Benjamin Uzochukwu, Benjamin Onwughalu, Erik Blas, Obinna Onwujekwe, Daniel Umeh and Uche Ezeoke. Immunization programme in Anambra State, Nigeria: an analysis of policy development and implementation of the reaching every ward strategy, p 105.
9. Kausar S Khan and Ajmal Agha. Women's empowerment and its challenges: review of a multi-partner national project to reduce malnutrition in rural girls in Pakistan, p 117.
10. Laura C. Altobelli and Carlos Acosta-Saal. Local Health Administration Committees (CLAS): opportunity and empowerment for equity in health in Perú, p 129.
11. James Hargreaves, Abigail Hatcher, Joanna Busza, Vicki Strange, Godfrey Phetla, Julia Kim, Charlotte Watts, Linda Morison, John Porter, Paul Pronyk and Chris Bonell. What happens after a trial? Replicating a cross-sectoral intervention addressing the social determinants of health: the case of the Intervention with Microfinance for AIDS and Gender Equity (IMAGE) in South Africa, p 147.
12. Jaap Koot, Romanus Mtung'e and Jane Miller Insecticide-treated nets in Tanzania mainland: challenges in reaching the most vulnerable, most exposed and poorest groups, p 161.
13. Patrick Harris, Jan Ritchie, Graham Tabi and Tony Lower. Addressing the social determinants of alcohol use and abuse with adolescents in a Pacific Island country (Vanuatu), p 175.

References:

Acheson D (1998). Inequalities in Health: Report of an independent inquiry, London: HMSO.

Annandale E, Hunt K (2000). Gender inequalities in health. Buckingham, Philadelphia: Open University Press.

Broom DH, D'Souza RM, Strazdins L, Butterworth P, Parslow R, Rodgers B (2006). The lesser evil: bad jobs or unemployment? A survey of mid-aged Australians. Soc Sci Med, 63:575-586.

Brunner E, Marmot M (1999). Social organisation, stress and health. In: Marmot MG, Wilkinson RG, editors. Social determinants of health. Oxford: Oxford University Press.

Cavelaars AE, Kunst AE, Geurts JJ, Crialesi R, Grötvedt L, Helmert U, Lahelma E, Lundberg O, Matheson J, Mielck A, Mizrahi A, Mizrahi A, Rasmussen NK, Regidor E, Spuhler T, Mackenbach JP (1998). Differences in self reported morbidity by educational level: a comparison of 11 western European countries. J Epidemiol Community Health, 52:219-27.

Dahlgren G, Whitehead M (1991). Policies and strategies to promote social equity in health. Stockholm: Institute for Future Studies.

Dalstra JAA, Kunst AE, Borrell C, Breeze E, Cambois E, Costa G, Geurts JJM, Lahelma E, Van Oyen H, Rasmussen NK, Regidor E, Spadea T and Mackenbach JP (2005). Socioeconomic differences in the prevalence of common chronic diseases: an overview of eight European countries. Int J Epidemiol, 34:316-326.

Department of Health and Social Security (1980). Inequalities in health: report of a research working group (Black report). London: DHSS.

Domínguez-Berjón F, Borrell C, Rodríguez-Sanz M, Pastor V (2006).The usefulness of area-based socioeconomic measures to monitor social inequalities in health in Southern Europe. Eur J Public Health, 16(1):54-61.

Doyal L (2000). Gender equity in health: debates and dilemmas. Social Science & Medicine, 51:931-39.

Engels F (1845/1987). The condition of the working class in England. New York: Penguin Classics.

Erikson R (2001). Why do graduates live longer? In: Jonsson JO, Mills C (Eds). Cradle to grave: life-course change in modern Sweden. Durham: Sociology Press.
European Commission Directorate-General for Health and Consumers (2013). Health inequalities in the EU. Final report of a consortium. Consortium lead: Sir Michael Marmot. European Union.
European Union (2014). Action on health inequalities in the European Union. The EU Health Programme's contribution to fostering solidarity in health and reducing health inequalities in the European Union 2003–13. Luxembourg: Publications Office of the European Union.
Ferrie JE (Ed.) (2004). Work, stress and health: the Whitehall II study. London: Council of Civil Cervice Unions.
Flinn MW (Ed.) (1965), Chadwick E. Report on the Sanitary Condition of the Labouring Population of Great Britain, 1842, Edinburgh: Edinburgh University Press.
Graham H (2004). Social determinants and their unequal distribution: clarifying policy understandings. Milbank Q, 82(1):101-102.
Janevic T, Jankovic J, Bradley E (2012). Socioeconomic position, gender, and inequalities in self-rated health between Roma and non-Roma in Serbia. Int J Public Health, 57(1):49-55.
Jankovic J, Simic S, Marinkovic J (2010). Inequalities that hurt: demographic, socio-economic and health status inequalities in the utilization of health services in Serbia. Eur J Public Health, 20(4):389-96.
Janković J, Marinković J, Simić S (2011). Utility of data from a national health survey: Do socioeconomic inequalities in morbidity exist in Serbia? Scand J Public Health, 39(3):230-238.
Janković J, Janević T, von dem Knesebeck O (2012). Socioeconomic inequalities, health damaging behavior, and self-perceived health in Serbia: a cross-sectional study. Croat Med J, 53(3):254-62.
Kaikkonen R, Rahkonen O, Lallukka T, Lahelma E (2009). Physical and psychosocial working conditions as explanations for occupational class inequalities in self-rated health. Eur J Public Health, 19:458-463.
Kunst AE, Bos V, Lahelma E, Bartley M, Lissau I, Regidor E, Mielck A, Cardano M, Dalstra JA, Geurts JJ, Helmert U, Lennartsson C, Ramm J, Spadea T, Stronegger WJ, Mackenbach JP (2005). Trends in socioeconomic inequalities in self-assessed health in 10 European countries. Int J Epidemiol, 34:295-305.
Louckx F, Vanroelen C, Beck M (2001). Socio-economic differences in health and access to health care. Archives of Public Health, 59:239–263.
Mackenbach JP, Kunst AE, Cavelaars AEJM, Groenhof F, Geurts JJM, EU Working Group on Socioeconomic Inequalities in Health (1997). Socioeconomic inequalities in morbidity and mortality in Western Europe. Lancet, 349:659-74.
Mackenbach JP, Stirbu I, Roskam AJ, Schaap MM, Menvielle G, Leinsalu M, Kunst AE (2008). European Union Working Group on Socioeconomic Inequalities in Health. Socioeconomic inequalities in health in 22 European countries. N Engl J Med, 358:2468-2481.
Marmot M (2005). Social determinants of health inequalities. Lancet, 365:1099-1104.
Marmot M (2007). Uvod. U: Miličić I (ur.). Sindrom statusa: kako društveni položaj utječe na naše zdravlje i dugovječnost. Zagreb: Algoritam, str. 9-21.
McDonough P, Duncan GJ, Williams D, and House J (1997). Income dynamics and adult mortality in the United States, 1972 through 1989. Am J Pub Health, 87:1476-1483.
McFadden E, Luben R, Bingham S, Wareham N, Kinmonth AL, Khaw KT (2008). Social inequalities in self-rated health by age: cross-sectional study of 22,457 middle-aged men and women. BMC Public Health, 8:230.
Ministry of Health and Social Affairs (2000). Hälsa pa lika villkor: nationella mål för folkhälsan. Slutbetänkande av nationella folkhälsokommittén (Health on equal terms: final proposal on national targets for public health). Stockholm: Ministry of Health and Social Affairs, SOU 2000:91.
Preston SH (1975). The Changing Relation between Mortality and Level of Economic Development. Population Studies, 29:231-248.
Raphael D (Ed.) (2009). Social determinants of health: Canadian perspectives, 2nd edition. Toronto: Canadian Scholars' Press.
Regidor E (2006). Social determinants of health: a veil that hides socioeconomic position and its relation with health. J Epidemiol Community Health, 60:896-901.

Reijneveld SA (1998). The impact of individual and area characteristics on urban socioeconomic differences in health and smoking. Int J Epidemiol, 27:33-40.
Sigriest J (2004). Social variations in health expectancy in Europe. In: An ESF Scientific Programme 1999–2003 – Final Report. Duesseldorf: University of Duesseldorf: Medical Faculty.
Siegrist J, Marmot M (Eds.) (2006). Social inequalities in health. New evidence and policy implications. Oxford: University Press.
Solar O, Irwin A (2010). A conceptual framework for action on the social determinants of health. Social Determinants of Health Discussion Paper 2 (Policy and Practice). Geneva, World Health Organization.
Tarlov A (1996). Social determinants of health: the sociobiological translation. In: Blane D, Brunner E, Wilkinson R (Eds.). Health and social organization. London: Routledge, 71-93.
UCL Institute of Health Equity (2011). Interim second report on social determinants of health and the health divide in the WHO European region. Geneva: World Health Organization.
United Nations (2012). Millenium Development Goals. Available at: http://www.un.org/millenniumgoals/ (accessed 11 November 2014)
Van Lenthe FJ, Schrijvers CT, Droomers M, Joung IM, Louwman MJ, Mackenbach JP (2004). Investigating explanations of socio-economic inequalities in health: the Dutch GLOBE study. Eur J Public Health, 14(1):63-70.
Virchow R (1848/1985). Collected essays on public health and epidemiology. Cambridge: Science History Publications.
Whitehead M (1990). The Concepts and Principles of Equity in Health. Copenhagen: WHO, Reg. Off. Eur. (EUR/ICP/RPD 414 7734r), p. 29.
Whitehead M (1992). The concepts and principles of equity and health. Int J Health Serv, 22(3):429-45.
Whitehead M, Dahlgren G (2006a) Concepts and principles for tackling social inequities in health. Levelling up (part 1). World Health Organization: Studies on social and economic determinants of population health nº 2, Denmark.
Whitehead M, Dahlgren G (2006b). Ten principles for policy action. In: Dahlgren G, Whitehead M, eds. Levelling up (Part 1): a discussion paper on concepts and principles for tackling social inequities in health. Copenhagen, WHO Regional Office for Europe: 13-21.
WHO (2002). Gender glossary. Appendix to Integrating gender perspectives in the work of WHO: WHO gender policy. Geneva: World Health Organization.
WHO (2004). Gender, Health and Work. Gender and health information sheets. Available at: http://www.who.int/gender/other_health/Gender,HealthandWorklast.pdf (accessed 11 November 2014)
WHO (2005). Commission on social determinants of health. Towards a conceptual framework for analysis and action on the social determinants of health. Discussion paper for the CSDH, DRAFT.
WHO (2006). Health and Economic Development in South-Eastern Europe. Paris: World Health Organization.
WHO (2008). Closing the gap in a generation: health equity through action on the social determinants of health. Final report of the Commission on Social Determinants of Health. Geneva: World Health Organization. Available at: http://whqlibdoc.who.int/publications/2008/9789241563703_eng_contents.pdf?ua=1 (accessed 11 November 2014)
WHO (2010). Putting our own house in order: examples of health-system action on socially determined health inequalities. Copenhagen: WHO Regional Office for Europe.
WHO (2013a). Review of social determinants and the health divide in the WHO European Region: final report.
WHO (2013b). The European health report 2012. Charting the way to well-being.
Wilkinson R, Marmot M (2003). Social determinants of health: the solid facts (Second edition). Copenhagen: WHO Regional Office for Europe. Available at: http://www.euro.who.int/ data/assets/pdf_file/0005/98438/e81384.pdf (accessed 11 November 2014)
Ziglio E, Levin L, Levi L, Bath E (Eds.) (2002). Investment for health: a discussion of the role of economic and social determinants. Copenhagen: WHO Regional Office for Europe.

Title:	**N 2.6 GENDER AND HEALTH**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Bosiljka Djikanovic
Address for correspondence	Dr. Bosiljka Djikanovic University of Belgrade, Medical Faculty, Institute of Social Medicine, Dr Subotica 8, Belgrade, Serbia E-mail: bosiljka.djikanovic@mfub.bg.ac.rs
Key words	Gender, health, gender equity, gender inequality, gender analysis, gender mainstreaming.
Topics	While sex in genetically and biologically determined, gender is socially constructed identity that shapes many aspects of person's functioning and has implications on health as well. There are historically present gender disparities that are related to the power, decision making, and different societal expectations of women and man. Although gender norms and values are deeply rooted in the culture, they are not fixed and unchangeable. They might evolve over time and may vary substantially in different environments. Gender analysis aims to identify gender differences that will inform actions to address gender inequality. Gender mainstreaming in medical education is important for eliminating gender biases in existing routines of health professionals.
Learning objectives	To understand basic concepts related to differences between gender and sex, and mechanisms through which gender influences health. Adopt global perspective related to gender inequalities and challenges that women met in different cultures worldwide. Acquisition of knowledge and skills needed for analysis of gender-based differences in health and health-related behavior. To become familiar with the policies and strategies that are being implemented in order to overcome gender-based inequalities.
Teaching methods	Lectures, interactive small group discussions, case studies, and international field practice
Who should apply	Those who pursue an international career in public health management, policy development, research or advocacy; entrance requirements are to be determined by the institution offering the modules.
Career opportunities	Teaching and/or research careers in academic environments; leadership positions in the health care sector, policy makers, private industry and Non-Governmental Organisations; free lance consulting.
Assessment of students	Written report and presentation of "gender analysis" of chosen health problem.
COMMENTS on the module by lecturers and students	**???**

Differences between sex and gender

Women and men encounter different experiences during their lifetime that go beyond their biological differences. Biological differences are conditioned by different genetic structure and biochemical and hormonal mechanisms that makes females and males differently susceptible to certain health outcomes and diseases. For example, breast cancer is far more often in female than in male, or hypertension, which is more prevalent in female after menopause, due to the loss of protective function of hormones.

However, vast majority of other health conditions is influenced by the societal experiences related to certain sex, i.e. being born as a male or female. These experiences are accountable throughout the whole lifecycle, from the birth (and sometimes even before birth), through the childhood, adolescence, adulthood, and aging. People are born as male and female, but they learn to be boys and girls, men and women. Therefore, sex (male, female) has to be distinguished from gender (women, men). While sex in genetically and biologically determined, gender is socially constructed identity that shapes many aspects of person's functioning and has implications on health as well. There are historically present gender disparities that are related to the power, decision making, and different societal expectations of women and man. These differences are present in every culture, although not in the same extent.

Although gender norms and values are deeply rooted in the culture, they are not fixed and unchangeable. They might evolve over time and may vary substantially in different environments. Thus, the poor health consequences resulting from gender differences and gender inequalities are not static either, and they can be changed.

Cotemporary considerations of gender differences must acknowledge that some people might consider themselves as *transgender* persons, which happens when there is a mismatch between their sexual and gender identity. This population group might experience inequities at different levels, but their characteristics, health outcomes and challenges they met deserve special attention, but they will not be in the focus of this article.

Gender and health

Many health issues are linked to gender inequality, such as women's access to high-quality health care, meeting their sexual and reproductive health needs, experiencing gender-based physical and sexual violence, as well as the burden of informal care carried by women. They all lead to measurable deterioration of women's health. However, considerations of gender disparities in health are more than just women's health. Gender disparities in health take into account and analyze the impact of the different life styles, access to resources, risk-taking behavior, and dealing with a peer pressure among men and women.

There are different mechanisms how gender differences might affect health, starting from the early childhood. When resources are limited, in some countries around the world boys might have been given advantage for education in comparison to girls, especially in low income families. In a long run, there is a number of evidences that women's education is one of the most important determinant of women's health, but also the health of their offspring (Black et al, 2013). Furthermore, girls in some countries might have been forced to early marriages, before the age of 18, which is illegal and absolutely unacceptable, with profoundly negative effects on their well-being, physical and mental health, and especially reproductive health.

Societal norms consistently favorite men's position in society relative to women, which often includes tolerant attitudes related to husbands' promiscuity, followed by the lack of use of condoms and preventing women in insisting on its use. It clearly contributes to the spread of HIV that is caused by gender disparities.

Another important example is the women's access to healthcare services, which might be compromised if women in some cultures are not allowed to travel alone to visit physician, or if health

care services are not accessible to them for various reasons. In general, women in society have less financial resources that are important for independent decision making, and they are not empowered enough to make choices that will positively impacted their health. This is especially relevant when gender-based violence is concerned, which is present in almost all countries all around the world.
On the other hand, men are more often exercising risk-taking behavior, as a result of the peer pressure, perceived masculinity, and perceived expectations of society. They are related to alcohol consumption, smoking, but also involvement in accidents, and interpersonal injuries. In the past, and still among undereducated groups, smoking is considered as attractive marker of masculinity, which is nowadays reflected in the lung's cancer mortality rate being higher for men than women. However, in the future this trend might have change, since many women initiated smoking, but they are quitting less successfully then men (Djikanovic et al, 2010).

Gender in(equity)
Above mentioned gender disparities in health are results of gender inequity and inequality. Therefore, it is important to define these terms and their opposites (gender equity and gender equalities). According to the definitions of World Health Organization, *gender equity* refers to "fairness and justice in the distribution of benefits and responsibilities between women and men" (WHO, 2009). This concept recognizes that women and men have different needs and strengths, and that these differences should be identified and addressed to rectify the imbalance between the sexes. Gender inequities are unfair and avoidable; they lead to inequities in health outcomes, so use of sex-disaggregated data, additionally stratified for age and other relevant social stratifications, is an imperative in reporting population health indicators, as well as monitoring and evaluation of the interventions that aim to improve health or health-related behaviour. Prerequisite for achieving health equity is addressing gender-based discrimination in policies and practices at all levels.

Gender equality is "the absence of discrimination (on the basis of a person's sex) in providing opportunities; in allocating resources and benefits, or in access to services" (WHO, 2009). Clearly, these discriminations are presented in all countries around the world, although in significantly different extent, which is mainly associated with the level of development of civil society and respect of human rights in particular society.

Prior to addressing gender inequalities, it is important to conduct gender analysis. *Gender analysis* "identifies, analyses and informs action to address health inequalities that arise from the different roles of women and men, or the unequal power relationships between them, and the consequences of these inequalities on their health" (WHO, 2009). Gender analysis is required since people are born female or male but they learn to be girls and boys, who grow into women and men, which is a part of their gender identity and determines gender roles.

A major strategy to implement gender equality is *gender mainstreaming* (Beijing, 1995).

Gender mainstreaming
Gender mainstreaming is a process that was defined by the UN Economic and Social Council as "the process of assessing the implications for women and men of any planned action, including legislation, policies or programs, in any area, and at all levels. It is a strategy for making the concerns and experiences of women as well as of men an integral part of the design, implementation, monitoring and evaluation of policies and programs in all political, economic and societal spheres, so that women and men benefit equally, and inequality is not perpetuated. The ultimate goal of mainstreaming is to achieve gender equality" (United Nations, 1997). Gender mainstreaming is very important in the education of future health professionals, since it is a long-term strategy which aims at eliminating gender bias in existing routines for which involvement of regular actors within the organization is required (Verdonk et al, 2008).

Case studies:

- Case study on gender differences in health in Canada:

Denton M, Prus S, Walters V. (2004) Gender differences in health: a Canadian study of the psychosocial, structural and behavioural determinants of health. *Social Science and Medicine*, 58 (12), 2585-2600

- Case study on gender mainstreaming in medical education in the Netherlands:

Verdonk P, Benschop YW, De Haes JC, Lagro-Janssen AL. (2008) Making a gender difference: case studies of gender mainstreaming in medical education. *Medical Teacher* 30,e194-201.

- Review on "women's health approach" and "gender inequality" in relationship with health sector reforms in developing countries:

Standing H. Gender and Equity in Health Sector Reform Rrogrammes: A Review. (1997) *Health Policy and Planning*, 12(1), 1-18.

References:

Black RE, Victora CG, Walker SP, Bhutta ZA, Christian P, de Onis M, et al. (2013) Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet,* 382, 427-451.

Djikanovic B, Vukovic D, Djikanovic S (2013) Inequalities in intentions to quit smoking in Serbia: data from 2006 National Health Survey. *Public Health,* 127,521-9.

UN Women (1995) Fourth World Conference on Women, Beijing. Available at: http://www.un.org/womenwatch/daw/beijing/ (accessed 12 December 2014)

Verdonk P, Benschop YW, De Haes JC, Lagro-Janssen AL. (2008) Making a gender difference: case studies of gender mainstreaming in medical education. *Medical Teacher*, 30,e194-201.

United Nations (1997). United Nations Economic and Social Council's agreed conclusions 1997/2.

World Health Organization (2009). Strategy for Integrating gender analysis and actions into the work of WHO. Available at: http://whqlibdoc.who.int/publications/2009/9789241597708_eng_Text.pdf (accessed Nov 15, 2014).

Additional reading

WHO (2004) Gender, Health and Work. Fact Sheet. Available at: http://www.who.int/gender/other_health/Gender,HealthandWorklast.pdf?ua=1

WHO (2003) Gender, Health and Tobacco. Fact Sheet. Available at: http://www.who.int/gender/documents/Gender_Tobacco_2.pdf?ua=1

WHO (2002) Gender and Tuberculosis. Fact Sheet. Available at: http://www.who.int/gender/documents/en/TB.factsheet.pdf?ua=1

WHO (2002) Gender and Mental Health. Fact Sheet. Available at: http://www.who.int/gender/other_health/en/genderMH.pdf?ua=1

World Health Organization (2007). Engaging men and boys in changing gender-based inequity in health: Evidence from programme interventions. Geneva. Available at http://www.who.int/gender/documents/Engaging_men_boys.pdf?ua=1

Title:	**N 2.7 STRUCTURAL AND SOCIAL VIOLENCE**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Fimka Tozija
Address for correspondence	Fimka Tozija, MD, PhD, Professor of Social Medicine, School of Medicine, Institute of Public Health, Skopje 50 Divizija No 6 1000 Skopje, Republic of Macedonia Tel: + 389 23 125 044 ext. 110 Fax: +389 23 223 354 E-mail: ftozija@mt.net.mk
Key words	Structural and social violence, armed conflicts, public health approach, structural interventions, multilevel prevention.
Topics	Theoretical and conceptual basis is provided for understanding structural and social violence, collective violence and armed conflicts as a public health problem: definitions, typology, burden, root causes and risk factors, public health approach, structural interventions and multilevel prevention. General overview of public health approach, ecological model and human rights approach is presented. The Module also explains the impact of structural and social violence on health, the role of the health sector and suggests a number of practical approaches for prevention and policy intervention.
Learning objectives	After completing this module students and public health professionals should have improved their knowledge to understand the nature, root causes and risk factors, burden and consequences of the structural and social violence and armed conflicts; to become familiar with the use of the ecological model and the public health approach; and to be able to identify the multilevel evidence-based programmes and structural interventions for violence prevention.
Teaching methods	Lectures, interactive small group discussions, case studies, international field practice, literature review, and critical reading will be applied.
Who should apply	Those who pursue an international career in public health management, policy development, research, advocacy, and safety promotion.
Career opportunities	Teaching and/or research careers in academic environments; leadership positions in the health care sector, policy makers, private industry and Non-Governmental Organizations; free lance consulting.
Assessment of students	Report on international field visit, group work, seminar paper and case problem presentations.
COMMENTS on the module by lecturers and students	**???**

Structural and social violence

Theoretical background and definitions

The World Health Organization (WHO) provides the most comprehensive definition of violence defining it as (Krug et al. 2002): The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation. Thus, ‗‗the use of physical force or power‘‘ should be understood to include neglect and all types of physical, sexual and psychological abuse, as well as suicide and other self-abusive acts. This definition associates intentionality with the committing of the act itself, irrespective of the outcome it produces.

Violence can be broadly divided into three broad categories – direct violence, structural violence and cultural violence: Violence, as defined in the dictionary of human geography, ―appears whenever power is in jeopardy‖ and ―in and of itself stands emptied of strength and purpose: it is part of a larger matrix of soci-political power struggles‖ (Hyndman 2009).

Structural violence, a term coined by Johan Galtung (Galtung 1969) and by liberation theologians during the 1960s, describes social structures—economic, political, legal, religious, and cultural—that stop individuals, groups, and societies from reaching their full potential. It refers to a form of violence where some social structures or social institutions may harm people by preventing them from meeting their basic needs (Farmer et al. 2006). In its general usage, the word violence often conveys a physical damage; however, according to Galtung, it is the ―avoidable impairment of fundamental human needs or…the impairment of human life, which lowers the actual degree to which someone is able to meet their needs below that which would otherwise be possible‖ (Galtung 1993). As it is avoidable, structural violence is a high cause of premature death and unnecessary disability. Gilligan (1997) defines structural violence as "the increased rates of death and disability suffered by those who occupy the bottom rungs of society, as contrasted with the relatively lower death rates experienced by those who are above them." Gilligan largely describes these "excess deaths" as "non-natural" and attributes them to the stress, shame, discrimination, and denigration that results from lower status. Because structural violence affects people differently in various social structures, it is very closely linked to social injustice and the social machinery of oppression (Farmer 2004, Farmer et al. 2006). Disparate access to resources, political power, education, health care, and legal standing are just a few examples.

Cultural violence refers to aspects of a culture that can be used to justify or legitimize direct or structural violence, and may be exemplified by religion and ideology, language and art, empirical and formal science (Galtung 1990). Cultural violence makes direct and structural violence look or feel "right", or at least not wrong, according to Galtung. The study of cultural violence highlights the ways the act of direct violence and the fact of structural violence are legitimized and thus made acceptable in society. One mechanism of cultural violence is to change the "moral color" of an act from "red/wrong" to "green/right", or at least to "yellow/acceptable" (Galtung 1990). Human rights are moral principles or norms that describe certain standards of human behaviour, and are regularly protected as legal rights in national and international law They are commonly understood as inalienable fundamental rights "to which a person is inherently entitled simply because she or he is a human being," and which are "inherent in all human beings" regardless of their nation, location, language, religion, ethnic origin or any other status. They are applicable everywhere and at every time in the sense of being universal and they are egalitarian in the sense of being the same for everyone (Sepúlveda et al. 2004). Human rights are rights (as freedom from unlawful imprisonment, torture, and execution) regarded as belonging fundamentally to all persons (Merriam-Webster dictionary 2014). The rights that everyone should have in a society, including the right to express opinions about the government or to have protection from harm (Macmillan Dictionary 2014).

Although, WHO does not specifically define societal violence, Kelly (2014) suggests that societal violence is a blending of community and social violence. Societal violence can range from an

interpersonal act of violence between two people on the playground to a mass shooting by one person. These examples of violence can have a profound effect on families, local communities, and society as a whole.

However, the definitions above are overlapping and ―as violence spreads and assumes unheard-of forms, it becomes difficult to name in contemporary language‖. In facing such a truth, it is prudent to reconsider violence as ‗horrorism', as Cavarero proposes – ―Horrorism – as though ideally all the…victims, instead of their killers, ought to determine the name‖ (Cavarero 2009).

The typology developed by WHO (Krug et al. 2002 divides violence into three broad categories according to characteristics of those committing the violent act: self-directed violence (upon himself or herself); interpersonal violence (violence inflicted by another individual or by a small group of individuals); collective violence (inflicted by larger groups such as states, organized political groups, militia groups and terrorist organizations. These three broad categories are each divided further to reflect more specific types of violence. Figure 1 illustrates the nature of violent acts, which can be physical, sexual, psychological, involving deprivation or neglect. The horizontal array in Figure 1 shows who is affected, and the vertical array describes how victims are affected.

This typology, while imperfect and far from being universally accepted, does provide a useful framework for understanding the complex patterns of violence taking place around the world, as well as violence in the everyday lives of individuals, families, and communities. It also overcomes many of the limitations of other typologies by capturing the nature of violent acts, the relevance of the setting, the relationship between the perpetrator and the victim, and - in the case of collective violence - possible motivations for the violence. However, in both research and practice, the dividing lines between the different types of violence are not always so clear.

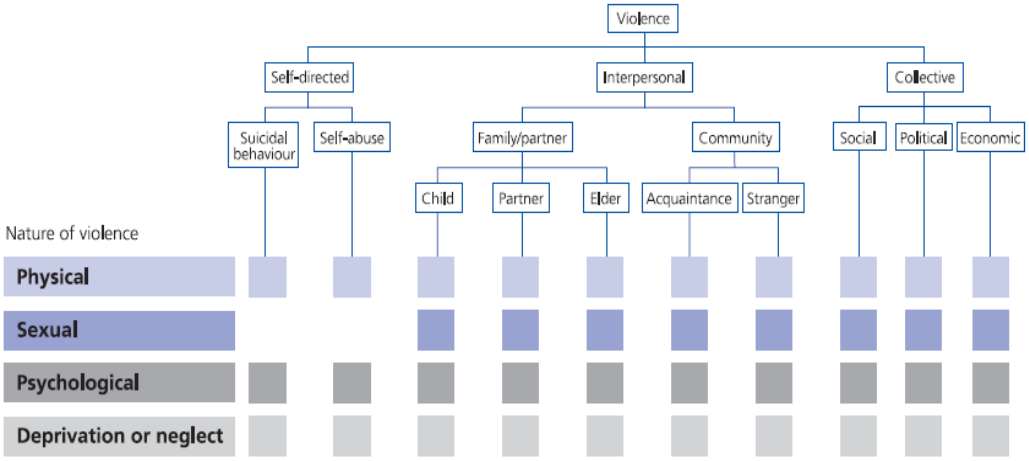
Collective violence may be defined as the instrumental use of violence by people who identify themselves as members of a group - whether this group is transitory or has a more permanent identity - against another group or set of individuals, in order to achieve political, economic, or social objectives (Krug et al. 2002). Collective violence can be subdivided into social, political, and economic violence. Unlike the other two broad categories, the subcategories of collective violence suggest possible motives for violence committed by larger groups of individuals or by states. Collective violence that is committed to advance a particular social agenda includes, for example, crimes of hate committed by organized groups, terrorist acts and mob violence. Political violence includes war and related violent conflicts, state violence and similar acts carried out by larger groups. Economic violence includes attacks by larger groups motivated by economic gain – such as attacks carried out with the purpose of disrupting economic activity, denying access to essential services, or creating economic division and fragmentation. Clearly, acts committed by larger groups can have multiple motives (Krug et al, 2002). Various forms of collective violence have been recognized (WHO 2012), including:

- Wars, terrorism, and other violent political conflicts that occur within or between states.
- State-perpetrated violence such as genocide, repression, disappearances, torture, and other abuses of human rights.
- Organized violent crime such as banditry and gang warfare.

Political violence, evidently, often gives a part for the state to play. When ―modern states not only claim a monopoly of the legitimate means of violence; they also routinely use the threat of violence to enforce the rule of law‖ the law not only becomes a form of violence but is violence (Hyndman 2009). War is a state of prolonged violent large-scale conflict involving two or more groups of people, usually under the auspices of government. It is the most extreme form of collective violence (Smihula 2013). War is fought as a means of resolving territorial and other conflicts, as war of aggression to conquer territory or loot resources, in national self-defence or liberation, or to suppress attempts of part of the nation to secede from it. We know also ideological, religious and revolutionary wars. The

killing fields and the genocide as a whole are one of the many contemporary examples of state sponsored violence(Ringer 2002). People were murdered with impunity because it was not considered a crime.

Figure 1: A typology of violence
(Source: World Report on Violence and Health, WHO, 2002 (Krug et al. 2002)



Burden of violence
Injuries and violence are a threat to health in every country of the world accounting for 9% of global mortality – more than five million deaths every year. Eight of the 15 leading causes of death for people between the ages of 15 and 29 years are injury-related: road traffic injuries, suicides, homicides, drowning, burns, war injuries, poisonings and falls (WHO 2008). The burden of disease due to injuries, particularly road traffic accidents, interpersonal violence, war and self-inflicted injuries is expected to rise considerably by the year 2020 (WHO 2012). WHO data in 2008 show that - on a global level - violence is a substantial public health problem. Globally, deaths due to violence exceed that of malaria, traffic injuries and tuberculosis (WHO 2014).

There are major variations in violence mortality rates between different regions in the world and between different gender and age groups. Overall, violence is among the leading causes of death worldwide for people aged 15–44 years (Krug et al. 2002). Over 70% of the global mortality due to interpersonal violence occurs among young persons aged between 15-44 years (WHO 2008; WHO 2012). Violent deaths in low-to-middle income countries occur at more than twice the rate of high income countries (32.1 vs. 14.4 per 100.000), due to a greater number and variety of hazards that expose inhabitants to violence, and fewer resources for violence prevention, the treatment of resulting injuries, and victim rehabilitation (Krug et al. 2002; WHO 1996). In low to middle income countries homicide and war are dominant, while in high income countries suicides predominate (WHO 1999; Tozija et al. 2006; Tozija et al. 2007).

The region with the largest number of deaths is the African region. In the African region and Latin America homicide rates are nearly three times greater than suicide rates whereas in the European and South-East Asia region suicide rates exceed homicide rates by a factor of two, in the Western Pacific region even by a factor of 5 (WHO 2012). Interpersonal violence mortality rates are highest among males in low- and middle-income countries of Latin America and Africa. Females in Africa have the highest interpersonal violence mortality rates.

Deaths are only the most visible part of the interpersonal violence iceberg, and for every death there are many more non-fatal cases. Of the hundreds of victims that survive, many require emergency medical treatment and a significant proportion suffer long term physical and mental health consequences (Tozija et al. 2005). Interpersonal violence occurs in the home and in public settings (such as streets, bars, clubs, workplaces, schools, hospitals and residential care facilities). It is widespread, but discrete and far less visible than the collective violence of terrorism and war. The highest rates of interpersonal violence occur in the poorest communities with the fewest resources to cope with financial, social and psychological strains (Krug et al. 2002). Unfortunately, precise national and international estimates of non-fatal violence are missing, partly because of under-reporting due to a range of factors, including inadequate victim services in the health and criminal justice systems (Tozija 2009). Violence can have a number of negative effects on the health of those involved such as physical, mental health, behavioural consequences and reproductive consequences (WHO 2012).

There are direct and indirect violence related costs to the individual, family, community and society as a whole (Tozija 2013). The majority of victims of violence are in the most economically productive age range of 15-44 years, and for every one of the thousands of millions of dollars spent on direct medical care for victims, many more financial resources are lost due to indirect factors such as time away from work and disruption of family routines. The direct costs and indirect costs of lost productivity due to interpersonal violence represent an enormous economic burden to victims, families and society. The economic burden of interpersonal violence in the USA has been estimated to be 3.3% of GDP, while in England and Wales the annual total costs from violence are estimated at US$ 40.2 billion (WHO 2007).

Examples of violence

Kelly in her book (Kelly 1984) presents examples of structural violence and its burden: ―A third of the 2 Billion people in the developing countries are starving or suffering from malnutrition. Twenty-five per cent of their children die before their fifth birthday. Less than 10 per cent of the 15 million children who died this year had been vaccinated against the six most common and dangerous children's diseases. Vaccination costs £3 per child. But not doing so costs us five million lives a year. These are classic examples of structural violence.‖

In recent years, an enormous amount of attention has been focused on societal violence, in particular violence that affects the nation‘s youth. Violent acts, such as the shootings at Columbine (1999), Virginia Tech (2007), Aurora Movie Theater (2012), and more recently at the Sandy Hook Elementary school (2013) have had a profound effect on today‘s youth and adults. These shootings are examples of societal violent acts; however, other forms of societal violence occur every day throughout the United States (Kelly 2014).

According to the US Bureau of Justice Statistics (2013) from 1992 to 2011, there was a 49% decrease in homicides. In addition, from 1994 to 2011, there was a decrease in intimate partner violence (IPV) for females (72%) and for males (64%). Homicides among youth declined by 22%; however, this age group still had the highest homicide rate. Despite the decrease of homicides, there was actually an increase in violent victimization (rape, sexual assault, robbery, simple and aggravated assault) for those 12 years and older.

Researchers have explored the influence societal violence has on the victims. For example, Graham-Bermann & Seng (2005) and Kelly (2010) found that exposure to societal violence has an immediate and direct direct negative impact on youths‘ physical and mental health. Further, there is evidence showing that the consequences of violence can continue to have a lasting impact on their adult lives (Scarpa 2001). The lasting effect of exposure to violence on youth in our society warrants and deserves attention from all healthcare professionals.

Wars grab headlines, but the individual risk of dying violently in an armed conflict today is relatively low. For example, between 1976 and 2008, African Americans were victims of 329,825 homicides

(BJS 2013; US Census Bureau 2012). Although there is a widespread perception that war is the most dangerous form of armed violence in the world, between 2004 and 2007 a person living in a conflict-affected country had a risk of dying violently in the conflict of about 2.0 per 100,000 population. This compares to the average world homicide rate of 7.6 per 100,000. This highlights the value of accounting for all forms of armed violence rather than an exclusive focus on war related violence. Certainly, there are variations in the risk of dying from armed conflict at the national and subnational level, and the risk of dying violently in a conflict in specific countries remains extremely high. In Iraq, for example, the direct conflict death rate for 2004–07 was 65 per 100,000 people per year and, in Somalia, 24 per 100,000 people. This rate even reached peaks of 91 per 100,000 in Iraq in 2006 and 74 per 100,000 in Somalia in 2007 (Krause et al. 2008).

The genocide in Cambodia in the 1970s, under the Khmer Rouge and Pol Pot, ended with the murder of over two million Cambodians - 25% of the Cambodian population. About fourteen thousand of these people were murdered at Choeung Ek, an extermination camp that came to be called the Killing Fields. Murdered arbitrarily – a person could be killed for wearing glasses which associated it with intellectuals, and so, part of the enemy. The killing fields and the genocide as a whole are one of the contemporary examples of state sponsored violence (Ringer 2002). People were murdered with impunity because it was not considered a crime.

Since the Industrial Revolution, the lethality of modern warfare has grown. World War I casualties were over 40 million and World War II casualties were over 70 million. Nevertheless, the actual deaths from war may have decreased compared to past centuries. In *War Before Civilization* Keeley (2004) calculates, that 87% of tribal societies were at war more than once per year, and some 65% of them were fighting continuously. The attrition rate of numerous close-quarter clashes, which characterizes endemic warfare, produces casualty rates of up to 60%, compared to 1% of the combatants as is typical in modern warfare. "Primitive Warfare" of these small groups or tribes was driven by the basic need for sustenance and violent competition. Their environment dictates the size of their groups for the most part and they would include only as many people as the tribe could provide for. The small group size also made moving much easier if needed, once resources were becoming scarce in the area.

Prevention and intervention

Structural violence is often a major determinant of the distribution and outcome of disease, but is it not in wider circulation in medicine and public health. One reason is that medical professionals are not trained to make structural interventions. Physicians can rightly note that structural interventions are ―not their job.‖ Yet, since structural interventions might arguably have a greater impact on disease control than do conventional clinical interventions, we would do well to pay heed to them (Farmer et al, 2006). As long as medical services are sold as commodities, they will remain available only to those who can purchase them. National health insurance and other social safety nets, including those that guarantee primary education, food security, and clean water, are important because they promise rights, rather than commodities, to citizens. The lack of these social and economic rights is fundamental to the perpetuation of structural violence (Farmer 2005). Structural violence and direct violence are said to be highly interdependent, including family violence, racial violence, hate crimes, terrorism, genocide and war. Institutionalized elitism, ethnocentrism, classism, racism, sexism, heterosexism and ageism are some examples of structural violence as proposed by Galtung (1993).

Often structural violenc, such as racism and sexism, has become such a common occurrence in society that it is almost invisible. Despite this fact, sexism and racism have been the focus of intense cultural and political resistance for many decades (Farmer et al. 2006).

Structural violence affects the availability of health care in the sense that physicians often need to pay attention to broad social forces (racism, gender inequality, classism, etc.) to determine who falls ill and who will be given access to care. It is more likely for structural violence to occur in areas where biosocial methods are neglected in a country's health care system.

Structural violence also exists in the area of mental health where systems are designed to ignore the lived experiences of people with mental illnesses when making decisions about services and funding without consulting with the ill, including those who are illiterate, cannot access computers, do not speak the dominant language, are homeless, are too unwell to fill out long formal surveys, or are in locked psychiatric and forensic wards. Online-only consultation may be inappropriate for people with a lived experience of mental illness. Structural violence is also apparent when consumers in developed countries die from preventable diseases 15–25 years earlier than do people without a lived experience of mental health.

The *public health approach* is a science-based, multi-disciplinary approach for understanding and preventing violence. The approach is intended to help coordinate actions by representatives of the many different sectors relevant to violence prevention, including welfare, social work, education, employment, health, police and justice. The public health approach consists of four steps: describing and monitoring the problem; identifying the risk and protective factors; the development and evaluation of prevention programmes; and the implementation and dissemination of these programmes (Krug et al. 2002).

Information arising from activities in steps 1 and 2 is vital for developing and evaluating interventions (step 3), and for widespread implementation and dissemination of proven and promising strategies (step 4). Individual violence prevention programmes will usually include activities relevant to only some of the steps, while national-level violence prevention policies and plans should ensure that all steps are adequately addressed, and that programmes dealing with the different steps are fully informed about the data and evidence from each of the other steps (Tozija 2009). Violence is an outcome of a complex interaction of many factors at different levels: biological, social, cultural, economic and political. The *ecological model* developed in the World report on violence and health is used to capture this complexity and understand the root causes and risk factors of violence as a basis for developing prevention strategies at four levels: individual, social relationship, community, and societal (Krug et al. 2002; Sethi et al. 2004): ―Whilst some risk factors may be unique to a particular type of interpersonal violence, more often the various types of violence share a number of risk factors‖. To address the multilevel risk factors, prevention programmes also need to operate on multiple levels (Tozija et al 2012).

The *human rights approach* is based on the obligations of states to respect, protect and fulfill human rights and therefore to prevent, eradicate and punish violence. It recognizes violence as a violation of many human rights: the rights to life, liberty, autonomy and security of the person; the rights to equality and non-discrimination; the rights to be free from torture and cruel, inhuman and degrading treatment or punishment; the right to privacy; and the right to the highest attainable standard of health. These human rights are enshrined in international and regional treaties and national constitutions and laws, which stipulate the obligations of the state, and include mechanisms to hold states accountable. The Convention on the Elimination of All Forms of Discrimination Against Women, for example, requires that countries party to the Convention take all appropriate steps to end violence against women. The Convention on the Rights of the Child in its Article 19 states that States shall take all appropriate legislative, administrative, social and educational measures to protect the child from all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse, while in the care of parent(s), legal guardian(s) or any other person who has the care of the child.

Violence is the result of the complex interplay of individual, relationship, social, cultural and environmental factors. Understanding how these factors are related to violence is one of the important steps in the public health approach to prevent violence. Because violence is a multifaceted problem with biological, psychological, social and environmental roots, it needs to be confronted on several different levels at once (Tozija et al. 2013). The ecological model serves a dual purpose in this regard, it explores the relationship between individual and contextual factors and considers violence as the product of multiple levels of influence on behaviour: each level in the model represents a level of risk and each level in the model can also be thought of as a key point for intervention (Krug et al. 2002).

There are a number of factors that contribute to violence at all levels:

- Individual level: demographic factors, psychological and personality disorders, history of violent behaviour and having experienced abuse.
- Relationship/family level: poor parenting, marital conflict, friends who engage in violence.
- Community level: concentration of poverty, high residential mobility, high unemployment, social isolation and illicit drug trade.
- Societal level: multiple social inequalities, norms that support violence, availability of means, weak police and criminal justice system.

Evidence shows strong relationships between levels of violence and potentially modifiable factors such as concentrated poverty, income and gender inequality, the harmful use of alcohol, and the absence of safe, stable, and nurturing relationships between children and parents. Scientific research shows that strategies addressing the underlying causes of violence can be effective in preventing violence (WHO 2010). However, the challenge is obvious: many countries cannot afford to stop the harmful cycle of structural violence. Farmer et al. (2006) argue that the major flaw in the dominant model of medical care is that medical services are sold as a commodity, remaining only available to those who can afford them. The concept of structural violence is used to show how medical professionals are not trained to understand the social forces behind disease, nor are they trained to deal with or alter them. Structural violence is an issue not only in developing countries, but also in North America. For example, it has had a significant impact on diagnosis and treatment of AIDS in the United States. A study by Moore et al. (1990) found that blacks had a significantly smaller chance of receiving treatment than whites. Farmer et al. (2006) claim that "structural interventions" are the only solution. Medical professionals still continue to operate with a focus on individual lifestyle factors rather than general socio-economic, cultural, and environmental conditions. One response is to incorporate medical professionals and to acknowledge that active structural interventions are necessary to address the real public health issues.

Multilevel prevention strategies

Programmes may assume a singular or multiple focus, target one or more at-risk environments, one or more at-risk groups, and sub-groups or whole populations, and one or more different levels (Butchart et al. 2004). Violence prevention work should therefore be conducted at different levels by a range of international, national, local government and civic groups. The United Nations, world economic agencies, human rights organizations, national governments, non-governmental agencies, and concerned individuals have initiated prevention activities. Some outstanding successes in preventing violence have been well evaluated and well documented, whereas others, particularly those in developing countries, remain unevaluated and poorly described (Butchart et al. 2004).

Traditionally public health interventions are characterized in terms of three levels of prevention, which relate back to the temporal dimension of the Haddon Matrix (WHO 2012; Haddon 1980). *Primary prevention* involves strategies and interventions to stop violent events from taking place, and are related to the time before violence actually occurs (pre-event phase); *Secondary prevention* includes strategies aimed at minimizing harm that occurs during and/or is following a violent event and preventing re-victimization and re-offending; *Tertiary prevention* includes all activities for the treatment and rehabilitation of victims and perpetrators and facilitating their re-adaptation to society (post-event phase).

Another way of defining prevention activities focuses on the target group of interest on three levels: *Universal interventions* that target everyone within the population without regard to their differences in the risk of becoming a victim or perpetrator (e.g. the enactment and enforcement of laws to regulate the consumption of alcohol and firearm ownership); *Selective interventions* target people at enhanced risk of violence only (e.g. parent training and home visitation for high-risk families in selected low-income settings); *Indicated interventions* are applied to individuals and groups that have already been

involved in violent behaviour (as perpetrators and/or victims) in an effort to reduce re-victimization and repeat offending.

Passive versus active interventions: *Passive interventions* are those aimed at preventing violence where the individual is not required to take any action and are independent of human behaviour; *Active interventions* are those where an individual‘s behaviour is involved and is important for their success. *Community level prevention* includes raising public awareness about violence, stimulating community action, and providing care and support for victims, addressing community level risks and the physical and social characteristics of settings such as schools, hospitals, neighbourhoods and workplaces (Krug et al. 2002). *Societal level prevention* strategies include changes in legislation, policies, and the larger social and cultural environment in order to reduce the risk of violence both in various settings as well as in entire communities. Governments may launch broad programmes to benefit society, which may be aimed at reducing interpersonal violence either directly or indirectly such as: reduction of income inequality, de-concentrating poverty, enforcing laws prohibiting the illegal transfer of guns, strengthening and improving police and judicial systems, reforming educational systems, establishing job creation programmes for the unemployed (Krug et al, 2002).

The aim of violence prevention programmes is to reduce the amount and severity of violence in the target population. It is important that the development of prevention strategies is evidence-based. That is, the design of an intervention needs to be based on accurate data concerning the problem and its risk factors (Tozija et al. 2013). The effectiveness of interventions also needs to be rigorously evaluated and reviewed to determine whether they have worked and whether they continue to work. As funding for the development and implementation of prevention strategies is usually limited, it is important to check that the money is being well spent (Butchart et al. 2004; Sethi et al. 2004). Further, it needs to be kept in mind that while an intervention may work effectively in one community, it may not readily transfer to another community with different culture and economy.

Interpersonal violence prevention programmes may focus directly on one or two risk factors, or may address many different risk factors and ecological levels at the same time. Some programmes have violence prevention as their only objective, while in others the prevention of violence is one among many aims, such as community empowerment programmes and pre-school enrichment programmes that, while aimed primarily at increasing education performance, have also been demonstrated to be effective in reducing youth violence and the risk factors for youth violence (Tozija 2009). The health sector has primary responsibility for carrying out interventions and monitoring their impact, advocate, collaborate, evaluate. If the primary responsibility for implementation lies with another sector, health has a crucial role in calling for the intervention, collaborating with other sectors in its implementation and monitoring the intervention‘s impact; also to discourage continued investments in interventions that have been shown to be ineffective or counterproductive to avoid waste of scarce resources (WHO 2007; Tozija et al. 2006). Countries such as Haiti and Rwanda have implemented structural interventions with positive outcomes. Examples include prohibiting the commodification of the citizen‘s needs, such as health care, ensuring equitable access to effective therapies, and developing social safety nets. These initiatives increase citizen's social and economic rights, thus decreasing structural violence. However, for these structural interventions to be successful, medical professionals need to be capable of executing such tasks. When planning responses to violent conflicts, recommended approaches include assessing at an early stage who is most vulnerable and what their needs are, co-ordination of activities between various players and working towards global, national and local capabilities so as to deliver effective health services during the various stages of an emergency (Krug et al. 2002).

Exercise:
In this exercise the students will work in small groups and will have three tasks:

Task 1: The students will look at publications on structural and social violence and armed conflicts and discuss the different methodologies used to study and address this problem.
Task 2: The students will apply the public health approach and the ecological model to analyse the situation in their countries regarding the multilevel root causes and risk factors for structural and social violence and armed conflicts.
Task 3: Case problem analysis will be used for review the existing and potential evidence-based multilevel prevention measures for structural and social violence and armed conflicts.

References:

Bureau of Justice Statistics BJS (2013) Homicide trends in the United States.
Bureau of Justice Statistics (2013) Violent crimes. Available at: www.bjs.gov/index.cfm?ty=tp&tid=31 (accessed 20.12.2014)
Butchart A, Phinney A, Check P, Villaveces A (2004) Preventing violence: a guide to implementing the recommendations of the World Report on violence and health. Department of injuries and Violence Prevention, Geneva: WHO.
Cavarero A. (2009) Horrorism: Naming Contemporary Violence. New York: Columbia University Press.
Farmer P (2004) An anthropology of structural violence. Curr Anthropol 45:305–326.
Farmer PE (2005) Pathologies of power: Health, human rights, and the new war on the poor. 2nd edition. Berkeley: University of California Press.
Farmer PE, Nizeye B, Stulac S, Keshavjee S (2006) Structural violence and clinical medicine. PLoS Med 3(10): e449. DOI: 10.1371/journal.pmed.0030449. Available at: http://www.plosmedicine.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pmed.0030449&representation=PDF (accessed 07.11.2014).
Galtung J (1969) Violence, peace, and peace research. J Peace Res 6:167–191.
Galtung J (1993) Kulturelle Gewalt. Der Buerger im Staat 43:106. In Kathleen Ho (2007) Structural Violence as a Human Rights Violation. Essex Human Rights Review 4/2
Gilligan J (1997) Violence: Reflections on a national epidemic. New York: Vintage Books.
Graham-Bermann SA, Seng J (2005) Violence exposure and traumatic stress symptoms as additional predictors of health problems in high-risk children. The Journal of Pediatrics, 146/3: 349-354.
Haddon W Jr (1980) Advances in the epidemiology of injuries as a basis for public policy. Public Health Rep 95/5:411-421.
Hyndman J (2009) Violence. In: Gregory D, Johnston R, Pratt G, Watts M, Whatmore S (eds.): Dictionary of Human Geography. New Jersey: Wiley-Blackwell:798-799.
Keeley LH (1996) War Before Civilization: the Myth of the Peaceful Savage Oxford University Press
Kelly P (1984) Fighting for Hope. Boston: South End Press.
Kelly S (2010) The psychological consequences to adolescents of exposure to gang violence: An integrated review of the literature. Journal of Child and Adolescent Psychiatric Nurses: 23(2), 61-73
Kelly S (2014) Overview and Summary: Societal Violence: What is Our Response? The Online Journal of Issues in Nursing (OJIN) 19/1: Overview & Summary
DOI**:** 10.3912/OJIN.Vol19No01ManOS
Krause K, Muggah R, Wennmann A (2008) Global Burden of Armed Violence. Geneva, Geneva: Declaration Secretariat, Available at http://www.genevadeclaration.org/fileadmin/docs/Global-Burden-of-Armed-Violence-full-report.pdf
Krug EG (1999) Injury: a leading cause of the global burden of disease. Geneva, WHO
Krug EG, Dahlberg LL, Mercy JA et al. (2002) World report on violence and health. Geneva: WHO. Available at: http://whqlibdoc.who.int/publications/2002/9241545615_eng.pdf
Macmillan Dictionary, Available at http://www.macmillandictionary.com/open-dictionary/submit.html
Merriam-Webster Online Dictionary and Thesaurus, Available at http://www.merriam-webster.com/

Ringer G (2002) Killing Fields. In: Christensen K & Levinson D (eds.) Encyclopedia of Modern Asia. New York: Charles Scribner's Sons: 368-370.
Scarpa A (2001) Community violence exposure in a young adult sample: lifetime prevalence and socioemotional effects. Journal of Interpersonal Violence, 16: 36-53.
Sepulveda, M. (2004) Human Rights Reference Hand Book, Ciudad Colon (Costa Rica), University for Peace
Sethi D, Marais S, Seedat M, Nurse J, Butchart A. (2004) Handbook for the documentation of interpersonal violence prevention programmes. Department of Injuries and Violence Prevention, Geneva: World Health Organization
Smihula D. (2013) The Use of Force in International Relations, Veda, ISBN 978-80-224-1341-1.
Tozija F. (2009) Violence and injury prevention and safety promotion in Macedonia: evidence based policy intervention. Archives of Public Health.Vol 1, No. 1: 39-46
Tozija F, Butchart A. (2005) Interpersonal Violence and Public Health. In: Health Determinants in the Scope of New Public Health. Georgieva L, Burazeri G. Eds. Health Determinants in the Scope of New Public Health. A Handbook for teachers, researchers and health professionals. PH-SEE. Sofia, Hans Jacobs Publishing Company: 201-219
Tozija F. Butchart A (2013) Violence a global public health problem and universal challenge. In: Forum for Public Health in Southeastern Europe. A Handbook for Teachers, Researchers and Health Professionals (2nd edition). Volume I: Health: Systems – Lifestyle – Policies. Editors: Burazeri G., Zaletel Kragelj Lj. Jacobs Publishing Company:420-434 Available at http://www.seejph.com/wp-content/uploads/2013/10/Volume-I-Health-Systems-Lifestyle-Policies.pdf
Tozija F., Gjorgjev D., Cicevalieva S. (2006) Report on violence and health in Macedonia – a guide for prevention. Skopje: MOH/IPH
Tozija F, Gjorgjev D, Kochubovski M. (2012) Violence and maltreatment of elderly – applied ecological model in risk assessment and policy intervention. Journal of Environmental Protection and Ecology. Official Journal of the Balkan Environmental Association. Vol.13 No 4:2173-2185
Tozija F, Spasovski M, Karadzinska-Bislimovska J, Gjorgjev D, Kosevska E (2007) Violence and Injury prevention – Challenges for Health Promotion in Macedonia. In: Donev D, Pavlekovic G, Zaletel Kragelj L. Eds. Health Promotion and Disease Prevention. PH-SEE-A Handbook for Teachers, Researching, Health Professionals and Decision Makers; Skopje, Hans Jacobs Publishing Company:651-69. Available at http://www.snz.unizg.hr/ph-see/Documents/Publications/FPH-SEE_Book_on_HP&DP.pdf
U.S. Census Bureau. (2012) Homicide Victims by Race and Sex. Census. Statistical Abstract of the United States: 2012
Murray JLC, Lopes AD (1996) Global burden of disease and injury. Geneva, World Health Organization
WHO. (2007) Preventing injuries and violence: a guide for ministries of health. Geneva, World Health Organization. ISBN 92 4 159207 9
WHO. (2008) Global Burden of Disease: 2004 Update. Geneva, World Health Organization
WHO. (2009) Violence prevention: the evidence. Geneva,. World Health Organization
WHO (2010) Preventing intimate partner and sexual violence against women: taking action and generating evidence. Geneva, World Health Organization
WHO. (2012) TEACH VIP 2. Geneva, World Health Oganization
WHO. (2014) Global Status Report on Violence Prevention. Geneva, World Health Organization

Additional readings:

Babbie E, Mouton J. (2001) The practice of social research. Cape Town, Oxford University Press
Butchart A, Phinney A, Check P, Villaveces A (2004) Preventing violence: a guide to implementing the recommendations of the World Report on violence and health. Department of injuries and Violence Prevention, Geneva: WHO.
Convention on the Elimination of All Forms of Discrimination Against Women. Available et http://www.un.org/Depts/dhl/resguide/resins.htm
Convention on the Rights of the Child Available et http://www.un.org/Depts/dhl/resguide/resins.htm

Conventions, Declarations and Other Instruments Found in General Assembly Resolutions (1946 onwards) Available et http://www.un.org/Depts/dhl/resguide/resins.htm
Gilman R. (1983) Structural Violence. Can we find genunine peace in a world with inequitable distribution of wealth among nations?
Ho K. (2007) Structural Violence as a Human Rights Violation. Essex Essex Human Rights Review, Vol. 4 No. 2 Available at http://projects.essex.ac.uk/ehrr/V4N2/ho.pdf
The International Center for Cooperation and Conflict Resolution. Available at: http://icccr.tc.columbia.edu/research-overview/ (Accessed 29 December 2014).
Krug EG, Dahlberg LL, Mercy JA et al. (2002) World report on violence and health. Geneva: WHO. Available at: http://whqlibdoc.who.int/publications/2002/9241545615_eng.pdf
Tozija F. Butchart A (2013) Violence a global public health problem and universal challenge. In: Forum for Public Health in Southeastern Europe. A Handbook for Teachers, Researchers and Health Professionals (2nd edition). Volume I: Health: Systems – Lifestyle – Policies. Editors: Burazeri G., Zaletel Kragelj Lj. Jacobs Publishing Company:420-434 Available at http://www.seejph.com/wp-content/uploads/2013/10/Volume-I-Health-Systems-Lifestyle-Policies.pdf
Tozija F., Gjorgjev D., Cicevalieva S. (2006) Report on violence and health in Macedonia – a guide for prevention. Skopje: MOH/IPH
Waters H, Hyder A, Rajkotia Y, Basu S, Rehwinkel JA, Butchart A. (2004) The economic dimensions of interpersonal violence. Geneva, WHO
WHO. (2007) Preventing injuries and violence: a guide for ministries of health. Geneva, World Health Organization. ISBN 92 4 159207 9
WHO. (2014) Global Status Report on Violence Prevention. Geneva, World Health Organization

Title:	**N 2.8 PREPAREDNESS FOR NATURAL AND MAN-MADE DISASTERS, AND TRAFFIC ACCIDENTS**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Luka Kovacic
Address for correspondence	Prof. Luka Kovacic A. Stampar School of Public Health Rockefeller str. 4 10000 Zagreb, Croatia E-mail: lkovacic@snz.hr
Key words	Disaster, natural disaster, man-made disaster, traffic accident, public health education
Topics	Natural or man-made hazards, like earthquakes, landslides, volcanic eruptions, floods, fires, transport accidents, industrial accidents, terrorist attacks, could end with serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses, which exceeds the ability of the affected community or society to cope using its own resources, will results with a disaster. In order to mitigate the losses and to prevent disaster situation local community, country and the international environment should be prepared. There are national and international organizations which can assist the areas in need.
Learning objectives	To understand the key issues of hazards and disaster (epidemiology, definition, classification), disaster management, prevention, preparedness, relief and recovery.
Teaching methods	Lectures, interactive small group discussions, analysis of population`s statistics.
Who should apply	Candidates for the career in the international public health management, policy development, research or advocacy; candidates in the public health and similar disciplines on the national level.
Career opportunities	Teaching and/or research careers in academic environments; leadership positions in the health care sector, policy makers, private industry and Non-Governmental Organizations; free-lance consulting.
Assessment of students	Students should analyze, write and present to the student`s group one problem in the area of Disaster preparedness, natural, man-made disasters and traffic accidents. For the student`s assessment the student`s self-assessment method could be used.
COMMENTS on the module by lecturers and students	**???**

Introduction

Various natural phenomenon like earthquakes, landslides, volcanic eruptions, floods, hurricanes, tornadoes, blizzards, tsunamis, and cyclones, which are called a natural hazards, could happen in a nature and can kill thousands of people, cause injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage. In addition to this natural phenomenon there are many dangerous phenomenons, like fires, transport accidents, industrial accidents, oil spills and nuclear explosions/radiation, terrorist attacks, wars and others, caused by human activity, and called technological hazards.

In the case that natural or man-made hazards end with serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources, will result in a disaster. Disasters are seen as the consequence of inappropriately managed risks. These risks are the product of a combination of hazards and vulnerability. Hazards that strike in areas with low vulnerability, like un-inhabited or low population density areas will not become disasters.

However, the rapid growth of the world's population and its increased concentration often in hazardous environments has escalated both the frequency and severity of disasters. With the tropical climate and unstable land formation, coupled with deforestation, unplanned growth proliferation, non-engineered constructions which make the disaster-prone areas more vulnerable, tardy communication, poor or no budgetary allocation for disaster prevention, developing countries suffer more or less chronically by natural disasters.

There are a range of challenges, such as climate change, unplanned-urbanization, under-development, poverty, as well as the threat of pandemics that will shape humanitarian assistance in the future. These aggravating factors will result in increased frequency, complexity, and severity of disasters.

The UN Office for Disaster Risk Reduction (UNISDR) in 1999 started the implementation of the International Strategy for Disaster Reduction (ISDR). The term disaster can enter into the database of the UN's International Strategy for Disaster Reduction (ISDR), only if at least one of the following criteria is met:

- a report of 10 or more people killed;
- a report of 100 people affected;
- a declaration of a state of emergency by the relevant government;
- a request by the national government for international assistance.

In its document the possible hazards and it short definitions are listed (UN Office for Disaster Risk Reduction 2014):

- *Avalanche:* snow avalanche, snow slide
- *Cold Wave*: extreme weather, extreme temperature, cold temperatures
- *Cyclone*: hurricane, tropical storm, tropical depression, typhoon
- *Drought*: deficiency of precipitation, desertification, pronounced absence of rainfall
- *Earthquake*: seismic, tectonic
- *Epidemic & Pandemic*: epidemic: bubonic plague, cholera, dengue, non- pandemic diseases, typhoid; pandemic: H1N1, HIV, smallpox, tuberculosis
- *Flood*: inundation; includes: flash floods
- *Heat Wave*: extreme weather, extreme temperature, high temperatures
- *Insect Infestation*: locust, plague, African bees
- *Land Slide*: debris flow, mud flow, mud slide, rock fall, slide, lahar, rock slide and topple
- *NBC - Nuclear, Biological, Chemica*l: biohazard risk, chemical contamination, nuclear radiation risk
- *Storm Surge*: coastal flood, wave surge, wind setup

- *Technical Disaster:* chemical spill/leak, explosions, collapses, gas leaks, urban fire, oil spill, technical failure
- *Tornado*: waterspout, twister, vortex
- *Tsunami:* Waves generated by submarine earth movements, earthquakes, volcanic eruptions or landslides
- *Volcano*: crater, lava, magma, molten materials, pyroclastic flows, volcanic rock, volcanic ash
- *Wild Fire*: bush fire, forest fire, uncontrolled fire, wildland fire

Since 1988, the Centre for Research on the Epidemiology of Disasters (CRED) has been maintaining an Emergency Events Database EM-DAT. EM-DAT was created with the initial support of the WHO and the Belgian Government. The main objective of the database is to serve the purposes of humanitarian action at national and international levels. It is an initiative aimed to rationalise decision making for disaster preparedness, as well as providing an objective base for vulnerability assessment and priority setting. EM-DAT contains essential core data on the occurrence and effects of over 18,000 mass disasters in the world from 1900 to present. The database is compiled from various sources, including UN agencies, non-governmental organisations, insurance companies, research institutes, and press agencies. It provides their products free on its webpage http://www.emdat.be (Center for Research on the Epidemiology of Disaster 2014).

Definitions

There are various solutions and sources to define terms in this area. One possible and easy accessible source is the United Nations Office for Disaster Risk Reduction (UNISDR), which published the glossary of terms *("2009 UNISDR Terminology on Disaster Risk Reduction")*. This book is published in different languages and it is available also on-line. Some terms from this publication interesting for this module are copied here (United Nations 2009).

Disaster: A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources. Comment: Disasters are often described as a result of the combination of: the exposure to a hazard; the conditions of vulnerability that are present; and insufficient capacity or measures to reduce or cope with the potential negative consequences. Disaster impacts may include loss of life, injury, disease and other negative effects on human physical, mental, and social well-being, together with damage to property, destruction of assets, loss of services, social and economic disruption, and environmental degradation.

*Hazard:*A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage. The hazards of concern to disaster risk reduction as stated in footnote 3 of the Hyogo Framework are "… hazards of natural origin and related environmental and technological hazards and risks." Such hazards arise from a variety of geological, meteorological, hydrological, oceanic, biological, and technological sources, sometimes acting in combination. In technical settings, hazards are described quantitatively by the likely frequency of occurrence of different intensities for different areas, as determined from historical data or scientific analysis. See other hazard-related terms in the Terminology: Biological hazard; Geological hazard; Hydrometeorological hazard; Natural hazard; Socio-natural hazard; Technological hazard.

Preparedness: The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent, or current hazard events or conditions. Preparedness action is carried out within the context of disaster risk management and aims to build the capacities needed to efficiently manage all types of emergencies and achieve orderly transitions from response through to sustained recovery. Preparedness is based on a sound analysis of disaster risks and good linkages with

early warning systems, and includes such activities as contingency planning, stockpiling of equipment and supplies, the development of arrangements for coordination, evacuation, and public information, and associated training and field exercises. These must be supported by formal institutional, legal and budgetary capacities. The related term "readiness" describes the ability to quickly and appropriately respond when required.

Response: The provision of emergency services and public assistance during or immediately after a disaster in order to save lives reduces health impacts, ensure public safety, and meet the basic subsistence needs of the people affected. Disaster response is predominantly focused on immediate and short-term needs and is sometimes called "disaster relief". The division between this response stage and the subsequent recovery stage is not clear-cut. Some response actions, such as the supply of temporary housing and water supplies, may extend well into the recovery stage.

Risk management: The systematic approach and practice of managing uncertainty to minimize potential harm and loss. Risk management comprises risk assessment and analysis, and the implementation of strategies and specific actions to control, reduce and transfer risks. It is widely practiced by organizations to minimize risk in investment decisions and to address operational risks such as those of business disruption, production failure, environmental damage, social impacts and damage from fire and natural hazards. Risk management is a core issue for sectors such as water supply, energy, and agriculture whose production is directly affected by extremes of weather and climate.

Classification of disasters

There are many criteria for classification of incidents and disasters. Regarding their nature they could be divided in two large categories: ***natural and man-made*** incidents/disasters. In terms of their occurrence they can appear ***suddenly or insidiously***. The major incidents/disasters can cause mechanical or medical casualties and the most affected group can be adult population or children (Stikova et al. 2013). Regarding the possibility to cope the hazards/disasters they could be ***compensated,*** meaning that they could be managed by additional resources mobilization, or ***uncompensated*** meaning that they can't be managed by additional mobilization of available resources.

The International Disaster Database (EM-DAT) distinguishes two generic categories for disasters: ***natural*** and ***technological.*** These are then divided into 15 main categories, each covering more than 50 subcategories (World Health Organization 2011a).

Natural disasters are divided into two groups:

- Hydro meteorological disasters: avalanches/landslides, droughts/famines, extreme temperatures, floods, forest/scrub fires, windstorms and other disasters, such as insect infestations and wave surges;
- Geophysical disasters: earthquakes, tsunamis, and volcanic eruptions.

Technological disasters comprise three groups:

- Industrial accidents**:** chemical spills, collapses of industrial infrastructure, explosions, fires, gas leaks, poisoning and radiation;
- Transport accidents: by air, rail, road or water means of transport;
- Miscellaneous accidents: collapses of domestic/non-industrial structures, explosions, and fires.

Natural disasters, including floods, hurricanes, earthquakes, and volcano eruptions could have immediate impacts on human health, and secondary impacts causing further death and suffering from (for example) floods, landslides, fires, tsunamis.

Environmental emergencies, including technological or industrial accidents, usually involving the production, use or transportation of hazardous material, and occur where these materials are produced, used or transported, and forest fires caused by humans.

Complex emergencies involving a break-down of authority, looting and attacks on strategic installations could include conflict situations and war.

Pandemic emergencies, involving a sudden onset of contagious disease that affects health, disrupts services and businesses, brings economic and social costs (World Health Organization 2011a).

Traffic accidents

Transport accidents could happen traveling by air, rail, road, or water means of transport. The transport accident can occur when a vehicle collides with another vehicle, pedestrian, animal, or other obstruction. Traffic collisions may result in injury, death, vehicle damage, and property damage.

The most frequent and most difficult trafic accidents are the road trafic accidents. Approximately 1.24 million people die every year on the world's roads, and another 20 to 50 million people suffer from nonfatal injuries as a result of road traffic accidents. Their importance is also in the possibility to prevent them. High-income countries have a decreasing number of deaths, while in the majority of low-income countries the numbers of road deaths are increasing. Middle-income countries have the worst situation: 80% of all road fatalities by only 52% of all vehicles happen in the middle income countries. The overall global road traffic fatality rate is 18 per 100 000 population. Middle-income countries have the rate of 20.1 per 100 000, while the rate in high-income countries is 8.7 per 100 000. The death rate in African WHO Region is the highest (24.1 per 100,000 inhabitants) and the lowest rate is in European WHO Region (10.3 per 100 000) (World Health Organization 2013a).

These injuries and deaths have high impact on the families affected and on the communities in which these people lived and worked. Road traffic injuries are estimated to be the eighth leading cause of death globally, with an impact similar to that caused by many communicable diseases, such as malaria (Murray 2012). They are the leading cause of death for young people aged 15–29 years, and as a result they take a heavy toll on those entering their most productive years (World Health Organization 2011b).

Economically disadvantaged families are hardest hit by both direct medical costs and indirect costs such as lost wages that result from these injuries. At the national level, road traffic injuries result in considerable financial costs, particularly to developing economies. Despite the enormous toll exacted by road traffic injuries, they have for many years been neglected by global health and development agendas, and funding for interventions has not been commensurate with the scale of the problem. This is despite the fact that road traffic injuries are largely preventable and that the evidence base for effective interventions is extensive.

A number of factors contribute to the risk of collision, including vehicle design, speed of operation, road design, road environment, driver skill and/or impairment, and driver behavior.
The *Global status report on road safety 2013* presents information on road safety from 182 countries, accounting for almost 99% of the world's population. Only 28 countries, covering 7% of the world's population, have comprehensive road safety laws on five key risk factors: drinking and driving, speeding, and failing to use motorcycle helmets, seat-belts, and child restraints. This report serves as a baseline for the Decade of Action for Road Safety 2011-2020, declared by the UN General Assembly (World Health Organization 2013a).

Epidemiological characteristics of disasters

Natural disasters may exhibit various kinds of trends, cycles, or seasonal patterns. During the past two decade, incidents of natural disasters have increased six fold compared to the 1960s and the increase is mainly due to small and medium scale disasters. Of the total, almost 90% are hydrometeorological events such as droughts, storms, and floods and scientific evidence suggests that global climate change will only increase the number of extreme events, creating more frequent and intensified environmental emergencies (Stikova et al. 2013).

Studying the characteristics of disasters from an epidemiologic perspective is a relatively new field of study. Only within the last twenty years have epidemiologists analyzed disasters more systematic. Among others, the Center for Injury Research and Control from the University of Pittsburgh prepared the lectures on the disaster epidemiology. The lectures could be downloaded from http://www.pitt.edu/~epi2170/lecture15/sld001.htm (World Health Organization 2014a).

The epidemiologic investigation of disaster events focuses on two approaches. The first is the typical epidemiologic study of the underlying causes of the disaster. This may focus upon the event itself, or the mortality and morbidity associated with the event. Learning as much as possible about the reasons for disasters is important for developing prevention activities in the future. The second approach is to use epidemiologic methods to investigate mechanisms for alleviating the burden of a disaster once it occurs. This may be applied at the stage of disaster preparedness or at the stage of disaster relief. The most direct application of epidemiology in this situation is the establishment of surveillance systems to identify injuries and the possible emergence of communicable diseases (World Health Organization 2014a).

The evolutions of these patterns can be summarized and made evident by using trend lines showing long-term movements in natural disasters time series data. Between 1961 and 2010, a global annual average of 129.6 million people was affected by natural disasters. These disasters claimed an average of almost 99,000 lives per year. 1 in 138 persons worldwide were affected by natural hazards 1961-1970, compared to 1 in 28 in the decade 2001-2010. The economic costs associated with natural disasters increased more than eightfold (Stikova et al. 2013).

Hydro-meteorological events such as storms including cyclones, typhoons and hurricanes, droughts, floods and wet landslides, account for anywhere between 70 – 90 percent of all registered natural disasters in the last 5 decades. In 2010, 92 % of the worldwide events were due to hydro-meteorological events (floods and storms). These events also accounted more than 96 % of the total affected people and for almost 63 % of the total economic losses that year. During the period between 1990 and 2011 the number of disasters varied between 227 and 432. The number of victims registered in the natural disasters was ranged from 100 million in 1990 to 658 million in 2002 year. In the year 2011, natural disasters had a devastating impact on human society. Worldwide, 332 reported natural disasters caused the death of more than 30,770 people, made 244.7 million victims and caused a record amount of US$ 366.1 billion of damages. A total of 101 countries were hit by these events (4-Stikova et al. 2013). Annual Global Climate and Catastrophe Report published by the Aon Benfield, the world reinsurance firm, shows that in 2013 the economic losses were USD192 billion, 4% below the ten year average of USD200 billion. The losses were generated by 296 separate events, compared to an average of 259. The most deadly event of 2013 was Super Typhoon Haiyan, which left nearly 8,000 people dead or missing in the Philippines. A total of 15 tropical cyclones (Category 1+) made landfall globally in 2013, slightly below the 1980-2012 average of 16 (Aon Benfield 2014).

Disaster management

Red Cross and Red Crescent societies define disaster management as the organisation and management of resources and responsibilities for dealing with all humanitarian aspects of emergencies, in particular preparedness, response, and recovery in order to lessen the impact of disasters (International Federation of Red Crescent Societies 2014).

Local, regional, national, and international organisations are all involved in managing a humanitarian response to disasters. Each has to prepare a disaster management plan, which should cover prevention, preparedness, relief, and recovery. The complexity of disaster requires the highest level of coordination. It should include the forecasting and early warning of possible disaster, early action, and truthfully information before the disaster starts and on all actions needed and applied.

The International Federation of Red Cross and Red Crescent Societies adopted the Strategy 2020 with three main goals (International Federation of Red Crescent Societies 2014):

1) Save lives, protect livelihoods, and prepare for and recover from disasters and crises;

2) Enable healthy and safer living;
3) Promote social inclusion and a culture of non-violence.

The first people to respond to a disaster are those living in the local community. They are the first to start rescue and relief operations. When the capacity of a community or country to respond and recover from a disaster is overwhelmed it should be requested the international community. The International Federation of Red Cross and Red Crescent Society is the first point which can be contacted. It will use its regional and international networks, assets, and resources to bring assistance to the community and National Red Cross and Red Crescent Society.

Disaster prevention

Before the disaster starts there are activities designed to provide permanent protection from disasters. Not all disasters, particularly natural disasters, can be prevented, but the risk of loss of life and injury can be mitigated with good evacuation plans, environmental planning, and design standards. In January 2005, 168 Governments adopted a 10-year global plan for natural disaster risk reduction called the Hyogo Framework. It offers guiding principles, priorities for action and practical means for achieving disaster resilience for vulnerable communities. The details of the Hyogo Framework could be found at the International Strategy for Disaster Reduction website (United Nations 2014). http://www.preventionweb.net/files/1037_hyogoframeworkforactionenglish.pdf

The Regional Office of the WHO for Americas (PAHO/WHO) works very activly, among other issues, with member countries to be prepared for chemical, radiological and technological disasters, cope with climate change, to improve disaster preparedness in the health sector, to protect health services from the risk of disasters, to provide training opportunities to health professionals, including simulations, workshops and online courses and provide other activities and information. More inside could be seen at the page: http://www.paho.org/disasters (World Health Organization 2014b).

Disaster preparedness

Besides human lives and injuries, domestic and wild animals any disaster can interrupt services, such as health care, electricity, water, sewage/garbage removal, transportation and communications. It can seriously affect the health, social and economic networks of local communities and countries. Disasters have a major and long-lasting impact on people long after the immediate effect has been mitigated. Poorly planned relief activities can have a significant negative impact not only on the disaster victims but also on donors and relief agencies. Disaster preparedness activities are designed to minimise loss of life and damage – for example by removing people and property from a threatened location and by facilitating timely and effective rescue, relief and rehabilitation. Preparedness is the main way of reducing the impact of disasters. Community-based preparedness and management should be a high priority in the practice management.

There are actions that should be taken before, during and after an event that are unique to each hazard. On the individual level each citizen should be informed about the hazards that have happened or could happen in his/her area and what action should be undertaken. Local emergency management authorities can help identify the hazards in the area and outline the local plans and recommendations for everybody. It should be shared the hazard-specific information with family members and make the family disaster plan. More detailed description of actions and recommendations for disaster management is proposed by the US Federal Emergency Management Agency at the website: https://www.fema.gov/plan-prepare-mitigate (US Federal Emergency Management Agency 2014).

There are several myths abouth hazards (Meniga et al. 2003):

- ***For the prevention of infectious diseases should be as soon as possible to bury the dead***

Burial of the dead should be organized for social and humanitarian reasons; the relevance for the epidemic is usually small (possible exception plague and Ebola).

- ***Help to the wounded on the spot should be provided during 1-2 weeks***

Important results to help the wounded should be provided in the first 24 hours, and the first three days are critical. Because of this outside help arrives usually too late.

- ***All wounded and sick should immediately evacuate***

On the contrary, triage should be performed and evacuation according to the urgency of the situation.

- ***The greatest danger of unsafe water threatens the countryside***

Water supply in rural areas is often less disturbed and less potentially dangerous than in urban arreas.

- ***It is necessary to carry out vaccination of the population***

The vaccinations are carried out according to epidemiological indications. Vaccination against typhoid fever and cholera are often less important than other epidemic control measures.

- ***It should be planned plenty of fluids for infusion because of the expected diarrhea***

Most diarrheas can be solved by oral rehydration, and larger amounts of fluids for infusion are not needed for the treatment of diarrhea.

- ***First we need to solve other problems of life, and then think of the production***

On the contrary, from the first day we should seek to re-establish production, and at the end of the first week it should operate all repaired plants, for which there is no risk of further destruction or damage.

- ***Things will return to normal in a few weeks***

On the contrary, the consequences of a disaster will last long time. For disaster affected countries much depends on their financial and other resources.

- ***Dissemination of information on disasters should be limited in order to prevent panic***

Dissemination of accurate and authentic information will combat panic and rumors and significantly facilitate all rescue functions.

- ***More help from the outside it is better***

Help from the outside, unless is not adequate, can cause more problems than benefits.

- ***Writing documentation is unnecessary waste of time***

Any neglect of writing down documentation is later paid dearly, and much of the facts could not be restored.

- ***If all work unanimously there is no need for planning***

A well-conceived and organized work helps much more. Only the planned elimination of disaster consequences can have success.

Disaster relief

Disaster relief is a coordinated multi-agency response to reduce the impact of a disaster and its long-term results. Relief activities include rescue, relocation, providing food and water, preventing disease and disability, repairing vital services such as telecommunications and transport, providing temporary shelter and emergency health care.

Help during and after disasters will always be of more use to have in mind some basic principles.

Donations and humanitarian help will achieve a better effect if the following recommendations are taken into account (Meniga et al. 2003):

• It should be recognized that every disaster is unique, and its effects will depend on the level of development of the country and community;
• Help and donations should respond to real needs as they are determined by the recipient;
• The affected country must also inform donors about what is not necessary or desired, which is as important as the information on what is needed;
• Ordering help in an accident must be consistent with the action steps in the affected country;
• Whenever possible, it should be used cash donations, because they provide local goods and services, saving logistics, transport and storage;
• Good results of help in the disaster will be obtained if a close cooperation between donors and recipients is reached, even better if it is established before the disaster;
• Some special materials and equipment requiring precise specification and instructions, which is especially true of drugs, medical equipment, vaccines, or new equipment;
• Good knowledge and information on the procedures, rules and organisation of humanitarian aid will increase the effectiveness of donations.

It is not recommended:

• Do not react too much on media reports for urgent help, rather wait for a complete picture and a

formal request;
• Donors should not compete with each other, the quality of aid and the fact that this aid meets the needs is the most important;
• It is not recommended to send used items (clothing, shoes, etc.);
• Never donate medicines which lifetime expired or is close to it;
• Not to use double standards for donations, because if the product is inappropriate in the donor country, such a product is not acceptable nor in the country in which the assistance refers.

Disaster recovery
Once emergency needs have been met and the initial crisis is over, the people affected and the communities that support them are still vulnerable. Recovery activities include rebuilding infrastructure, health care, and rehabilitation. These should blend with development activities, such as building human resources for health and developing policies and practices to avoid similar situations in future.

The recovery task of rehabilitation and reconstruction begins soon after the emergency phase has ended, and should be based on pre-existing strategies and policies that facilitate clear institutional responsibilities for recovery action and enable public participation.

The international financial and political organizations and national goverments play the important role in recovery and reconstruction of disaster affected areas and countries. Since The Global Facility for Disaster Reduction and Recovery (GFDRR), a growing partnership of 41 countries and eight international organizations, founded in 2007, is the World Bank's institutional mechanism for Disaster Recovery Management (DRM). It supported in disaster-specific medium- to long-term recovery and reconstruction investments. These investments are expected to lead to the reconstruction of at least 1.7 million homes, 600 health facilities and 2,300 schools, in turn permitting the return of some 8 million displaced people to their homes and a restoration of health and education facilities for around 3 million peo. A new World Bank-GFDRR DRM Hub in Tokyo was established in February 2014 under a $100 million DRM program supported by Japan. The Hub will help to match relevant expertise with World Bank DRM operations and clients (World Bank 2014a).

In July 2014 the new Work Plan FY 15-17 for 2015-2017 was endorsed by the GFDRR Consultative Group in which is accepted that GFDRR will continue to implement its Strategy 2013–2015. GFDRR also aims to scale up efforts to meet the demand of Priority Countries and those of additional countries by supporting activities that influence and leverage country investment programs to improve resilience to climate change and disaster risk management. FY15-17 program aims to support more than 70 countries using an envelope of approximately US$275 million (World Bank 2014b).

Excercises:
Task 1: Chose one possible hazard that could appear in your country or region and analyze in the group of 3-5 students the conditions when this particular hazard can develop the disaster. Refer the results in the plenary session.

Task 2: The participants will look on traffic accidents data from different countries, analyze and discuss how many different factors, including preventive measures, are linked with the problem. Propose a program for your country, city or community to reduce traffic accidents by 10%. How many years will be needed for implementation of the program?

Task 3: The participants could look out for the classification of disasters and try to identify common characteristics for the certain groups.

References:

Aon Benfield (2014). Annual Global Climate and Catastrophe Report: Impact Forecasting. Chicago/USA: 2014. Available at: http://thoughtleadership.aonbenfield.com/Documents/20140113_ab_if_annual_climate_catastrophe_report.pdf (Accessed: November 24, 2014).

Centre for Research on the Epidemiology of Disasters (2014). Available at: http://www.emdat.be/ (Accessed: November 19, 2014).

International Federation of Red Cross and Red Crescent Societies (IFRC) (2014). Available at: http://www.ifrc.org/en/what-we-do/disaster-management/ (Accessed: November 24, 2014).

Meniga A, Jaksic Z, Dzakula A, Kovacic L, Sosic Z (2003). Zdravstvena zastita u izvanrednim stanjima (Health Care in State of Emergency). In: Kovacic L (ed.). Organizacija i upravljanje u zdravstvenoj zaštiti (Organization and Management of Health Care), Zagreb: Medicinska naklada, 2003.

Murray CJL (2012). Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. Lancet 2012;380:2095-2128.

Stikova E, Lazarevski P (2013). Global public health threats and disaster management. In: Genc Burazeri G and Zaletel Kragelj L, eds. Systems – Lifestyles – Policies, A Handbook for Teachers, Researchers and Health Professionals (2nd edition, Volume I). Lage, Germany: Hans Jacobs Publishing Company, 2013. Available at: http://www.seejph.com/wp-content/uploads/2013/10/Volume-I-Health-Systems-Lifestyle-Policies.pdf (Accessed: December 24, 2014).

United Nations (2009). UNISDR Terminology on Disaster Risk Reduction, Geneva, Switzerland, 2009. Available at: http://www.unisdr.org/we/inform/terminology (Accessed: November 24, 2014).

United Nations (2014). International Strategy for Disaster Reduction. Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters. Available at: http://www.preventionweb.net/files/1037_hyogoframeworkforactionenglish.pdf, (Accessed: November 24, 2014).

UN Office for Disaster Risk Reduction (2014). Available at: http://www.unisdr.org/ (Accessed: November 17, 2014).

US Federal Emergency Management Agency (2014). Plan-Prepare-Mitigate. Available at: https://www.fema.gov/plan-prepare-mitigate (Accessed: November 24, 2014)

World Health Organization (2011a). WHO Collaborating Center for Research on Epidemiology of Disaster. Annual Disaster Statistical Review 2011 – The numbers and trends. Available at: http://cred.be/sites/default/files/2012.07.05.ADSR_2011.pdf (Accessed: September 4, 2013).

World Health Organization (2011b). Global burden of disease, Geneva: 2011. Available at: http://www.who.int/healthinfo/global_burden_disease/estimates_regional/en/index.htm (Accessed: November 21, 2014).

World Health Organization (2013b). Global status report on road safety 2013: supporting a decade of action. Geneva: 2013. Available at: http://www.who.int/violence_injury_prevention/road_safety_status/2013/en/ (Accessed: November 21, 2014).

World Health Organization (2014a). WHO Collaborating Center University of Pittsburgh. Supercourse. Available at: http://www.pitt.edu/~epi2170/lecture15/sld001.htm (Accessed: November 24, 2014).

World Health Organization (2014b). Pan American Health Organization. Available at: http://www.paho.org/disasters (Accessed: November 24, 2014).

World Bank (2014a). Disaster Risk Management. Available at: http://www.worldbank.org/en/topic/disasterriskmanagement/overview#2 (Accessed: November 24, 2014).

World Bank (2014b). Disaster Risk Management. Available at: https://www.gfdrr.org/sites/gfdrr/files/Updated%20GFDRR%20Work%20Plan%202015-17%2010.24.14_0_0.pdf (Accessed: November 24, 2014).

Title:	**N 2.9 THE MILLENNIUM DEVELOPMENT GOALS (MDG)**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Marta Lomazzi
Address for correspondence	Dr. Marta Lomazzi [1,2] [1]World Federation of Public Health Associations, c/o IGH, University of Geneva, chemin des Mines 9, 1202 Geneva, Switzerland; [2]Institute of Global Health, University of Geneva, chemin des Mines 9, 1202 Geneva, Switzerland; E-mail: marta.lomazzi@wfpha.org
Key words	Millennium development goals, public health professionals, post-2015 Agenda, governance, health systems
Topics	The Millennium Development Goals (MDGs) are eight international development goals to be achieved by 2015 addressing extreme poverty, hunger, maternal and child mortality, communicable disease, education, gender equality and women empowerment, environmental sustainability and the global partnership. Most activities worldwide have focused on maternal and child health as well as communicable diseases, while less attention has been addressed to environmental sustainability and the development of a global partnership. At present, numerous targets have been at least partially attained. However, some goals will not be achieved, particularly in the poorest regions, due to different challenges. The post-2015 agenda is now under debate. The new goals should reflect today‟s geopolitical, economic and social situation and adopt an all-inclusive, intersectoral and accountable approach.
Learning objectives	To understand the concepts and the rationale behind the Millennium Development Goals and their impact on the global and national Agenda; To acquire knowledge and skills needed to take part to the post 2015 Agenda debate and beyond; To advance strategic thinking to develop and strengthen public health approach post 2015 and beyond.
Teaching methods	Lectures, interactive small group discussions, case studies, and international field practice
Who should apply	Those who pursue an international career in public health management, policy development, research or advocacy; entrance requirements are to be determined by the institution offering the modules
Career opportunities	Teaching and/or research careers in academic environments; leadership positions in the health care sector, policy makers, private industry and Non-Governmental Organizations; free-lance consulting
Assessment of students	Review of publications, activities and debates
COMMENTS on the module by lecturers and students	**???**

The Millennium Development Goals (MDGs)

The Millennium Development Goals (MDGs) are eight global development goals to be achieved by 2015 addressing poverty, hunger, maternal and child mortality, communicable disease, education, gender inequality, environmental sustainability and the global partnership for development. These targets are both global and local, adapted to each country to meet specific needs. The MDGs are inter-dependent and deeply influence each other (UN).

The goals have been generated as an output of the United Nations Millennium Declaration (UN 2000) and have managed to focus world attention and global political consensus on the needs of the poorest, to achieve an important change in the Official Development Assistance commitments (UN 2012) and to provide a framework for the entire international community to work together towards a common goal in the last 14 years.

Comparable indicators have been developed to measure the progress of MDGs (UN retrieved 2013 and 2014; UNICEF retrieved 2013) and several reports have tracked the global assessment of progress (Mahjoub, Halim et al. 2010, Lomazzi, Theisling et al. 2013, PROCOSI 2013, UN 2013, Lomazzi, Laaser et al. 2014, UN 2014). Although considerable achievements has been made, reliable data and statistics analyses remain poor, especially in many developing countries (Bourguignon, Bénassy-Quéré et al. 2008).

The most recent UN report (UN 2014) on progress towards the MDGs has highlighted several achievements in all health and education areas: global poverty has been halved, 90% of children in developing regions have access to primary education, disparities between boys and girls in school enrolment have been narrowed. Significant gains have also been made against communicable diseases along with progresses in all health indicators. The chance of a child dying before age five has been nearly halved as the proportion of people who lack access to safe sources of water (Hogan, Foreman et al. 2010, Lozano, Wang et al. 2011, UN 2014).

However, progress has been somehow unfair. The reduction in global income poverty shall be mainly attributed to the rapid growth of a few countries in Asia (i.e. China, India, Indonesia and Vietnam), while in other countries, poverty reduction has been quite slow, or poverty has even increased (i.e. Sub-Saharan Africa) (Bourguignon, Bénassy-Quéré et al. 2008). Projections indicate that in 2015 more than 600 million people will still be using unsafe water sources, almost 1 billion will be living in very poor conditions, mothers will continue to die giving birth, and children due to preventable diseases. The goals of primary education and gender equality also remain partially unfulfilled with broad negative consequences since achieving the MDGs deeply relies on education and women‟s empowerment. This aspect is even more evident in rural areas and among marginalized people (UN 2012, UN 2013, UN 2014). Also, environmental sustainability remains an international defy. MDG8 remains one of the most challenging (Bourguignon, Bénassy-Quéré et al. 2008).

This partial achievement can be attributed to a range of common challenges (Waage, Banerji et al. 2010). First, the MDGs were not the product of a comprehensive analysis and prioritization of development needs and therefore were often too narrowly focused. Second, this framework has not enough taken into account the impacts on environmental, social and economic dimensions. Environmental aspects are addressed under goal 7 but only some topics are covered, neglecting key issues for sustainable development. Third, a gender perspective has been integrated explicitly only in MDGs 3 and 5 (Jones, Holmes et al. 2008, Waage, Banerji et al. 2010). Improving equalities will require health system strengthening, associated with a political and social engagement to face all forms of discrimination (TheWorldWeWant 2013). Fourth, a lack of clear ownership and leadership globally and nationally might have partially limited the achievement of the MDGs. We have mainly observed a tendency to a global uniform approach even if different countries scale up health services and make progress at different speeds. A more specific approach as well as the adoption of a „learning by doing‟ approach involving key stakeholders and taking advantages from evidence-based data from pilot projects shall be considered (Waage, Banerji et al. 2010, Subramanian, Naimoli et al. 2011).

Furthermore, not only stakeholders but also public health professionals should be considered as key actors in the process (Lomazzi, Theisling et al. 2013, Lomazzi, Laaser et al. 2014). Fifth, achievement of the MDGs depends much on the fulfilment of MDG8 on global partnership. Engagement by governments (and donors in general) has been deeply affected by the global economic and financial crisis. The public-private partnership should be boosted. Up to now, more than half of the services used for MDGs have been provided by the private sector (WorldBank 2009, UNDP 2010); this sector should not be considered only as a donor but be embedded in the path, taking advantages of the competences. Investments should be sustainable, predictable and include innovative financing mechanisms. Sixth, accountability must be an essential part of the framework. Little attention has been paid to the corruption linked to the use of MDGs money (Gagnon 2009); some studies have been run in recent years to define methods, tools, and good practices to map corruption and develop strategies to block corruption in the health sector, improve accountability and service delivery post-2015 and beyond (UNDP 2011, Mackey and Liang 2012, Lomazzi, Laaser et al. 2014). Last but not least, goal measurement is often too narrow, or might not identify a clear means of delivery (Attaran 2005, Waage, Banerji et al. 2010). Government reports have sometimes been criticized as false and government-driven, leading to a lack of confidence into the official reporting systems (Pieth 2012, Anti-CorruptionResearchNetwork 2013, Lomazzi, Borisch et al. 2014, Lomazzi, Laaser et al. 2014). More and better data are definitely needed.

Despite the positive achievements attained, many see the health MDGs as "unfinished business". Indeed, MDGs have not fully addressed the wide concept of development embedded in the Millennium Declaration, which embraces human rights, equity, democracy and governance (TheWorldWeWant 2013). A post-2015 slowdown must be avoided. The Millennium Declaration is still valid and the work should be completed. To fully achieve this aim, the new targets, whatever they will be called, should be tailored to the new socio-economic and political situation. The framework should be adapted to today‟s needs: new power, new countries, new poors and new partnerships. The notion of good health is developing, shifting towards a people-centered approach to create and maintain good health and well-being rather than preventing and treating diseases. Health shall be perceived as a societal global issue and considered as a global good (Smith, Beaglehole et al. 2003). Health systems should tailor the new health and environmental challenges. New approaches can be adopted to improve health: new technologies allow exceptional access to information and enable civil society globally to take part in the decision-making process, including also marginalized people (TheWorldWeWant 2013). The post-2015 health agenda should also embrace specific sustainable health-related targets as well as take an all-inclusive approach to preserve people‟s health for the entire lifespan. As a first step, the existing MDGs targets should be reached and new targets should be adopted. Equity and education should be considered as the base of health and integrated in all targets. The links between health and sustainable development goals (SDGs) shall be reinforced with a rigorous framework and the new agenda should adopt a social determinant of health approach (UN 2013, WHO 2013). An integrated „health-in-all-policies‟ approach involving different sectors linked to governance, environment, education, employment, social security, food, housing, water, transport and energy are essential to address the complexity of health inequities (Shaikh 2008, Pronyk, Muniz et al. 2012, Boerma, Chopra et al. 2013, TheWorldWeWant 2013). Health should be perceived as an investment and not only as a cost (Kickbusch, Novotny et al. 2013, UN 2013). Accountability must be guaranteed; on one hand, better data will be required to allow transparency, proper evaluation and improvements. On the other hand, governments‟ engagement and partnership dynamics should be boosted to answer at best to the new socio-political context, taking advantage also of innovative solutions offered by low and lower-middle income countries. Last, these targets should be global social contracts among governances and societies, and the concept of social responsibility, lacking for the MDGs, should be incorporated.

Most of the discussions are dealing with two types of comprehensive goals for health: universal health coverage (UHC) and healthy life expectancy (HALE). Debates about post-MDG targets and linkages with SDGs are now on going through in-country and thematic consultations, including, e.g. a UN Task Team, a post-2015 high-level panel established by the UN Secretary General, society consultations through social media, an Open Working Group provided by the UNSG in consultation with

governments, etc. (Post2015.org 2013, UN 2013, UN 2013, WorldWeWant 2013). Regardless of which targets will be selected, the goals must be translated into measurable indicators; accountability and regular reviews of progress should be performed and shared with governments and general public. A multisectoral approach will be crucial, integrating the social determinants of health and with a main focus on equity, education and poverty reduction.

References:

Anti-CorruptionResearchNetwork. (2013). "Anti-Corruption Research Network - The Global Meeting-Point for Anti-Corruption Research." Retrieved 29 April 2013, from http://corruptionresearchnetwork.org/resources/frontpage-articles/corruption-as-an-obstacle-to-achieving-the-millennium-development-goals.

Attaran, A. (2005). "An immeasurable crisis? A criticism of the millennium development goals and why they cannot be measured." PLoS medicine 2(10): e318.

Boerma, T., M. Chopra, C. Creo, S. El-Halabi, J. Lindgren-Garcia, T. Moeti, A. Nordström, J. Phumaphi and K. Rasanathan (2013). "What do people want for health in the post-2015 agenda?" The Lancet.

Bourguignon, F., A. Bénassy-Quéré, S. Dercon, A. Estache, J. W. Gunning and R. R. (2008). Millennium Development Goals at midpoint: Where Do We Stand and Where Do We Need to Go? Brussels and Luxembourg, European Commission.

Gagnon, J.-P. (2009). Necessary but Not Sufficient: Accelerating Progress and Looking Beyond the MDGs. M. La Trobe University.

Hogan, M. C., K. J. Foreman, M. Naghavi, S. Y. Ahn, M. R. Wang, S. M. Makela, A. D. Lopez, R. Lozano and C. J. L. Murray (2010). "Maternal mortality for 181 countries, 1980-2008: a systematic analysis of progress towards Millennium Development Goal 5." Lancet 375(9726): 1609-1623.

Jones, N., R. Holmes and J. Espey (2008) "Gender and the MDGs."

Kickbusch, I., T. Novotny, N. Drager, G. Silberschmidt and S. Alcazar. (2013). "Bulletin of the World Health Organization - Global health diplomacy: training across disciplines." Retrieved 07 May 2013, from http://www.who.int/bulletin/volumes/85/12/07-045856/en/.

Lomazzi, M., B. Borisch and U. Laaser (2014). "The Millennium Development Goals: experiences, achievements and what's next." Glob Health Action 7: 23695.

Lomazzi, M., U. Laaser, M. Theisling, L. Tapia and B. Borisch (2014). "Millennium Development Goals: how public health professionals perceive the achievement of MDGs." Glob Health Action 7: 24352.

Lomazzi, M., M. Theisling, L. Tapia, B. Borisch and U. Laaser (2013). "MDGs – A public health professional‟s perspective from 71 countries." Journal of Public Health Policy 34(1): e1-e22.

Lozano, R., H. D. Wang, K. J. Foreman, J. K. Rajaratnam, M. Naghavi, J. R. Marcus, L. Dwyer-Lindgren, K. T. Lofgren, D. Phillips, C. Atkinson, A. D. Lopez and C. J. L. Murray (2011). "Progress towards Millennium Development Goals 4 and 5 on maternal and child mortality: an updated systematic analysis." Lancet 378(9797): 1139-1165.

Mackey, T. K. and B. A. Liang (2012). "Combating healthcare corruption and fraud with improved global health governance." BMC Int Health Hum Rights 12: 23.

Mahjoub, A., M. Halim and a. K. R. (2010). "Assessing the Millennium Development Goals process in the Arab region – a survey of key issues."

Pieth, M. (2012). Collective Action: Innovative Strategies to Prevent Corruption Dike Verlag AG.

Post2015.org. (2013). Retrieved 26 April 2013, from http://post2015.org/.

PROCOSI (2013). Civil society consultation on health in the post-2015 development agenda.

Pronyk, P. M., M. Muniz, B. Nemser, M. A. Somers, L. McClellan, C. A. Palm, U. K. Huynh, Y. Ben Amor, B. Begashaw, J. W. McArthur, A. Niang, S. E. Sachs, P. Singh, A. Teklehaimanot and J. D. Sachs (2012). "The effect of an integrated multisector model for achieving the Millennium Development Goals and improving child survival in rural sub-Saharan Africa: a non-randomised controlled assessment." Lancet 379(9832): 2179-2188.

Shaikh, B. T. (2008). "Marching toward the Millennium Development Goals: what about health systems, health-seeking behaviours and health service utilization in Pakistan?" World health & population 10(2): 16-24.

Smith, R., R. Beaglehole, D. Woodward and N. Drager (2003). Global Public Goods for Health: health economics and public health perspectives. Oxford, Oxford University Press.
Subramanian, S., J. Naimoli, T. Matsubayashi and D. H. Peters (2011). "Do we have the right models for scaling up health services to achieve the Millennium Development Goals?" BMC health services research 11: 336.
TheWorldWeWant (2013). Health in the post-2015 agenda. Report of the Global Thematic Consultation on Health.
UN. "MDG Indicators." Retrieved 12 April 2013, from http://unstats.un.org/unsd/mdg/.
UN. "MDG Monitor." Retrieved 15 April 2013, from http://www.mdgmonitor.org/aboutMDG.cfm.
UN. "Official list of MDG indicators." Retrieved 25 December 2014, from mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators%2fOfficialList.htm
UN. "UNdata." Retrieved 12 April 2013, from http://data.un.org/.
UN. (2000). "55/2. United Nations Millennium Declaration." Retrieved 25 March 2013, from http://www.un.org/millennium/declaration/ares552e.htm.
UN (2012). The Millennium Development Goals Report 2012.
UN. (2012). "Official Development Assistance." Retrieved 25 April 2013, from http://iif.un.org/millennium-development-goals/official-development-assistance-oda.
UN. (2013). "Beyond 2015." Retrieved 26 April 2013, from http://www.un.org/millenniumgoals/beyond2015-news.shtml.
UN (2013). Health in the post-2015 development agenda: need for a social determinants of health approach - Joint statement of the UN Platform on Social Determinants of Health.
UN (2013). The Millennium Development Goals Report 2013.
UN (2014). The Millennium Development Goals Report 2014.
UNDP (2010). "Active macroeconomic policy for accelerating achievement for the MDG targets."
UNDP. (2011). "Fighting corruption in the health sector: methods, tools and good practices." Retrieved 14 October 2014, from http://www.undp.org/content/undp/en/home/librarypage/democratic-governance/anti-corruption/fighting_corruptioninthehealthsector.html.
UNICEF. "UNICEF Monitoring & Statistics." Retrieved 13 April 2013, from http://www.unicef.org/statistics/index_24304.html.
Waage, J., R. Banerji, O. Campbell, E. Chirwa, G. Collender, V. Dieltiens, A. Dorward, P. Godfrey-Faussett, P. Hanvoravongchai, G. Kingdon, A. Little, A. Mills, K. Mulholland, A. Mwinga, A. North, W. Patcharanarumol, C. Poulton, V. Tangcharoensathien and E. Unterhalter (2010). "The Millennium Development Goals: a cross-sectoral analysis and principles for goal setting after 2015 Lancet and London International Development Centre Commission." Lancet 376(9745): 991-1023.
WHO. (2013). "Health in the post-2015 UN development agenda." Retrieved 21 March 2013, from http://www.who.int/topics/millennium_development_goals/post2015/en/index.html.
WorldBank (2009). Global monitoring report 2009 - A Development Emergency.
WorldWeWant. (2013). "The World We Want." Retrieved 26 April 2013, from http://www.worldwewant2015.org/.

Title:	**N 2.10 THE GLOBAL FINANCIAL CRISIS AND HEALTH**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Helmut Wenzel
Address for correspondence	Helmut Wenzel MA c/o Dr. Ulrich Laaser, Medical Faculty University of Belgrade Centre-School of Public Health and Health Management 15 Dr Subotica Street, 11000 Belgrade, Serbia
Key words	Financial crisis, budgeting processes, health system financing, managed care, efficiency, health, health impacts, heath systems
Topics	The economic situation influences the health status of a population in many ways. The financial crisis has now given greater weight on an old debate about the financial sustainability of health systems in Europe. Drivers of health expenditures will be critically analyzed. The vulnerability of public budgets and its consequences for health budgets is depicted. The toolset of politics, and policies applied by policy-makers will be analyzed. Managed care approaches are presented and evaluated. The health impact
Learning objectives	To understand the principles of a global financial market and the inter-dependencies of national budgets and allocation of resources on health budget etc.; To understand the direct and indirect impacts of a global financial crisis on health To understand the dynamics of financial and economic crises; To understand the constraints of financing and setting up health budgets To aquire knowledge and skills needed for redesigning health systems; To design a case study and to analyze the impact of the crises on health outcomes, based on secondary statistics
Teaching methods	Lectures, interactive small group discussions, case studies
Who should apply	Those who pursue an international career in public health management, health policy development, research or advocacy planning; entrance requirements are to be determined by the institution offering the modules
Career opportunities	Teaching and/or research careers in academic environment; Policy administration in public institutions, non-governmental organizations and in consulting companies.
Assessment of students	Test and case problem presentations.
COMMENTS on the module by lecturers and students	**???**

Global financial crisis and health

The scope of the problem

Health and health care are influenced by many factors that differ from country to country and from national economy to national economy. The economic situation influences the health status of a population in many ways; at least it is part of the social determinants of health. "The social determinants of health are the conditions in which people are born, grow, live, work, and age. These conditions are shaped by the distribution of money, power and resources at global, national and local levels - sometimes termed "structural determinants" of health inequities" (World Health Organization-Regional Office for Europe 2013).

Good health of population is an important locational factor and an incentive for establishing various enterprises. On the other hand, the making up of the production processes and working places, technological progress, education and the political (regulatory) framework of the government interact with health, too. Increasingly, the policy of firms is to put maximization of profits on top of their priorities even at costs of negative effects on health. Changes in the prosperity of a national economy will have its effects at various places. The most obvious are at diverse places of the economic sector. Nevertheless, public institutions and government are also influenced, but mostly indirect and sometimes with a certain delay. Taxes and contribution fees are calculated based on the profits of enterprises and the income of employees. The financing of health care and insurance may depend on income also, and, in the case of a Beveridge system, on tax income of the government.

Health care systems are faced with two basic problems: Increasing expenditures and a financing power that does not keep pace with the increasing demand - independent how the money is collected, i.e. in a Bismarckian or Beveridge model. Some call it a permanent financing crisis. The discussions centre on the determinants of health expenditures, and, mostly identify the ageing population as the important driver. Recent research now shows that this seems not to be correct (Zweifel et al. 2004), at least the contribution of an ageing population is very low - actually the annual growth rate of per capita expenditures is about 1.5% (Breyer et al. 2011), which is less than the observed growth rate of about 2% in the OECD (Felder 2013). However, the evidence shows also an indirect influence on expenditures. Medical technology and its progress is an important driver of health expenditure growth, and medical technology, strongly interacts with age and health, i.e., population ageing reinforces the influence of medical technology on health expenditure growth and vice versa (de Meijer et al. 2013). Furthermore, there are also a number of increasingly complex challenges: Globalization, evolving health threats, financial constraints on government spending, and social and health inequalities are some of the most pressing (Bjegovic-Mikanovic et al. 2014).

The so-called financial crisis has now shed new light on an old debate about the financial sustainability of health systems in Europe. For many years, it was the "ghost" of ageing populations. Further expenditure drivers were identified in the development of medical technology and medical progress, which offer new (and more expensive - but not necessarily more costly) treatment options; these are supplemented by changing public expectations (Bjegovic-Mikanovic et al. 2014). All of these were suited for tormenting policy-makers who were troubled by a steady growth in health sector spending. However, the most far-reaching real threat came in the shape of a different triumvirate: financial crisis, sovereign debt crisis and economic crisis. After 2008, the focus of concern turned from the future to the present, from worrying about how to pay for health care in thirty years" time to how to pay for it in the next three months (World Health Organization-Regional Office for Europe 2014).

Financial and economic crises

To understand the development and the rapid spread of the crises, we first have to look at the basic principles of a global market and the world economy. The firms and institutions t together make it possible for money to make the world go round. Part of this are "financial markets, securities exchanges, banks, pension funds, mutual funds, insurers, national regulators, such as the Securities and Exchange Commission (SEC) in the United States, central banks, governments and multinational

institutions, such as the International Monetary Fund (IMF) and World Bank“ (The Economist 2014). A financial crisis is “a situation in which the supply of money is outpaced by the demand for money is called financial crisis. This means that liquidity is quickly evaporated because available money is withdrawn from banks, forcing banks either to sell other investments to make up for the shortfall or to collapse“ (BusinessDictonary 2014). As The Financial Times (2014) points out, the consequences are that the involved institutions, such as banks, typically stop to pass funds to others. They also demand early repayment of loans and other financial instruments, they liquidate holdings of financial assets that can be sold, they possibly increase collateral requirements etc. to an extent that is outside the prior expectations of market participants. This ends up in what is often referred to as “frozen” financial markets, where trading volumes fall considerably and market participants often cannot be convinced to trade financial instruments, independent of prices. The infection of other countries, i.e. the transmission of the financial and economic shock from one nation to another gains speed at times where substantial financial capital, goods, and services flow across borders. These cross-border interdependencies additionally bring down economies that suffer from a financial crisis (Financial Times-ft.com/lexicon 2014a).

The Financial Times (Financial Times - ft.com/lexicon 2014b) also identifies four channels through which the „disease“ spreads. The first three belong to the private sector. (1) Losses on financial assets which are held abroad can damage confidence in the domestic financial institutions that made those investments. (2) Participants in financial markets in one country may re-evaluate their assessment of certain adverse risks taking place there in the light of recent developments in other nations, arguing that certain pertinent circumstances are common. (3) Because many firms supply customers abroad severe economic downturns can spread across borders, as falling exports reduce the national incomes. This trade-related channel has grown in importance with the development of international supply chains. Reductions in sales of a final good can produce cuts in orders for foreign sourced parts and components worth multiples of the original transaction (so-called bullwhip effect). (4) Certain government policies that seek to bolster the domestic economy at the expense of other nations also have a share in spreading the “disease” across borders. Essentially measures are taken such as raising tariffs and other trade barriers, devaluing national currencies, insisting that domestic financial institutions repatriate financial asset holdings from abroad, restricting government contracts to domestic firms etc. (so-called beggar-thy-neighbour policies).

Of course, a global financial crisis must not necessarily result in a global economic crisis. But in modern economies, where working capital is needed to bridge the time span between the occurrence of expenditures, e.g. for parts, supplies, and staff, and the time when revenues occur, the following withdrawal of credit creates the potential for widespread corporate bankruptcies. A financial market breakdown, then, can quickly create a severe downturn in economic activity, involving falls in national income and increases in unemployment that are in excess of those witnessed during traditional economic recessions. Such a process undergoes several phases. Guillén (Guillén 2014) provides a very detailed list of the events and the corresponding timing, which can help to identify the different phases of the process.

In one of the later stages austerity plans (from 2010 on) were brought in, concentrating on tax rises and budget cuts of governments. These plans were discussed controversially and criticised. Some thought that these measures were too dangerous, because national economies had not returned to their previous growth paths. Others argued that austerity, in combination with structural reforms, would rise - on the long run - the rate of economic growth, and, finally, would raise expectations of future tax levels and calm down fears about the long-term solvency of governments (Financial Times-ft.com/lexicon 2014c). Resulting from a combination of austerity, deleveraging, and rebuilding bank balance sheets economic growth fell below projections for many large economies during the years 2010 to 2012 (Financial Times-ft.com/lexicon 2014d).

Detecting the financial dependencies between health and financial crisis

In health care - at “normal” times of scarce resources - governments try to close the gap between rapidly increasing demand and slower raise of financing opportunities by applying four classical

administrative measures: (1) Cutting down expenditures (various budgets), (2) excluding services from being reimbursed (problem to patients), thus increasing the amount of patient´s contribution, i.e. out-of-pocket payments, (3) by raising the contribution fees from the insured, and, (4) last but not least, by bargaining with providers and forcing the setting of fixed prices. Of course, there is some variation, depending on the health care model - tax financed or contribution fee financed. Rationing of services is also an option. Policy-makers are mostly gazing at expenditures but not on (opportunity) cost. This means that efficiency issues and consequently efficiency gaps have not been in the focus. New approaches of delivering care, aiming at improving efficiency, by overcoming traditional barriers, are not yet widely applied, or still under critical appraisal (Nolte et al. 2014).

Ruckert et al. visualise how health equity and financial crisis are linked. They distinguish between direct and indirect channels of influence (Ruckert et al. 2012). Direct influence channels lead from "economic decline & lower tax revenue" to "health budget cutbacks" and to "health impacts", then. Furthermore, there is also a link to "transformation of health system", "commodification[1] of users fees" and finally to "health impacts". The indirect channels are "reduction in welfare programs", "climate of austerity", "labour market transformation" and finally "health impacts" (Ruckert et al. 2012 p. 2). Studying the consequences of the financial crisis in Canada, they come to the conclusion that " The findings suggest that health equity is primarily impacted through two main pathways related to the global financial crisis: austerity budgets and associated program cutbacks in areas crucial to addressing the inequitable distribution of social determinants of health, including social assistance, housing, and education; and the qualitative transformation of labour markets, with precarious forms of employment expanding rapidly in the aftermath of the global financial crisis. Preliminary evidence suggests that these tendencies will lead to a further deepening of existing health inequities, unless counter-acted through a change in policy direction" (Ruckert et al. 2014).

The global crisis has arrived at all parts of society and, even though located outside the health system, its unexpected occurrence, demonstrated its vulnerability, and deploys large negative effect on the provision of health (Mladovsky et al. 2014). Health systems are complex, nested entities. However, like enterprises or public organisations they need predictable reliable sources of income to operate appropriately. Sudden interruptions of funding can make it difficult to maintain necessary levels of health care (Mladovsky et al. 2014).

Financing health systems

In this situation governments and policy-makers - metaphorically speaking - have "to square the circle", i.e., they are faced with inconsistent systems of conflicting goals. They have to regain financial stability, protect banks, maintain the level of public health, sustain the competitiveness of their national economy, and care for the principles of equity, equality, and solidarity. Governmental income comes from various taxes and/or from the financial market. To raise fresh capital from the market creditworthy is a prerequisite and one has to be able to pay high interest rates, which of course is a financial burden for the next generations, and which in turn impacts the above mentioned principles. In addition, it is not possible to raise taxes unboundedly.

To protect health of its population is first and foremost an ethical goal. However, the operation which takes place at different levels of the health system is under the reservation of financial feasibility, i.e. the economic situation of a country is an important constraint, which follows other (economic) laws. Allocation of resources takes place at different levels of the system and at different organizational structures. Nevertheless, budgeting processes have one thing in common: They are not only rationally determined. Money goes there where budget holders with strong power are. Therefore, the allocation does not really follow cost-benefit ratios. The health sector competes with other sectors of a governmental budget. This is the first hurdle, and there are bad examples how money from the health sector was reallocated to finance spending in other areas (Thompson et al. 2014). Other hurdles will follow.

[1] Commodification refers to the way that market values can replace other social values, or the way a market can replace a communal system.

Policy-makers may now decide to maintain, decrease or increase current levels of public expenditure on health. Given the tool set mentioned above they can review and alter the level of contributions for publicly financed care, the volume and quality of publicly financed care, and the cost of publicly financed care (Mladovsky et al. 2014). Of course, when making these decisions one has to keep in mind the goals of the health system, or as Mladovsky et al. state "Achieving fiscal balance is likely to be important in the context of a financial crisis but generally it is not regarded as a primary goal of the health system - on a par with or overriding health policy goals such as health gain or financial protection - since, if it were, it could be achieved by cutting public spending on health without regard for the consequences" (Mladovsky et al. 2014).

An overview of applied policy tools

The general situation is characterized by falling GDP [2], rising unemployment, growing fiscal pressure, reallocation of money from the health sector to finance spending in other areas (Thompson et al. 2014p. 8), and reducing health budgets etc.. The health consequences may be directly derived, i.e. through restrictions in getting access to care and treatment or more indirect through poor working conditions, unemployment, unsecure living conditions etc. Some authors discuss the correlation between unemployment and negative health outcomes, like suicide (Ayuso-Mateos et al. 2013; Vogli 2014), and poverty and postponed doctor visits (Thompson et al. 2014). Mladovsky et al. (2014) analysed the health policy responses to the financial crisis, too. Their main conclusions are that: European Region countries have applied a mix of policy tools. Some countries seem to have used the crisis to increase efficiency, although little has been done to improve public health, which is a missed opportunity.

That Policy responses aiming at secure financial sustainability, and to improve the health sector‟s fiscal preparedness for financial crises, should be consistent with the fundamental goals of the health system. Such tools which can take into account health policy goals are: " increased risk pooling; strategic purchasing, where contracts are combined with accountability mechanisms including quality indicators, patient reported outcome measures and other forms of feedback; health technology assessment to assist in setting priorities, combined with accountability, monitoring and transparency measures; controlled investment in the health sector, particularly for health infrastructure and expensive equipment; public health measures to reduce the burden of disease; price reductions for pharmaceuticals combined with cost-effectiveness evidence and other measures to promote rational prescribing and dispensing; shifting from inpatient to day-case or ambulatory care, where appropriate; integration and coordination of primary care and secondary care, and of health and social care; reducing administrative costs while maintaining capacity to manage the health system; fiscal policies to expand the public revenue base; counter-cyclical measures, including subsidies, to protect access and financial protection, especially among poorer people and regular users of health care; and, outside the health sector, active labour market programmes and social support services to mitigate some of the adverse effects of economic downturns" (Mladovsky et al. 2014).

Contra productive measures, i.e. measures that could undermine health system goals include: "reducing the scope of essential services covered; reducing population coverage; increases in waiting times for essential services; user charges for essential services; and attrition of health workers caused by reductions in salaries. The discussion highlights the trade-offs involved in any policy decision. These trade-offs should be understood and made explicit so that decision-makers can openly weigh evidence against ideology in line with societal values. Policy decisions should be guided by a focus on enhancing value in the health system rather than on identifying areas in which cuts might most easily be made" (Mladovsky et al. 2014).

[2] Gross Domestic Product (GDP) is a measure of wealth and an indicator that says the most about the status of a national economy. A 2.5-3.5% per year growth in real GDP is an acceptable range. The informal value is still a matter of debate.

From the viewpoint of health system, fiscal balance is a constraint. This views would decision-makers allow shifting the debate away from balancing the budget at any cost towards a more performance oriented view of the health system (Mladovsky et al. 2014).

Possible Responses: Managed Care

It is unlikely that the budgeting situation and the global economic situation will change for the better in the near future. Besides the consequences of financial and economic crises, which will continue to have an effect, governments are confronted with an increasing eroding of their tax income. "Creative accounting" of firms, aiming at finally shifting profits to places where the tax rates are lowest can worsen the budgeting situation and will cause discrepancies between expenditures for health care and tax income. Furthermore, "competition" between countries/governments/cantons/cities, strongly supported by "tax-saving models" from banks, aggravates this trend. Moreover, health expenditures that are caused by a working population have to be financed in one country whereas taxes of the corresponding firm where the workers belong to are paid somewhere else.

To overcome restrictions coming from the difficult economic situation, and to gain more independence, it is unavoidable to challenge the utilization of resources. This applies for all kinds of health related activities, health care and public health programs. Efficiency and/or managed care are magic words that are often used in this context.

Managed care is a very complex approach. Principally is the goal to manage health care delivery in such a way that costs can be controlled. This is done for example by eliminating redundant facilities and services and to reduce costs, and to include health education and prevention. Managed care is not a coherent theory. In fact it is made up of various organizational forms (solutions) and different management tools that are applied, and it is still developped further. Disease management, case management and integrated care are well-knnown prominent forms. A very interesting attempt is integrated care. „Integrated care" is a term that reflects a concern to improve patient experience and achieve greater efficiency and value from health delivery systems (Shaw 2014b). The aim is to address fragmentation in patient services, and enable better coordinated and more continuous care, frequently for an ageing population which has increasing incidence of chronic disease. Actually, it is not easy to overcome fragmentation in care delivery (Shaw 2014a; Simmons et al. 2011). In some countries accompanying measures like bundling payments are introduced.

Exercises:

Topics for small work group discussions:

- Principles of budgeting processes
- How react the different countries?
- What measures have been taken?
- How to stabilize the health sector?
- How to become more independent?
- Describe the measures, the preconditions of the respective country and analyze its policies.
- What is managed care?
- Can managed care approaches be useful?
- How to show correlations between the economic situation and health outcomes?

References:

Ayuso-Mateos JL, Barros PP, Gusmão R (2013) Financial crisis, austerity, and health in Europe. Lancet 382(9890):391-392. Available at: http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2813%2961663-3/fulltext (Accessed 10.11.2014).

Bjegovic-Mikanovic V, Czabanowska K, Flahault A, Otok R, Shortell S, WisbaumW, LaaserU (2014) Addressing needs in the public health workforce in Europe: WHO Regional Office for Europe.

Breyer F, FelderS, Costa-i-FontJ (2011) Does ageing really affect health expenditures? If so, why? Available at: http://www.voxeu.org/article/does-ageing-really-affect-health-expenditures-if-so-why (Accessed 10.11.2014).

BusinessDictonary (2014) What is financial crisis? definition and meaning. Available at: http://www.businessdictionary.com/definition/financial-crisis.html#ixzz3IgJf3DJr (Accessed 10.11.2014).

de Meijer C, Wouterse B, Polder J, Koopmanschap M (2013) The effect of population aging on health expenditure growth: a critical review. European Journal of Aging (Springer) 10/4:353-361. Available at: http://link.springer.com/article/10.1007%2Fs10433-013-0280-x (Accessed 25.12.20014).

Felder S (2013) Managing the Health Care System. Available at: https://wwz.unibas.ch/fileadmin/wwz/redaktion/health/dicereport113-forum1.pdf (Accessed 10.11.2014).

Financial Times-ft.com/lexicon (2014a) Global Financial Crisis, Definition from the Financial Times Lexicon. Available at: http://lexicon.ft.com/Term?term=global-financial-crisis (Accessed 10.11.2014).

Financial Times-ft.com/lexicon (2014b) Global Financial Crisis, Definition from the Financial Times Lexicon. Available at: http://lexicon.ft.com/Term?term=global-financial-crisis (Accessed 10.11.2014).

Financial Times-ft.com/lexicon (2014c) Global Financial Crisis, Definition from the Financial Times Lexicon. Available at: http://lexicon.ft.com/Term?term=global-financial-crisis (Accessed 10.11.2014).

Financial Times-ft.com/lexicon (2014d) Global Financial Crisis Definition, from the Financial Times Lexicon. Available at: http://lexicon.ft.com/Term?term=global-financial-crisis (Accessed 10.11.2014).

Guillén MF (2014) The Global Economic & Financial Crisis: A Timeline. Available at: http://lauder.wharton.upenn.edu/pages/pdf/class_info/Chronology_Economic_Financial_Crisis.pdf (Accessed 10.11.2014).

Mladovsky P, Srivastava D, Cylus J, Karanikolos M, Evetovits T, Thompson S, McKee M (2014) Health policy responses to the financial crisis in Europe. Copenhagen: WHO Regional Office for Europe.

Nolte E, Pitchforth E (2014) What is the evidence on the economic impacts of integrated care? Copenhagen: WHO Regional Office for Europe.

Ruckert A, Labonté R (2012) The global financial crisis and health equity: Toward a conceptual framework. Critical Public Health 2/3:267-279. Available at: http://cancer-epidemiology.org/nbirkett/pdf_files_2013_winter/Jan_7/Global%20financial%20crisis%20and%20health%20equity%20Ruckert%20and%20Labonte%202012.pdf (Accessed 10.11.2014).

Ruckert A, Labonté R (2014) The global financial crisis and health equity: Early experiences from Canada. Global Health 10/1): 2.

Shaw S, Rosen R (2014a) Fragmentation: a wicked problem with an integrated solution? Journal of Health Services Research and Policy (Sage). Available at: http://hsr.sagepub.com/content/18/1/61 (Accessed 25.12.2014).

Shaw S, Rosen R, Rumbold B (2014b). What is Integrated Care - Social Care Reform . The Nuffield Trust. Available at: http://www.nuffieldtrust.org.uk/publications/what-integrated-care (Accessed 10.11.2014).

Simmons D, Wenzel H (2011) Diabetes inpatients: a case of lose, lose, lose. Is it time to use a 'diabetes-attributable hospitalization cost' to assess the impact of diabetes? Diabetes Medicine 28: 1123-1130.

The Economist (2014) Economics A-Z terms. Available at: http://www.economist.com/economics-a-to-z/f#node-21529568 (Accessed 10.11.2014).

Thompson S, Figueras J, Evetovits T, Jowett M, Mladovsky P, Maresso A, Cylus J, KaranikolosM, Kluge H (2014) Economic crisis, health systems and health in Europe: Impact and implications for policy. Copenhagen: WHO Regional Office for Europe. Available at: http://www.euro.who.int/en/about-us/partners/observatory/policy-briefs-and-summaries/economic-crisis,-health-systems-and-health-in-europe-impact-and-implications-for-policy (Accessed 12.11.2014).
Vogli R (2014) The financial crisis, health and health inequities in Europe: The need for regulations, redistribution and social protection. Int J Equity Health 13/1:58.
World Health Organization-Regional Office for Europe (2013) The Economics of the Social Determinants of Health and Health Inequalities. Copenhagen: WHO.
Zweifel P, Felder S, Werblow A (2004) Population Ageing and Health Care Expenditure: New Evidence on the "Red Herring". The Geneva Papers on Risk and Insurance 29/4:652-666. Available at: https://www.genevaassociation.org/media/242394/ga2004_gp29(4)_zweifel%20felderwerblow.pdf (Accessed 12.11.2014).

Additional links:

Integrated Care: http://www.euro.who.int/en/about-us/partners/observatory/policy-briefs-and-summaries/what-is-the-evidence-on-the-economic-impacts-of-integrated-care;
Public Health Workforce: http://www.euro.who.int/_data/assets/pdf_file/0003/248304/Addressing-needs-in-the-public-health-workforce-in-Europe.pdf?ua=1
Experiences from NHS: http://www.nuffieldtrust.org.uk/publications/towards-integrated-care-trafford

Title:	**N 3.1 GLOBAL GOVERNANCE OF PUBLIC HEALTH AND SELECTED HEALTH ORGANISATIONS**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Author	George Lueddeke
Address for correspondence	Dr. George Lueddeke Consultant in Higher and Medical Education Southampton, Hampshire United Kingdom SO40 4XG E-mail: glueddeke@aol.com
Key words	Cornerstones of health systems, governance, global, regional, national health organisations, regional public/population health educational networks.
Topics	• Issues of Governance • National Health Systems • Non-Governmental Organizations (NGOs) • Leading Global Health Organisations • Regional Health Organisations • National Health Organisations • Collaborative Regional Public Health Networks
Learning objectives	On completion, students should be able to: • *define* cornerstones of effective health systems • *compare* two global approaches for dealing with health concerns in an interdependent world: • *distinguish* between different types of health organisations in terms of scope and remit • *outline* specific functions - research, education, outreach - of collaborative regional public health networks based on national/regional perceptions
Teaching methods	Case-based learning.
Who should apply	Those who pursue an international career in public health management, policy development, or advocacy.
Career opportunities	Policy administration of public institutions, non-governmental organizations and in consulting companies, management in global institutions.
Assessment of students	Research on topics and contributions to case discussions.
COMMENTS on the module by lecturers and students	**???**

Global governance of public health and selected health organisations

Introduction

The transition from a concern strictly with health improvement and national healthcare systems to the broader global community is most recently echoed in the book *Health in All Policies*: *Seizing Opportunities, Implementing Policies* (Leppo et al. 2014).

The central message of the book for policy-makers appears to be "the need to be prepared and quick to seize windows of opportunity arising from the convergence of problems, policies, and politics." Moreover, the authors contend that population health is maximized significantly when health systems and decision-makers accept that 'health"

- is largely created by factors outside healthcare services;
- builds on a strong foundation of human rights and social justice;
- is a focus for policy-making with a view to enhancing „health and other important societal goals; and
- seeks to avoid harmful impacts on health.

Fundamental questions raised by these observations include (Lueddeke 2015), among others:

- how can global health issues be addressed in an interdependent world characterized by political, economic and social instability?
- which structures or functions at local, national, regional and global levels currently exist to respond to emerging health and social care concerns?
- could alternative mechanisms or approaches at regional levels help to support and cohere existing bodies and thereby strengthen research and education capacity underpinning global public health?

Issues of global governance

The World Health Organisation (WHO) defines „governance" as "the attempts of governments and other actors to steer communities, whole countries or even groups of countries in the pursuit of health as integral to well-being through both whole-of-government and whole-of-society approaches" (WHO 2011).

„From sovereignty to solidarity'

In a *Lancet* paper, „From sovereignty to solidarity: a renewed concept of global health for an era of complex interdependence" (Frenk et al.2014) observe that in today"s interdependent world "no single stakeholder-not even the most powerful government or corporation-is singlehandedly able to address all the health threats that affect it". Many of these threats are in the form of the triple burden of disease, including communicable and non-communicable diseases as well as those stemming from globalisation that "extend beyond the capacity of any one country to address, and often require concerted responses from governments and non-state stakeholders". Moreover, the authors point out that "the challenge is that in a world of sovereign states, there is no hierarchical authority or world government to fill in the gaps. Rather, there is only a relatively weak system of multilateral institutions built on the shaky foundations of the consent of sovereign states".

While one solution is to improve stewardship of the global health system by reaching consensus on a number of fronts (e.g. „facilitating mutual accountability"), in the longer term, and „in the absence of a global government", a much more fundamental change is required according to Frenk et al.: "...the gradual construction of a global society…based on the principles of human rights and the logic of health interdependence," whereby all stakeholders "...accept to share the risks, rights, and duties related to protection and promotion of the health of every member of this society". This re-thinking would demand "...moving beyond the narrow view of global health as the problems of the world"s

poorest societies to global health as the health of an interdependent global population". Achieving this laudable goal necessitates high level political trust, courage and resolve - all of which appear to be in short supply at the moment.

The political origins of health inequity

A structural alternative to this long-term view is presented by the *Lancet*-University of Oslo Commission of Global Governance for Health. Their report, „The political origins of health inequity: prospects for change" (Ottersen et al. 2014) justifiably "...examines power disparities and dynamics across a range of policy areas that affect health and that require improved global governance: economic crises and austerity measures, knowledge and intellectual property, foreign investment, treaties, food security, transnational corporate activity, irregular migration, and violent conflict". The authors conclude that these "...power asymmetries between actors with conflicting interests shape political determinants of health". They identify five main dysfunctions of global governance "...that allow adverse effects of global political determinants of health to persist", namely, lack of participation of key groups in decision-making processes; inability to constrain power; norms, rules and decision-making processes that undermine change; inadequate policy-making arenas and space for health; and absence of international institutions to protect and promote health. The Commission calls "...for stronger cross-sectoral global action for health" and proposes the establishment of a „Multi-stakeholder Platform on Governance for Health", serving "...as a policy forum to provide space for diverse stakeholders to frame issues, set agendas, examine and debate policies in the making, that would have an effect on health and health equity, and identify barriers and propose solutions for concrete policy processes". The commissioners also recommend setting up an „Independent Scientific Monitoring Panel on Global Social and Political Determinants of Health".

Towards health as a basic human right

For some the „sovereignty to solidarity" viewpoints expressed earlier may seem too utopian or too far removed from today"s realities, while for others the *Lancet*-University of Oslo Commission report, although it tackles power relationships „head-on", may not be radical enough to effect the much needed changes in global health. Indeed, as one example, Clift (2014) in an expert statement for Chatham House concludes that "... it might have made more sense for the commission to produce recommendations that focus on what changes it would like to see in the policies of national governments, and what policies it would like see them pursue to reform the key international bodies whose governance and policies are, often rightly, criticized and which they control".

However, while alternative viewpoints are always welcomed and helpful, what seems equally important is that individuals and groups are beginning to openly tackle the hard questions, in particular addressing social, economic and political inequities which collectively "...require a global political solution" (Ottersen et al. 2014) in order to achieve "...a shared commitment to realisation of health as a human right based on recognition of our common humanity" (Frenk et al. 2014). Fundamentally, global governance for health must be rooted in commitments to global solidarity and shared responsibility; sustainable and healthy development for all requires a global economic and political system that serves a global community of healthy people on a healthy planet.

Selected health organisations
The following overview (Lueddeke 2015)[1] of selected health organisations at global, regional, and national levels may play an increasingly important role in progressing towards equitable standards of „Health for All" at a global level.

I. National Health Systems
National governments have played a central role in designing health care systems in the 20th and 21st centuries, defining health needs and requirements, setting policies, and budgets and and delivering health care services to individuals mostly through primary, secondary and tertiary care at local levels, regulated through departments of health or their equivalents.

More recently, as is the case in the United Kingdom (UK), increasing attention is being paid to "improving public health" (UK Department of Health 2014) by shifting more responsibility, including social care, to local government. Reasons for this restructuring include the

- ability to shape services to meet local needs
- ability to influence wider social determinants of health
- ability to tackle health inequalities.

According to the UK Department of Health, giving greater responsibility and power to local government makes sense as local government is in a better position "to shape the locality in a healthy direction". In addition, the UK Department of Health contends that "...local authorities are also well placed to release innovation, trying new ways to tackle intractable public health problems". While these directions are commendable, it must be said that funding of primary care and public health remain the „poor health cousins" across most nations despite non-communicable /chronic diseases now being the main cause of mortality and morbidity globally with figures as high as 70%. Most funding worldwide is allocated to infrastructure and treatment.

II. Non-Governmental Organizations (NGOs)
Alongside „state" health systems are Non-Government Organisations (NGOs) that may function at all levels and are neither a part of a government nor a conventional „for-profit business" and are often classified in terms of 'orientation' and 'level of operation' (Wikipedia 2014). „Orientation" refers to the type of activities in which the NGO is involved , for example, health, human rights or development work. These activities, often funded by foundations charities or governments, might include a focus on human rights, environmental, or development work. A number of EU-grants fund projects managed by NGOs.

„Operation" defines the level at which the NGO functions- local, national, regional, or global where the NGO works toward achieving " small-scale change directly through projects," mobilizing financial resources, materials, and volunteers, including campaigning.

The number of NGOs is striking with estimates of 1.5 million in the U.S, 277,000 in Russia, 2 million in India "many times the number of primary schools and primary health centres in India" (Wikipedia 2014).

Most NGOs are concerned with social transformation and improvements in quality of life (e.g., The Council on Health Research for Development [COHRED] and Greenpeace). It is noteworthy that in

[1] The profile examples that follow have been excerpted with permission from the publisher of *Global Population Health and Well Being in the 21st Century - Towards New Paradigms, Policy and Practice*" (Lueddeke 2015), see: Appendix A-:organisations/associations (n=50) and Appendix A-2: schools/institutes of public health (n=15). Additional information on each of these has been provided by the 65 organisations - Vision, Mission, Values, Achievements, Strategies, Conferences, Publications and Contact details - and is included in the text.

2007 the U.S. Department of Defence established an International Health Department to communicate with NGOs. A key recommendation is to *"...accredit NGOs* based on ethical criteria especially with regard to administrative costs, brain drain of local staff, and participation in revitalized SWAps", or Sector Wide Approaches (Laaser et al. 2015).

III. Leading Global, Regional and National Health Organisations

The numbers of leading health organizations worldwide are many and varied. They function at global, regional, and national levels, and differ in terms of scope as well as remits: public health, clinical care, education/research, regulatory, and so forth.

Global Health Organisations

The World Health Organisation

Globally, the World Health Assembly is the supreme decision-making body for WHO.It generally meets in Geneva in May each year, and is attended by delegations from all 194 Member States. Its main function is to determine the policies of the Organization. The Organization is headed by the Director-General, who is appointed by the Health Assembly on the nomination of the Executive Board In addition to medical doctors, public health specialists, scientists and epidemiologists, WHO staff include people trained to manage administrative, financial, and information systems, as well as experts in the fields of health statistics, economics and emergency relief. WHO is represented in five regions of the world: Africa, Americas, South-East Asia, Europe, Eastern Mediterranean, and Western Pacific.

WHO fulfils its public health objectives through its core functions:

- providing leadership on matters critical to health and engaging in partnerships where joint action is needed;
- shaping the research agenda and stimulating the generation, translation, and dissemination of valuable knowledge;
- setting norms and standards and promoting and monitoring their implementation;
- articulating ethical and evidence-based policy options;
- providing technical support, catalysing change, and building sustainable institutional capacity; and
- monitoring the health situation and assessing health trends."

The World Federation of Public Health Associations (WFPHA)

„Launched in 1967, WFPHA is an international, nongovernmental organization composed of multidisciplinary national public health associations. It is the only worldwide professional society representing and serving the broad field of public health. WFPHA‟s mission is to promote and protect global public health. It does this throughout the world by supporting the establishment and organizational development of public health associations and societies of public health, through facilitating and supporting the exchange of information, knowledge and the transfer of skills and resources, and through promoting and undertaking advocacy for public policies, programmes and practices that will result in a healthy and productive world‟.

The World Health Summit

„Following the inaugural World Health Summit (WHS), organized in 2009 on the occasion of the 300th anniversary of the Charité – Universitätsmedizin Berlin, the WHS is being held annually and became the pre-eminent international forum for global health. Underpinned by the M8 Alliance of Academic Health Centres, Universities and National Academies, the World Health Summit is organized in collaboration with the National Academies of Sciences of more than 67 countries and their InterAcademy Medical Panel (IAMP). The World Health Summit‟s mission is to bring together representatives from academia, politics, the private sector, and civil society to address the most pressing issues facing medicine and healthcare over the next decade and beyond‟.

Regional Health Organisations

The Association of Schools of Public Health in the European Region (ASPHER)
„ASPHER the key independent European organization dedicated to strengthening the role of public health by improving education and training of public health professionals for both practice and research. Founded in 1966, ASPHER has over 100 institutional members located throughout the European Region of WHO. It is represented in 42 countries in Europe, with more than 5000 academics employed in its member institutions".

The European Public Health Association (EUPHA)
„EUPHA is an umbrella organization for public health associations and institutes in Europe. Founded in 1992 by 15 members (12 countries), EUPHA now has 68 members from 40 countries. It is an international, multidisciplinary, scientific organization, bringing together around 14,000 public health experts for professional exchange and collaboration throughout Europe".

The African Federation of Public Health Associations (AFPHA)
„Established in 2011, AFPHA is a nonprofit association composed of national associations of public health in Africa whose activities contribute to the strengthening of public health in the continent. The Federation will serve as a platform to collectively advocate for and voice Africa"s health concerns and required actions needed to achieve the highest standard of health of its people. Furthermore, the AFPHA will also serve as a forum for knowledge, experiences and information exchange among public health professionals towards Africa"s contribution to the Region"s and to Global public health".

National Health Organizations

The American Public Health Association (APHA)
„APHA is a community of people and organizations interested in public health. Founded in 1872 by Dr. Stephen Smith, the Association champions the health of all people and all communities; strengthens the profession of public health; creates understanding, engagement and support for key public health issues; and is the only organization that is influencing directly federal policy to improve public health. As the nation"s leading public health organization, APHA is evidence-based and speaks out for public health issues and policies backed by science. In addition to APHA"s 25,000 individual members, the organization represents another 25,000 individuals and organizations who are members of affiliated state and regional public health associations".

The Chinese Preventive Medicine Association (CPMA)
„CPMA, established 1987, is a non-profit national academic institution, comprised of voluntary scientific and technological workers in the fields of public health and preventive medicine in its membership. Under the direct administration of the Ministry of Health and legally registered with the Ministry of Civil Affairs, CPMA is also a member of the China Association for Science and Technology (CAST). As such, it serves as an important social agent in promoting the development of public health and preventive medicine within China".

The Public Health Foundation of India (PHFI)
„PHFI is a public- private initiative formed to redress the limited institutional capacity in India for strengthening training, research and policy development in the area of public health. Structured as an independent foundation, PHFI adopts a broad, integrative approach to public health, tailoring its endeavors to Indian conditions and bearing relevance to countries facing similar challenges and concerns. The Prime Minister of India, Dr. Manmohan Singh, launched PHFI on March 28, 2006 at New Delhi. Under the governance structure adopted by the Society, the Foundation is governed by a fully empowered, independent, General Body (comprising of all the members of the Society) that has representatives from multiple constituencies - government, Indian and international academia and scientific community, civil society and private sector".

Schools and Institutes of Public Health

BRAC University James P Grant School of Public Health (JPGSPH)
„JPGSPH was founded in 2004 as a collaborative effort between BRAC University, BRAC and icddr,b (the International Center for Diarrhoeal Disease Research, Bangladesh - an international health research institution located in Dhaka). The School was named after former Executive Director of UNICEF the late James P. Grant whose energy and vision was a major force behind the child survival and development revolution. In January 2005, JPGSPH initiated its flagship Masters of Public Health (MPH) program with the aim of developing public health leaders. Grant‟s legacy is one that inspires the School‟s mission in the 21st century - to harness knowledge and know-how in pursuit of health equity‟.

Maastricht University School for Public Health and Primary Care (CAPHRI)
„CAPHRI is the largest of six Maastricht Graduate Schools. Maastricht is well known for its expertise in the prevention of diseases, diagnostic and prognostic research in primary care and public health, the promotion of healthy behaviour, and the redesign of healthcare services. CAPHRI plays a pivotal role in the Maastricht, as it finds itself at the forefront of scientific, innovative, applied, ethical, and policy-related research in public health and primary care. CAPHRI coordinates research, PhD training and Master‟s education‟.

Developing Collaborative Regional Public Health Networks to Strengthen Public Health Research, Education and Outreach

One of the ten recommendations (#3) that arose from the Global Think Tank on Public Health (Laaser et al. 2015) was the need to establish "…decision-making mechanisms that have enough leverage and expertise to carefully work through the delicate and complex decision-making processes needed to consider options or alternatives, inform planners and decision-makers regionally and actually make a meaningful difference to the sustainability of life on this planet‟.

Possibly hosted by regional public health associations or associations of schools of public health , these public health coordinating mechanisms could be tasked to network on an „issue by issue‟ basis and thereby optimize in a realistic way their reach and impact by taking on the mantle of *apolitical* „learning organizations‟. As a whole, they might function as "...a collaborative public health education network‟ and support the training of a "new generation of One Health professionals" (One Health Initiative 2014). In addition, they could liaise closely with other regional bodies (e.g. WHO regional offices, associations, universities) and carry responsibilities for incentivising schools/institutes of public health and associated organisations to identify, prioritize and tackle the difficult public health issues of the day.

References

Clift C. (2014) Tackling the Political Origins of Health Inequity. Expert comment: 2014. Available at: https://www.chathamhouse.org/media/comment/view/197318 (Accessed 31 December 2014).

Frenk J, Gómez-Dantés O, Moon S. From sovereignty to solidarity: a renewed concept of global health for an era of complex interdependence. Lancet 2014; 383/9911:94-97. Available at: http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(13)62561-1/fulltext or http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2813%2962561-1/fulltext#aff1 (Accessed 31 December 2014).

Laaser U, Bjegovic-Mikanovic V, Lueddeke G. Epilogue. In: Lueddeke G. Global Population Health and Well-Being in the 21st Century: Towards New Paradigms, Policy, and Practice. New York: Springer (2015, in press).

Leppo K, Ollila E, Peña S, Wismar M, Cook S. Health in All Policies: Seizing Opportunities, Implementing Policies. Helsinki: Ministry of Social Affairs and Health, 2013. Available at: http://www.euro.who.int/en/about-us/partners/observatory/publications/studies/health-in-all-policies-seizing-opportunities,-implementing-policies (Accessed 30 December 2014).

Lueddeke G. *Global Population Health and Well-Being in the 21st Century: Towards New Paradigms, Policy, and Practice*. New York: Springer (2015, in press).

One Health. One Health Initiative will unite human and veterinary medicine. Available at: http://www.onehealthinitiative.com/ (Accessed 31 December 2014).

Ottersen OP, Dasgupta J, Blouin C, Buss P et al. The Lancet -University of Oslo Commission of Global Governance for Health, The political origins of health inequity: prospects for change. Lancet 2014;383/9917:630–667. Available at: http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736%2813%2962407-1.pdf (Accessed 31 DEce,ber 2014).

United Kingdom (UK) Department of Health. Public Health in Local Government. Factsheets 2014. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216708/dh_131904.pdf (Accessed 31 December 2014).

Wikipedia. Non-Government Organizations. Available at: http://en.wikipedia.org/wiki/Non-governmental_organization (Accessed 25 July 2014).

WHO (2011) Governance for health in the 21st century: a study conducted for the WHO-Regional Committee for Europe, 61st Session, Baku/Azerbaijan. WHO Regional Office for Europe. Copenhagen. Available at: http://www.euro.who.int/__data/assets/pdf_file/0010/148951/RC61_InfDoc6.pdf (Accessed 31 December 2014)

Title:	**N 3.2 DESIGNING AND IMPLEMENTING POLICY REFORMS AND EFFECTIVE AID INTERVENTIONS IN THE HEALTH SECTOR**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Author	Christopher C. Potter
Address for correspondence	Dr. Christopher C. Potter[1] Institute of Primary Care and Public Health Cardiff University Room 302D, 3rd Floor, Neuadd Meirionnydd Heath Park Cardiff CF14 4YS cpotter999@aol.com
Key words	Health development interventions, health projects implementation, health programme design, health systems reform.
Topics	Health development interventions are described as falling under four modalities: personnel, projects, programmes and policy reform initiatives underpinned by new financial support mechanisms, particularly sector-wide approaches (SWAps). These modalities are briefly analysed to provide an introduction to readers about how and why such interventions are used, and their strengths and weaknesses. It is emphasised that the modalities are not hard and fast entities but frequently overlap. Indeed one of the problems facing those designing and implementing interventions in the fuzzy nature of many management terms. Such issues as vertical and horizontal programme design and the transaction costs to governments who have to deal with many donors in an often relatively short-term and fragmentary manner are considered. SWAps are considered as one way of dealing with some of these issues but it is noted that as many other non-state stakeholders, including industrial and commercial interests, have entered the health development arena, the possible, although contended advantages, of SWAps have been compromised. Finally, it is recognised that the public health challenges and their socio-political and economic contexts facing poorer countries are ever changing, so finding effective ways to deliver health development to the world‟s most needy will also be an on-going challenge.
Learning objectives	To appreciate a range of interventions to promote public health improvements in disadvantaged countries. To understand the use of the terms project and programme in the context of public health interventions. To understand how skills/tools such as project management and log-frames can be used to improve the effectiveness of interventions. To better understand the role sector wide approaches can play in improving public health interventions. To begin to develop skills of project design and implementation.

[1] **Declaration of interests:** The author has no current links with any of the agencies referred to in this paper although he has worked previously as a consultant for some of them, including leading the EC‟s technical assistance programme in India from 1998- 2002. He manages the Global Health module on Cardiff University‟s MPH Programme, and at the time of writing is Interim Director of Health Protection for Avon, Gloucestshire & Wiltshire. The views in this paper represent the author‟s alone, and not those of University of Cardiff, Public Health England, or any agency referred to.

Teaching methods	Lectures, interactive small group discussions, case study analysis, presentations, and practical exercises.
Who should apply	Those who pursue an international career in public health management and policy development; entrance requirements are to be determined by the institution offering the modules.
Career opportunities	Working in international development agencies, non-governmental organizations and consulting companies. Teaching and research.
Assessment of students	Tests, writing analytical and briefing documents, presentations, role play.
COMMENTS on the module by lecturers and students	**???**

Designing and implementing policy reforms and effective aid interventions in the health sector

Introduction

Financed interventions agreed between donors or development partners and recipient governments can broadly be encompassed by four broad modalities:

- Personnel
- Projects
- Programmes
- Policy support or reform

These modalities are not hard and fast distinctions. They overlap and a project, for example may include some project aspects, personnel support and attention to better policy definition and implementation. Not only are definitions far from precise but the different modalities are often interlinked and interdependent. Most people who end up working in overseas health development will spend much of their time designing, working in, evaluating or writing about programmes and projects, and will themselves be evaluated on how well they perform while so engaged. Yet there is surprisingly little literature to advise the practitioner. Most of the skills and knowledge has derived from experience or from the more general management and organisational literature. This may be because the field does not lend itself to research (or more precisely research funding) and, therefore, to publication. This section will seek to give an introduction to the issues.

It will be noted that the opening word used above is "financed". There is an assumption that the intervention is being funded somehow and that, therefore, there are least two stakeholders: funder and recipient. In practice the stakeholders may be considerably more, with the Ministry of Health (or its equivalent), the Ministry of Finance and Comptroller and Auditor General, State/ regional/ municipal/governments and NGOs, etc, on one side and the bilateral development agency and the foreign office/ embassy of the donor country on the other. Where several donor countries are collaborating, or where multilateral agencies are involved the relationships escalate – and not infrequently the WHO, the World Bank and possibly the IMF may have an advisory role to the government. Similarly, the type of financing may vary between simple financing of an intervention, to a loan, and with or without conditions e.g. money released in stages according to performance achievement or policy changes being introduced. These different approaches and some of their implications and consequences will be described below.

Personnel

Much health development aid is provided through providing additional expert support to the recipient country or region (region in this context, a state, district, city or area smaller than a sovereign nation is

meant, rather than a region in the WHO sense of a part of the world covering a number of such nations). Apart from attempts to supplement actual clinical hands-on skills because of the "global crisis in the health work force, expressed in acute shortages and maldistribution of health workers, geographically and professionally" (Shrikant et al. 2010) there is frequently a perception that specific more strategic level technical skills are absent or in short supply locally and a development partner will fund the employment of such specialists for periods of time to assist in the design of services, buildings, clinical or management training staff, experts in health informatics, clinical waste management, and so on. The list of types of specialists is endless. Their employment may be direct or indirect in two senses. Firstly, that the development agency provides its own staff, either long term employees or specially hired short term consultants; or it may fund the recipient country to employ additional specialists – either international staff, or local hires. Secondly, staff may be very hands on providing actual managerial, clinical or teaching inputs, or writing proposed legislation and so on; or they may be used to assist with better commissioning/contracting, better human resources practice or research by building greater capacity. Employment may last from a few weeks to several years.

The recruitment, deployment and management of such expertise is a complex topic in its own right, and in this section the intention is merely to draw attention to it as a significant way in which health development aid is offered. A considerable amount of the money allocated to overseas development through multilateral and bilateral agencies is accounted for the employment of international experts. Typically, a project or programme will be contracted out after tendering processes, and much will depend on the perceived quality and experience of staff that will be recruited for a team to be based in the focal country or region. They will be responsible for writing some sort of inception report, probably within 2-4 months depending on the complexity of the proposed intervention or context, prior diagnosis. This inception report will set out how they intend working and how the initial specification will be translated in action. Some of the team mobilised, such as the Team Leader, will almost certainly have to be an international figure with at least 10 years experience. Others may be local experts or secondees from the government, and others again may be brought in for quite specific and short term activities. The wages of international staff can be high, but additional costs will be their airfares, local accommodation, hotels while on field trips, possibly family travel, accommodation and education fees for children, insurances and local transport, as well as translators and interpreters in many instances. To win such contracts the companies bidding will also need to maintain offices for "back-stopping" and organising the logistics of mobilising teams and liaising with the funding agency in the home country. These offices are often sited near the major aid agencies e.g. in Washington DC (where they are often referred to as "Beltway Bandits"), Brussels, London, Frankfurt, and so on. To ensure expertise is available overseas aid contracts must factor in the expenses incurred by such companies, and a profit margin (or surplus for not-for-profits organisations and NGOs, which even without shareholders need to consider sustainability issues).

Of the many thousands of such development experts who work abroad each year most are dedicated, expert and hardworking, and have developed resilience to work under adverse conditions. Cross cultural work needs diplomacy (Fairman et al. 2012; WHO 2012; Kickbusch 2007). Dealing with bureaucracies can be frustrating and time absorbing. The risks of road traffic accidents and disease are significant. Security may be an issue. Power outages may be common, consumables for office or clinical equipment may be in short supply. However, there are risks that people's core professional skills may deteriorate after working too long abroad. There is a tendency to act as a vector for the same "solutions" in different parts of the world even though contexts can vary widely. (Potter & Harries 2006). Agencies and employers may look at years of experience on a CV without looking to see how well that person has performed in previous jobs. Contracting organisations are under pressure to mobilise a team often at short notice, maybe months after they submitted a bid because the agency and/or recipient country have been slow reaching a conclusion. So they may not look too closely at the match of skills, experience and performance if they have someone ready and willing to go at the right price. Agencies can have quite short organisational memory because their staff move around frequently, and it would be unusual for an agency funding work in one country to check with an agency with an activity in another about how well someone had done their job.

For these sorts of reasons and to reduce perceptions of neo-colonialism and paternalism in the development of aid packages agencies are increasingly careful in the design of personnel-heavy interventions. The UK‟s Department for International Development (DfID), for example, stresses that technical cooperation (TC) "consultants facilitate the sharing of expertise and know-how. They should not be used to fill gaps in the public service apart from short term crisis response…In all contexts, we should only fund TC consultants to an organisation where there is clear demand and political ownership for them."(DfID 2006).

Projects

The project is perhaps the simplest and the most traditional type of intervention. Ideally a project is agreed, designed and implemented after careful analysis of the health requirements in a particular situation. This seems rational but the reality can be very different. The author worked on one project that arose after the premier and president of two countries went for a walk and agreed between them that it would be a nice gesture if the donor country built a children‟s‟ hospital in a particular location. The fact that the epidemiology didn‟t support this, there were few staff available and it further undermined precarious existing services never entered their minds. In other situations services or buildings are introduced because a politician or their spouse comes from a particular place, the agency wants to eradicate a disease or a project was agreed in locality A but recent security concerns it is relocated to locality B.

Ideally, projects are agreed because epidemiological data shows that a certain disease needs attention, a flood has knocked out a hospital, a community‟s health is being neglected because of geographical isolation, or some other factor has created an acknowledged problem. In response experts and planners from the donor agency and the government agree the scope of the intervention, the donor country agrees to finance some or all of the intervention (they may require "matching funds", say 20% in cash or kind from local sources as "buy in" or a demonstration of commitment by the national or local stakeholders). As well as financing the initial analysis and a baseline survey (to enable later evaluation) the donor may agree to assist not just the construction, equipping and staff training costs required, but may include on-going operational support for a period of time with financing and/or foreign expertise.

The time period is important as this is one of the ways we can define a "project". It is an activity which is fairly well defined in terms of outcomes or products, and which is time bounded. It is these characteristics which enable the skills and disciplines of project management to be applied. Project management is a widely practised structured way of addressing building construction, the manufacture of complex items such as submarines and space craft, organisational relocation, and so on. Although some form of project management must have been used thousands of years ago by pyramid and temple builders, it developed as a system in the mid-1950s with the emergence of Programme Evaluation Review Technique (PERT) and closely allied techniques such as Critical Path Analysis/ Management, CPA/M. Many books and web sites will give the details of how project management can be handled, including techniques such as mapping timelines with Gantt Charts - developed just before World War 1 by Henry Gantt these are now ubiquitous – and identifying stakeholders.(Young, 2007). Unfortunately only a few guides have been published specifically relating to development work and even less on health development. (Asian Development Bank, 1988). An approach developed and used widely within the UK‟s public sector is PRINCE ***(Pr****ojects* ***IN C****ontrolled* ***E****nvironments*), which became PRINCE 2 in 1996.(Office of Government Commerce, 2002). It has 8 stages running from starting a project through managing stage boundaries to the planning and exception stage (dealing with what comes next or sorting out remaining issues). It involves the creation of things like Project Initiation Documents (PIDs) and is available as a computerised process that automatically creates prompts and progress reports. For many projects such sophistication can seem like overkill, and become overly bureaucratic, but the essential elements are useful even if used only as checklists.(Gawande, 2010). As more private sector players have been drawn in to global health development activities industrial or commercial approaches have become more dominant. (Rushton & Williams 2011).

However, the allure of the project and its defined, time-bounded nature is also one reason why enthusiasm for projects can wane. At least three problems occur with projects. Firstly, it can lead to projects that are not necessarily going to deliver long term improvement. An old medical adage states "No treatment without diagnosis". Unfortunately, in the world of health development diagnosis often highlights systems problems which require long term solutions and approaches that require action outside the purview of the Ministry of Health e.g. health workers may be civil servants covered by rules and regulations which are unhelpful in the rational deployment of staff, or there are Treasury rules about contracting for drugs or about how budgets may be re-allocated between headings. Policy makers within the national ministry, as well as desk officers in development agencies, need to allocate funds when they are available, need to disburse those funds within a certain time frame, and need to give an account of their use. Successful disbursement and achievement of precise results within the planned time frame looks good for all concerned. So despite evidence that new buildings, training for traditional birth attendants, provision of extra vehicles and surgical equipment, or trips abroad, have been repeatedly shown to have no effect they will be implemented over and over again.

Linked to this, bilateral development agencies may want visible success for the politicians in the donor country, multi-lateral agencies want it for turf wars with competing agencies, NGOs want it for their supporters, so there is a temptation to work in isolation. It can lead to wanting to identify certain initiatives or geographical areas as belonging to that donor ("flags" on maps). At best this is often wasteful, losing the opportunity costs of synergy, requiring recipients to write a variety of different reports and dance attendance at the visits of foreign dignitaries to different project sites, and to collect different sorts of data for evaluation and audit reports. At worst it leads to agencies criticizing one another, confusing recipient countries about the change agenda and its priorities. Thirdly, as agendas change (maybe different governments are elected in the donor country, there is a personality change in the recipient Ministry of Health or the WHO or World Bank changes priorities and approaches) old projects are neglected in favour of new ones. Funding dries up, staff may be laid off, lessons are forgotten.

Programmes

Given these sorts of problems, even when projects have been designed and implemented well, emphasis may shift towards *programmes* i.e. more co-ordinated activities, either in terms of one agency introducing several different types of intervention to create greater likelihood of success and synergy, or several agencies working together. An example might be trying to eradicate a disease by training clinical staff with the latest knowledge and skills, providing new equipment once the training has occurred, developing a behaviour change campaign aimed at community opinion leaders, supplying foreign experts as trainers for a period, providing clinic refurbishment and outreach vehicles, introducing bio-medical maintenance capacity, and developing a computerised reporting system. In many ways a programme can be understood, therefore, as a set of projects. At one level these may form what this author calls a "string of beads" programme, with the various projects loosely linked by a connecting thread (the same funding source, the same geographic area, the same target group) or a more sophisticated programme such as that described above where different elements are supposed to support the ultimate expected outcome. In practice, the equipment may arrive before the training and gets broken or stolen, the bio-medical engineers make more money repairing fridges and TVs for the public, the staff trained are selected on the basis of favouritism not need or function, trips abroad become "jollies" for shopping and CV enhancement, the foreign experts come across as arrogant and unrealistic, and the evaluation reports are abandoned. But at least some thought went into designing a coherent "treatment plan" to address problems identified through system diagnosis.

A second common meaning of "programme" is an unending stream of activity focussed on, say, men"s health or malaria. Programmes are frequently described as *vertical* or *horizontal.* A vertical programme typically addresses a disease which is creating particular problems in a country or region, and may have been neglected previously because of, perhaps, cultural reasons or traditional acceptance of the disease as just the way things are. It may be introduced because a multilateral agency such as the WHO has persuaded the world that smallpox or polio should be eradicated; or an

agency focuses on a disease (the Jimmy Carter Foundation, for example, has done much to tackle Guinea Worm eradication, and there are long-standing NGOs that have advanced the treatment of leprosy); or epidemiological studies show that river blindness in children is neglected and is not only a tragedy for the victims and their immediate families, but represents a disproportionate burden of disease when measured in DALYs or QALYs. Vertical programmes recognise that attention is probably required at national level to prioritise action, ring-fence budgets, and sponsor specific training. Cadres of staff can be quickly trained in a limited range of skills, maybe utilising syndromic diagnosis techniques, or collecting samples for lab testing, provided with bicycles or other vehicles, taught how to record essential data in dedicated registers, and probably supplied with distinctive uniforms. There will be regional organisers and supervisors, and local arrangements for visiting homesteads and villages with a restricted range of medications. The staff will ignore other diseases or health issues and focus single-mindedly on the one condition, giving health advice, encouraging (or even carrying out) spraying against vectors, performing surveillance, and will become very expert in managing the disease in their locality.

By contrast, *horizontal* programmes take a broader approach, seeking to address any and every disease or health problem which patients may present with. The Alma Ata approach with its primary care emphasis is the ultimate example of a horizontal approach. Typically horizontal approaches depend on primary care of family doctors who carry out a differential diagnosis and order tests or prescribe treatment accordingly, including referral to specialists. A modified version of this may utilise bare-foot doctors or *feldshers* who are also generalists but whose expertise lies across a narrower range of diseases and whose legal authority to prescribe and treat will be more restricted.
Many observers of the Indian health system, for example, have been critical of the stress given by the WHO to polio eradication (a vertical approach) because it has often undermined the pre-existing child immunisation systems (horizontal emphasis) and in a drive to eradicate the last few cases in India (and Pakistan, Nigeria, and Nepal‟s Terai region bordering India) have compromised the safety of countless tens of thousands of other children in regards to other child killers such as measles. This author has seen a doctor ignoring a baby‟s obvious distress and diarrhoea while immunising it against polio because "today is Polio Campaign Day." There is an argument that the world would be better off without polio, but it is hard to justify forcing countries to prioritise their scarce resources for a handful of cases to meet the West‟s concerns for its own offspring, or to satisfy the personal ambition of a foreign policy maker to go down in history as having eradicated something.

This problem highlights the main problem of vertical programmes when considered from a public health ethics perspective. However, vertical programmes create other difficulties. Because they are often very successful at tackling the problem they address it is easy for policy makers and development agencies to automatically reach for the same tool to deal with other priorities – and as with projects there is a temptation for officials wanting fast results to use tried a tested methods. It is very easy for vertical policies to proliferate, and once this happens diminishing returns can set in because national and regional officials have to share their attention between many competing demands for their time. Opportunity costs are wasted e.g. vehicles which could be used to take several health workers to a village will be scheduled independently for different days, or if a breakdown occurs to one programme‟s vehicle another programme will be reluctant to share. Locally, there may be little need for the programme. This author has seen officials dutifully filling in reports about malaria in mountainous areas too high for mosquitoes to be a problem, and in one district in Rajasthan there was a full time doctor with vehicle and staff under a leprosy programme, with only one patient. But there was a national requirement for a programme to be in place so…).

Another major problem occurs when a programme has been successful and the facilities, and especially the staff, are no longer required. Because they were so focussed on a narrow range of issues they are not readily absorbed into the wider (horizontal) system which requires generically trained doctors, nurses, pharmacists, etc. They may have accrued pensions which are not yet payable, may have established employment security or redundancy entitlements, all of which are a burden on scarce health resources, but without considerable re-training these experts in TB, leprosy or whatever, are no longer productive and can be an active nuisance in the system.

As has been outlined health projects and programmes are fraught with problems, but it would be a mistake to assume all are doomed to failure and underperformance. There are many examples of good practice and simply being aware of the practical difficulties which arise can help to avoid them. One way of planning and structuring programmes that has been popular with many development agencies has been the "logical-framework" or *log-frame*. As with project management, to which it is closely related, this short section cannot hope to describe it in detail. It attempts to link "diagnosis" and "treatment" by showing how the different elements interact in a logical way to achieve a stated goal. It is explicit about risks and assumptions, and makes the case for the strategy being adopted as well as inviting an inherent way of evaluating what takes place.

Essentially, a log-frame analysis sets out a goal and then using an "if-then" logical approach indicates project objectives, components and activities (the last two may be referred to as outputs and inputs). *If* these inputs are provided (100 training courses per year for five years, 5 train-the trainer expat tutors for two years, 5000 packs of X kit including drug Y, 20 new clinics, sponsorship of two health education masters students to a European university, etc) *then* we expect these outputs (10 new national trainers within 12 months, 100 health staff with enhanced skills and the equipment and drugs, 2 national experts in health education, with 20 dedicated clinics including health education facilities at the end of year three). *If* these outputs or components *then* we will be able to achieve the project objectives which are to have immunised 5000 children in 5 years, raise awareness of disease Z in the region, reduce IMR from this cause by 150 cases a year, or whatever. *If* these objectives are met we can expect to accomplish the programme goal of rates of disease Z decreasing to the national rate.
The other axis of the matrix asks what assumptions are built in? That we can find two candidates with language skills to do the course and commit to returning to the roles envisaged. That trained staff of one caste or religion will be acceptable to, and willing to engage with, people of a different community. Similarly, what are the risks? That at the election in year two local politicians will continue to support the proposal and not demand that new sites for clinics are identified so construction time is lost or impact is lessened. That customs and excise will expedite the import of the kits without them deteriorating in the tropical sunshine as corrupt officials argue over paperwork. That expat workers will come to an area with little natural beauty and a high security risk. That families will accept the new immunisation proposals for their children. Finally, how will we measure achievement? Numbers of staff trained and clinics built against time scales is easy. But what of the objective or raising awareness? How will that be measured? Can we use existing surveillance and epidemiological data collection or do we need new registers and skills? Do we need a baseline survey before we start in order to measure results? Such questions may require us to add new components to the activities and define new outputs and objectives in order to come up with a coherent and robust intervention that contains adequate attention to inter-related requirements and facilitates effective project management, including early detection of problems so that corrective action can be taken. Quarterly and annual reports will enable monitoring.

It should be stressed again that there are no strict definitions between programmes and projects. The definition of management expressions within the global health context has long been a problem. (De Geyndt 1990). A logframe analysis could well be used for a complex project, for example. Personnel will be a part of projects and programmes. But the logframe is particularly good at demonstrating the linkages between the elements of a complex intervention and how they articulate. Finally, a variety of programmes are described by Manton in a very useful way which can be used be used in teaching students. (Manton 2011).

Policies, SIPs and SWAps

While carrying out the analysis needed to produce an effective log-frame it may become clear that an intervention will not be effective in the current policy environment (Potter & Harries 2006) or that new policies may be needed to reinforce the activities being introduced. This section will not attempt to address the large literature on global health policy which is much greater than that dedicated to projects and programmes. It is appropriate, though to briefly consider two other modalities development agencies have adopted to try and overcome the problems discussed above, and which

also reflect greater congruency with agreements such as the Paris-Dakkar agreements which seek to reduce patronising and neo-colonial imposition of interventions on recipient countries and that show greater respect for those countries‟ sovereignty and own understanding of their problems. These two modalities focus less on the physical interventions and more on the sustainable financing of a country‟s health system within an appropriate policy environment: the Sector Investment Programme (SIP) and the Sector Wide Approach (SWAp).

The World Bank developed the concept of the SIP as part of its concern that countries have strong macro-economic structures in place, and that assistance (grants or loans) to specific sectors such as health should make sense from a macro-economic perspective[2]. The idea was adopted more widely by bilaterals and multilaterals such as the European Commission‟s development agency. Essentially, assistance was being offered as financial support to the country‟s health sector budget to increase the total amount available, or to ensure regular flow of funds, so that more comprehensive plans and policies could be implemented and sustained. Because it was untried, or because of financial constraints, a country might not be able to introduce, say, demand-side mechanisms such as voucher distribution for pregnant women to receive antenatal care and institutional births. So a donor partner might offer to supplement the budget for some years to come in order to introduce vouchers, or hospital accreditation, or better quality control for medications, or improved on-the-job-training (See Ensor & Cooper 2004, for a review of demand side approaches).

An inevitable aspect of this would be discussion about the types of policies and practices which the partner was anticipating to see implemented, but rather than a fully designed project or programme identified specifically with that agency, there was scope to allow things to develop as part of the general development of the system at a steady pace through the recipient country‟s own structures. The SIP does not preclude projects and programmes but they would be elements within a broader agenda of policy and system reforms. One downside of the SIP is that any one agency‟s financial contribution is so small compared to the recipient country‟s own health budget that it is barely an incentive for significant change. Another is that an agency‟s SIP may not reflect policy changes other agencies are advocating (more private sector involvement, more attention to women‟s health needs, better health information systems to improve priority setting, more taxes on alcohol, or whatever) and can even confuse the recipient country‟s policy makers with different messages about action needed to improve health in the country.

So the SWAp takes the logic further. “Sector-wide approaches (SWAps), organised around a negotiated programme of work, offer a better prospect for success than the piecemeal pursuit of separately financed projects.” (Cassells 1997). Hutton & Tanner (2004) have also described succinctly the potential benefits of SWAps for public health. The SWAp proposes that the donor agency community dialogues with the host country about the policy reforms and investments which the health sector requires to be more effective and sustainable, and the resources they bring are pooled with the country‟s health budget. (It should be noted that SWAps can and have been used in sectors other than health, and sometimes have covered several sectors not just one (Nordheim-Larsen 2007)). Imagine that each donor brings a bucket along and pours it into a swimming pool. Some may have bigger buckets than others but once in the pool the individual contributions are no longer distinguishable. Instead of each donor having its own projects and programmes and wanting separate performance and audit reports they all receive previously and jointly agreed reports on the progress of

[2] Health system here means the organisational arrangements managed by the Ministry of Health, or its equivalent, to deliver primary, secondary and tertiary health care to its people, including health promotion activities, and health associated teaching and research. It mainly refers to the public services although there may be contracts with other providers, and there may be inputs from cognate ministries such as education. The health sector includes the wider private and not-for-profit agencies, traditional and complementary medicine practices. It is recognised that health is also impacted by activities in other sectors such as employment, housing, environment, etc, and that health services may be offered through other ministries such as defence. These would all be part of the health sector. When talking about SIPs and SWAps, however, it is usually the health system which is the focus and “sector” is used more loosely as a synonym.

the whole sector. They have a joint approach to policy priorities, to modalities of working, to performance indicators, and timetables. There is a coherent framework within which projects and programmes may still take place but there are no longer the transaction costs of dealing with a multiplicity of donors each with their own expectations and timetables. There is a common understanding which may strengthen the Ministry in its dealings with its own government or new players who want to join in the action. It is harder to play donors off against each other or to gain funding for pet projects which are not evidence based, but the benefits should outweigh the losses.
Perhaps the most important value to the recipient country is that it offers a longer policy time horizon with guaranteed funds to back reforms. "The reform of viable health systems takes time, persistence, flexibility and circumspect advice." (Schwefel 2010). It is all very well encouraging policy makers to take what may well be unpopular reforms (remember that current system will always have those whose self-interest is heavily invested in the current situation) but they need not only to be convinced that the reforms are technically correct but will have the resource support over an extended period, not anchored to changing fashions or agendas within the donor country or international development community.

What benefits are there for the donors? The main one is that all the agencies can compete less and pool their energies into a more rational approach to improvements and influence policy. The problems are also easy to spot. Development agencies are answerable to their own foreign ministries, politicians, auditors and press. The county"s own policies may be quite explicit about not funding abortion, or requiring funds to be allocated and reported on by a certain month, or focussing on women"s literacy or poverty eradication. It may be very hard or even impossible to "sell" the collective policy approach "back home." Once it is done it may help to prevent the traditional see-sawing of priorities as Conservatives follow Socialists, Democrats follow Republicans, Greens follow Christian Democrats, and so on, but governments may see development, like war, as an extension of foreign policy and promoting influence for trade, and not wish to lose identity in the collective. A socialist oriented country may not want to be seen advocating more private sector involvement. A country selling high levels of branded drugs may not want to see an essential drugs policy introduced. There may be a feeling that the agency providing the "biggest bucket" should have greater say in the policy direction taken, and antagonise others with more experience but smaller resources. Another problem is reaching agreement with the host country both about what is meant by policy and about dialogue. A sovereign country will not want to be seen being pushed around by a group of non-elected foreign policy advisers. Its idea of dialogue may be a once a year briefing to the assembled representatives, whilst their expectation was regular and frequent meeting to discuss jointly sponsored data collection and analysis and review of the global evidence base for this or that approach.

One of the first SWAps was developed in Ghana, and since then it has been used widely round the world. The first ex-USSR state to introduce a SWAp was Kyrgyzstan. (Ibraimova et al. 2011). The SWAp, however, is no panacea and there is a considerable critical literature around it, including the review by Hill where he examines the rhetoric of sector-wide approaches (Hill 2002).

More recent developments have emphasised through a series of international agreements such as the Paris/Accra Declaration the values and principles behind such criticism (Horton 2009; Asian Development Bank 2009). The international health development world has also become far more complex. It is no longer just bilateral and multilateral aid agencies representing countries or the UN which are involved. "Since the mid1980s… there has been recognition of the greater significance, both quantitatively and qualitatively, of non-state actors…private companies…NGOs…consultancy firms, research institutions, charitable foundations, religious and other social movements…and organised crime…The increased importance of non-state actors in health has led to the development of analytical approaches that seek to understand health policy in a more pluralist environment…Importantly, these approaches also support a recognition of the porous nature of national-level policy making, and the importance of actors and forces that cross over state boundaries." (Lee & Goodman 2002). Since that was written we have also seen with many more partnerships such as the Global Fund, attempting to achieve the Millennium Development Goals, for example, with commercial stakeholders involved. (Rushton & Williams 2011).

Conclusion

Although health development projects and programmes have been around for decades the dissatisfaction with such interventions is widespread. Curiously despite their ubiquity project and programme design and management in health development receives little attention in the academic literature, compared to, say, policy analysis. The author consulted a wide range of text books on global health issues and few even included the words in their index (although this is true also of "corruption" and "culture" despite their importance in holding back health development [23]). The short-termism encapsulated in many projects and the organisational memory loss encountered leads to many interventions that have not been sustainable, leaving in their wake wasted opportunities, wasted human resources and wasted hopes. In an attempt to tackle the lost learning opportunities the EC‟s Technical Cooperation Programme in India began working with the Government of India to capture many of the project and programme essentials from all over India for several years, to provide a data base of what had been tried, what lessons were learned, and so on. The GoI adopted this work for a while and during its lifetime it highlighted just how much effort had been expended trying to bring health to poorer communities (Government of India 2007). The work also emphasised the fragmentation of efforts as different donors and development partners all tried to tackle different problems in different ways.

Nor should the transaction costs for recipient governments of having to deal with a myriad of potential development partners in this disjointed way be underestimated. In 2003 the Indian Government became so fed-up with these transactional costs they told the smaller donors they could deal directly with states but at national level they restricted the number of partners they would deal with directly. Lee has noted that the flow of people, goods, capital, ideas and values which constitute globalization "has posed three major challenges for the public health community: How can the evidence base on globalization and health be strengthened; what effective policy responses are needed to optimize the benefits, and minimize the costs to public health, arising from globalization; and how can these policy options be practically and effectively implemented?" (Lee 2011). These challenges remain and all the major agencies are constantly seeking new and better ways to help societies disadvantaged by location, economic status, corruption, natural disasters, over-population or whatever, to improve their health standards.

While senior officials in agencies and host governments posture and talk and play games, looking all the time for quick fixes that can play well in reports to headquarters or facilitate promotion, easily resolvable problems like malarial and diarrhoeal deaths still kill far too many people, while daily countless families go into inter-generational debt for relatively straightforward or even unnecessary hospital treatments. So the search for better ways to channel expertise and finances to needy communities, to improve the quality of health services, and to better train and equip the armies of dedicated health professionals around the world must continue. This author believes that ultimately all global health interventions should be about building the capacity for all countries, regions and local communities to manage and sustain their own health systems. Capacity building means far more than just training (Potter & Brough 2004). Simply providing buildings, equipment and training is important but insufficient. Attention is needed to address systems capacity development issues and SWAps certainly provide one way to encourage better analysis, planning, implementation and reduced transactional costs and inertia. The commercially oriented emphasis on disciplines like project management is another way forward, although there are understandable concerns about the including commercial interests such as pharmaceutical industry representatives or non-accountable figures like Bill Gates, into the policy shaping boards of the various global alliances, and a fear that decision making in the headquarters of the various global initiatives is obviating the type of policy dialogue and local prioritising that SWAps could achieve (Rushton & Williams 2011).

If resolving the problems was easy, solutions would be clearer than they are. As it is, we have to keep struggling to find the most effective ways of helping those who have the most to gain from more effective interventions to provide better health care and achieve better health outcomes. This section

has given a short over-view of modalities widely used over the past several decades but it is an ever changing field responding to ever new challenges.

Exercises:
(Note: For the questions below a, b and c are suggested as different levels of difficulty: (a) could be used for introductory work or ice-breaking early in the module; (b) would be a more challenging assignment; and (c) could be a serious term paper or assessed assignment.)

1. Imagine you have been appointed as a public health adviser to a selected country or region, as a two year secondment from an allocated aid agency or NGO. You will be based in the capital city and will be the lead PH adviser expected to help shape the next 5 years of assistance.
    a. Describe how you would go about assessing the public health needs of the country in order to write a briefing paper for your headquarters and the host MoH at the end of the first month, and difficulties you would anticipate.
    b. Review any real projects or programmes that the agency has been running and consider any performance reports on them. Using this material write a briefing paper on how such projects/ programmes could be developed or re-directed to improve their efficiency and effectiveness.
    c. In the context of the country‟s reported public health situation write a report setting out a programme of policy reforms and practical interventions for the next 5 years with which your agency could assist the host country, within a total budget of €25 million and no more than €5 million in any one year (could include an implementation plan).

2. Review any available material on the web about the public health status of a selected country or region (e.g. World Bank Sector Report, WHO sector review, that country‟s Ministry of Health annual report, etc.):
    a. Think of an appropriate intervention and write a briefing paper advocating why this intervention should be adopted (this can be role played, taking the view point of an MoH official, agency or NGO desk officer);
    b. As for (a) but develop a log frame which could be used to demonstrate the coherence of the intervention, and to identify strengths and weaknesses.
    c. As for (b) but also show how project management skills could be used to improve the efficiency and effectiveness of the intervention.

3. Access the ODI reference describing SWAps in Mozambique, Cambodia, Vietnam, Uganda, and Tanzania.
    a. Taking any one country prepare a presentation for fellow students on the SWAp as applied that country, describing the main features, strengths weaknesses and recommendations from the ODI report.
    b. Review whatever information you can find about the country in question and reflecting back on the ODI report assess in what ways the SWAp was successful, and how it fell short of expectations, particularly in achieving MDGs 4,5 and 6.
    c. Take any disadvantaged country and after assessing the status of that country‟s current public health status use the ODI to write a briefing on what benefits and drawbacks would be likely from adopting a SWAp.

References:

Asian Development Bank (1988) Handbook on management of project implementation: a practical guide for implementers of ADB-supported projects. Revised edition. Manila.

Asian Development Bank (2009) Aid effectiveness. http://www.adb.org/Media/InFocus/2009/aid-effectiveness.asp.

Cassels A (1997) A guide to sector-wide approaches for health development: concepts, issues and working arrangements. WHO.

De Geyndt W (1990) Towards a Common Vocabulary for identifying Management Issues in Health Projects. Health services Management Research: Vol. No.2 July.

DfID (2006) How to provide Technical Cooperation Personnel. How to Note. Policy Division Info series. Ref no: PD Info 099. June.

Ensor T. and Cooper S (2004) Overcoming barriers to health service access: influencing the demand side. Health Policy & Planning (19)2:69 – 79.

Fairman D, Chigas D, McClintock E & Drager N (2012) Negotiating Public Health in a Globalized World: Global Health Diplomacy in Action.. Springer: Dordrecht.

Gawande A (2010) The Checklist Manifesto: How to get things right. Profile Books Ltd: London.

GoI. Health Sector Policy Reform Options Database of India (HS-PROD) (2007) Central Bureau of Health Intelligence, Directorate General of Health Services, Ministry of Health & Family Welfare. New Delhi.

Hill PS (2002) The rhetoric of sector-wide approaches for health development. Social Science and Medicine 54:1725-1737. Pergamon.

Horton R (2009) Venice Statement: global health initiatives and health systems. Lancet 374:10-12.

Hutton G, Tanner M (2004) The sector-wide approach: a blessing for public health? Bulletin of WHO 82/12:891-970. Available at: http://www.who.int/bulletin/volumes/82/12/editorial21204html/en/ (Accessed 1.1.2015).

Ibraimova A, Akkazieva B, Murzalleva G & Balabanova D (2011) Kyrgyzstan: A regional leader in health system reform. In: Balabanova D, McKee M & Mills A (eds.) „Good health at low cost" 25 years on: What makes a good health system?

Kickbusch I, Novotny TE, Drager N, Silberschmidt G, Alcazar S (2007) Global health diplomacy: training across disciplines. Bulletin of WHO: Lessons from the Field Article ID: 07-045856; article DOI: 10.2471/BLT.07.045856.

Lee K. Globalization (2011) In Detels R, Beaglehole R, Lansang MA & Gulliford M. (eds.) Oxford Textbook of Public Health (5th edition) Published on-line Mar 2011. Oxford University Press.

Lee K, Goodman H (2002) Global policy networks: the propagation of health care financing reform since the 1980s. In: Lee K, Buse K, Fustukian S (eds.) Health Policy in a Globalising World. Cambridge University Press: Cambridge.

Manton J (2011) Global Health. In Berridge V, Gorsky M, Mold A (eds.). Public Health in History. McGraw Hill and Open University: Maidenhead.

Nordheim-Larsen C, Bialluch G (2007) Sector-wide approaches: Implications for sustainable land management and UNCCD financing arrangements: Case studies from Kenya and Uganda. The Global Mechanism of the UNCCD. Available at: global-mechanism.org/edocman/download.php?fname=swap_paper (Accessed 1.1.2015).

Office of Government Commerce (UK) (2002) Managing Successful Projects with Prince 2. HMSO.

ODI (u.d.). Available at: http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/4533.pdf (Accessed 28.12.2014).

Potter C, Brough R. Systemic capacity building: a hierarchy of needs (2004) Health Policy and Planning 19/5:336-345.

Potter C, Harries J (2006) Determinants of Policy Effectiveness. Bulletin of WHO84/11:841-920.

Rushton S,Williams OD (eds.) (2011) Partnerships and Foundations in Global Health Governance. Palgrave Macmillan: Basingstoke.

Schwefel D, Vuckovic M, Korte R, Doetinchem O, Bichman W, Brandrup-Lukanow A (2010) Health, Development and Globalisation: Guidelines and Recommendations for International Cooperation, GTZ.

Shrikant I, Bangdiwala MS, Fonn S, Okoye O, Tollman S (2010) Workforce Resources for Health in Developing Countries. Public Health Reviews 32/1:296.

Transparency International (2006) Global Corruption Report: Corruption and Health. Pluto Press: London.
WHO (2012) WHO intensifies health diplomacy to Improve Africa‟s health. Available at: http://www.afro.who.int/en/media-centre/pressreleases/item/4359-who-intensifies-health-diplomacy-to-improve-africa%E2%80%99s-health.html (Accessed 28 Dec 2014).
Young T (2007) The Handbook of Project Management. 2nd Edition, Kogan Page.

Title:	**N 3.4 THE ROLE OF THE CIVIL SOCIETY IN HEALTH**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Motasem Hamdan, PhD Assoc. Prof. Health Policy and Management
Address for correspondence	Al-Quds University, School of Public Health, East Jerusalem, P.O.Box 51000 Palestine Email: mhamdan@med.alquds.edu
Key words	Civil society organisation, non-governmental organisation, public health, global health, coordination,
Topics	The topic of the module will include these issues: • Definitions ad termenology (CSOs, NGOs etc), • The historical development of NGOs • Types, features, foundations of NGOs • Roles of NGOs in health and social development • International NGOs and role in global health • Impact of NGOs on health and health care sector • Regulating and coordinating work of NGOs, code of conduct of NGOs work • Discussions and case studies
Learning objectives	• To acquire knowledge about the history, foundations, types, features, and funding of the NGOs. • To develop a wider understanding of the role of the NGOs in health and health system development. • To understand the positive and negative impact of NGOs on health and health care sectors. • To recognize the challenges regulating, integrating and coordinating of NGOs activities in health settings.
Teaching methods	Short lectures, interactive small group discussions, case studies and field practice
Who should apply	Those who pursue an international career in public health management, policy development, research or advocacy; entrance requirements are to be determined by the institution offering this modules.
Career opportunities	Teaching and/or research careers in academic environments; leadership positions in the health care sector, non-governmental organizations, in consulting companies.
Assessment of students	Test and case studies as well as project/ field visit and reports.
COMMENTS on the module by lecturers and students	**???**

The role of the civil society in health

The concept of civil society goes back many centuries in Western thinking with its roots in Ancient Greece. The modern idea of civil society emerged in the 18th Century, influenced by political theorists from Thomas Paine to George Hegel, who developed the notion of civil society as a domain parallel to but separate from the states (Cerothers 1999). The 90s brought about renewed interest in civil society, as the trend towards democracy opened up space for civil society and the need to cover increasing gaps in social services created by structural adjustment and other reforms in developing countries (Ghaus-Pasha 2004;).

Individuals and groups organize themselves into civil society organizations (CSOs) to pursue their collective interests and engage in activities of public importance (WHO 2011). Civil society is a broader concept, encompassing all organizations and associations that exist outside the state and the market (Ghaus-Pasha 2004). Non-governmental organizations (NGOs) are considered part of civil society and the term is often used interchangeably with the term CSOs, particularly in the health sector (WHO 2001). Usually, NGOs are defined as organizations that pursue a public interest agenda, rather than commercial interests (Hall-Jones 2006). The World Bank define NGOs as private organizations that pursue activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social services, or undertake community development. NGOs includes different categories of organizations that are not-for-profit, voluntary organizations entities and also do not belong to the government sector.

Compared with governmental organizations, NGOs have the advantages of being autonomous, being able to influence both community and governmental institutions, having knowledge and understanding of local circumstances, and having the flexibility to adapt to local situations (WHO).

NGOs are important health system stakeholders as they provide numerous, often highly valued programs and services to the members of their community (Wilson et al. 2012). They often provide services and support to the most marginalized, disadvantaged and stigmatized sections of society (Wilson et al. 2012). Furthermore, these organizations play crucial role in health and social development. In 2006, for example, almost 25% of the total development assistance for health was channeled through NGOs (Laaser and Brand 2014).

NGOs have contributed to the development of communities around the world and are important partners of many governments. According to the UNDP Human Development Report 2002, there were in 2002 over 37,000 NGOs in the world, a growth of 19.3% from 1990. The dominant purposes of these are: economic development and infrastructure (26%) and research (23%) (Delisle et al. 2005).

Types and features of NGOs

There are many different classifications of NGOs. NGOs are diverse in terms of their size, the scope of their missions, geographical coverage, and areas of work and interest. The most common focus is on the type of activity they perform such as social, health, human rights, environmental, development work. Moreover, NGOs by level of activities can be local, national, or international. NGOs types can be understood by their orientation and level of operation (Adapted from Wikipedia: http://en.wikipedia.org/wiki/Non-governmental_organization):

By orientation

- Charitable orientation often involves a top-down paternalistic effort with little participation by the "beneficiaries". It includes NGOs with activities directed toward meeting the needs of the poor.
- Service orientation includes NGOs with activities such as the provision of health, family planning or education services in which the programme is designed by the NGO and people are expected to participate in its implementation and in receiving the service.

• Participatory orientation is characterized by self-help projects where local people are involved particularly in the implementation of a project by contributing cash, tools, land, materials, labour etc.
• Empowering orientation aims to help poor people develop a clearer understanding of the social, political and economic factors affecting their lives, and to strengthen their awareness of their own potential power to control their lives. There is maximum involvement of the beneficiaries with NGOs acting as facilitators.

By level of operation
• Community-based organizations (CBOs) arise out of people's own initiatives. They can be responsible for raising the consciousness of the urban poor, helping them to understand their rights in accessing needed services, and providing such services.
• City-wide organizations include organizations such as chambers of commerce and industry, coalitions of business, ethnic or educational groups, and associations of community organizations.
• National NGOs include national organizations such as the YMCAs/YWCAs, professional associations.
• International NGOs range from secular agencies such as Save the Children, OXFAM, CARE, Ford Foundation, and Rockefeller Foundation to religiously motivated groups. They can be responsible for funding local NGOs, institutions and projects and implementing projects.

Role of Civil Society Organisations
Nongovernmental organizations plays an essential role throughout the world in addressing disease burden and the disparities in access to and quality of health care (Azenha et al. 2011). Particularly, they are in a better position to develop, tailor, and deliver primary health care services to communities because they understand their local communities and are connected to the groups they serve (Wilson et al. 2012). NGOs have contributed to the provision of essential primary healthcare for marginalised groups such as the poor, women, children, and patients in low resources countries. NGOs can raise public awareness and educate patients, as well as mobilize resources to serve local needs and provide services not available through government services (Azenha et al. 2011). For example, community-based organizations in the HIV/AIDS sector often directly provide services, care and resources to many marginalized and/or stigmatized populations (Wilson et al. 2012). Also civil society organisations, worldwide play crucial role in addressing the growing breast cancer burden and the disparities in access to and quality of care. Breast cancer NGOs can raise public awareness and educate patients, as well as mobilize resources to serve local needs and provide services not available through government services.

NGOs can assist in national health policy development. They can also help shape public policies and services to be more responsive to patient and community needs (Azenha et al. 2011). They often play important advocacy roles in the development of policy, programmes and services, and are increasingly involved in the development and production of research to inform the development of policy, programs and services (Wilson et al. 2012). They can ensure that their existing programs and new initiatives promote full participation by individuals and communities in the planning, implementation, and control of these programs (WFPHA 1978).

NGOs can also establish means for greater collaboration and coordination of primary health care activities (WFPHA 1978). This can be done among NGOs and between them and governments, locally, nationally, and internationally.

Moreover, according to Delisle and colleagues (2005), one of the strengths of NGOs has been as advocates for the populations they serve. Through conducting and disseminating health research NGOs can become more effective health advocates. Governments depend on health research for needs assessments, formulation of policy options, implementation of interventions, and evaluation of action plans. Empowered citizens and NGOs can demand accountability of the government. They can also

encourage international donors to focus on the health priorities of countries and thus facilitate a check and balance mechanism for good governance (Delisle et al. 2005).

Impact of NGOs on health and national health care systems

The major advantages of NGOs work in development are "flexibility, ability to innovate, grass-roots orientation, humanitarian versus commercial goal orientation, non-profit status, dedication and commitment, and recruitment philosophy" (Asamoah 2003).

NGOs have been contributing to public health for centuries. In more recent years, however, they have grown in scale and influence and are having profound impacts on health and national health care systems (WHO 2011). Pfeiffer and colleagues (2008) have summarised the positive and negative impact of NGOs on national health systems in three categories: managment of services, operation/ services delivery and human resources (Table.1). In his review of the NGOs Pfeiffer (2003) reported that the involvement of NGOs in primary health care in Mozambique had undermined the local efforts and governments' ability to maintain control over their own health care system (Pfeiffer 2003). Wheras, the international NGOs, led to the fragmentation of the local health system, uncoordinated work, creating parallel projects among different organizations, vertical programs with no plans for expansion or sustainability and little integration with local health systems, and brain drain of health service workers from public services (Pfeiffer 2003, Pfeiffer et al. 2008), see table 1.

Regulating NGOs work

Due to the negative impact of NGOs on national health systems, there has been is growing need and pressure to regulate the work of NGOs and to establish standards of work and codes of conduct to ensure quality of service delivery, harmonize activities with national health strategies and priorities (Pfeiffer et al. 2008).

In any context, accountability – the means by which individuals and organizations report to a recognized authority (or authorities) and are held responsible for their actions (Edwards and Hulme 1995) – is a key issue in NGO–state relationships. All NGOs are accountable under the relevant laws of a particular country where they operate, and states have legal powers to intervene if NGOs transgress laws relating to accounting, rules of bureaucratic procedure and registration obligations. NGOs are normally accountable to a voluntary body (such as a board of trustees or governors) which derives no financial gain from the organization and has no ostensible financial interest. NGOs which are membership organizations are directly accountable to their members, who elect a governing body (Lewis and Kanji 2009).

There have been many efforts to improve NGO accountability through sel-regulation using „codes of conduct", with varying levels of success (. Most initiatives of this kind have come from the humanitarian action field, such as the Code of Conduct for International Red Cross and Red Crescent Movement and NGOs in Disaster Relief (IFRC 1997), the People in Aid Code of Best Practice in the Management and Support of Aid Personnel (ODI 1997). These codes are regarded by many governments, donors and NGOs as a valuable step forward, but their enforcement without the availability of clear or appropriate sanctions remains a problem (Lweis and Kanji 2009).

Table 1: Nongovernmental Organization (NGO) Impact on National Health Systems (Source: Pfeiffer et al, 2008).

Area	Negative Impact	Positive Impact
Management	***Burden***	***Support***
	• Multiple projects to oversee	• Support for management capacity building
	• Divergent financial and program reporting requirements	• Support for financial coordination and harmonized program reporting
	• Diversion of planning to meet NGO needs	• Support for integrated planning
Operations	• Fragmentation of services, vertical technical assistance	• Technical assistance, innovation, pilot projects
	• Showcase projects with limited sustainability	• New, innovative programs to meet MOH priorities
	• Imbalances in geographic and programmatic resource allocation	• Contribution of resources to MOH technical assistance priorities
	• Vertical programs that undermine service integration	• Innovative methods to channel vertical funds into integrated services
	• Concentration of scarce MOH human resources within NGO-related projects	• Allocation of human resources to MOH for innovative projects
Human resources	• Shortages	• Capacity building
	• "Brain drain" to NGOs	• On-the-job training for MOH staff
	• Lack of sustainability for new programs	• Funding for additional MOH workforce for new program needs
	• Lower morale among health workers	• Advocacy to improve work conditions, capacity, and workloads
	• Weakened management through loss of skilled staff	• Provision of management training and funding for new management

Following is an example of code of conduct that the UK"s Commission on the Future of the Voluntary Sector in 1997 developed for the UK voluntary sector. Its main points included the following (*Source: Ashby 1997, adapted from Lewis and Kanji 2009:29)*:

- stating an organization"s purpose clearly and keeping it relevant to current conditions;
- being explicit about the needs an organization intends to meet, and the ways this will be achieved;
- managing and targeting resources effectively and „doing what we say we will do";
- evaluating effectiveness of work, tackling poor performance and responding to complaints fairly and promptly;

- agreeing and setting out all those to whom an organization is accountable and how it will respond to those responsibilities;
- being clear about the standards to which work is undertaken;
- being open and transparent about arrangements for involving clients/ users;
- having an open and systematic process for appointing to the governing body;
- setting out the role and responsibilities of the governing body;
- having clear arrangements for involving, supporting and training volunteers;
- ensuring policies and practices do not discriminate unfairly;
- recruiting staff openly and remunerating them fairly.

Case studies:

1. Role of NGOs: Azenha G et al. **The role of breast cancer civil society in different resource settings.** 2011 Apr;20 Suppl 2:S81-7. doi: 10.1016/j.breast.2011.02.005. Available at: http://www.cancer.org/acs/groups/content/@internationalaffairs/documents/webform/acspc-028415.pdf (Accessed 1401.2015).

Learning Objective: This case offers students an opportunity to undertsand the role that NGOs plays in health development- the example of cancer control- in both poor and high income countries.

2. Regulating NGOs work: Pfeiffer J. 2003. International NGOs and primary health care in Mozambique: the need for a new model of collaboration. Social Science & Medicine 56 (4):725-738.

Learning Objective: It provides the students with and understands the effect of NGOs on primary health care and local health care systems. Also the case shows the need for NGOs to adopt a code of conduct that establishes standards and best practices for NGO relationships with public sector health systems.

Discussion questions:

- What is the role of different civil society organizations in health and health care sector development?
- What are the strengths and weaknesses of NGOs work in local and global health development?
- How far the implementation of civil society organizations activities aligned with national priority needs?
- What actions need to be taken to enhance accountability, regulate, coordinate, and harmonize the work of the civil society organizations to national health priorities?

References:

1. Azenha G, Bass LP, Caleffi M, Smith R, Pretorius L, Durstine A, Perez CP. Breast. 2011 Apr;20 Suppl 2:S81-7. doi: 10.1016/j.breast.2011.02.005. Epub 2011 Feb 22.**The role of breast cancer civil society in different resource settings.** Available at: http://www.cancer.org/acs/groups/content/@internationalaffairs/documents/webform/acspc-028415.pdf (Accessed 14.01.2015)
2. Delisle H, Roberts JH, Munro M, Jones L, Gyorkos TW. **The role of NGOs in global health research for development.** Health Research Policy and Systems 2005, 3:3 doi:10.1186/1478-4505-3-3. Available at: http://www.health-policy-systems.com/content/3/1/3 (Accessed 14.01.2015).
3. Doyle C, Patel P. **Civil society organisations and global health initiatives: Problems of legitimacy. Social Science & Medicine**. Volume 66, Issue 9, May 2008, Pages 1928–1938
4. Cerothers T (1999) Think again: Civil society. Carnegie Endowment. Washington D.C. Cited in: http://www.ilo.org/public/english/iira/documents/congresses/regional/lagos2011/5thsession/session5a/buildingsocsec.pdf (Accessed 14.01.2015).
5. Ghaus-Pasha A**. Role of civil society organizations in participatory and accountable governance.** 6th Global Forum on Reinventing Government Towards Participatory and Transparent Governance 24 – 27 May 2005, Seoul, Republic of Korea. Available at: http://unpan1.un.org/intradoc/groups/public/documents/un/unpan019594.pdf (Accessed
6. Laaser U, Brand H. **Global health in the 21st century.** Glob Health Action 2014, 7: 23694 - http://dx.doi.org/10.3402/gha.v7.23694
7. Lee K (2010). **Civil Society Organizations and the Functions of Global Health Governance: What Role within Intergovernmental Organizations.** *GLOBAL HEALTH GOVERNANCE*, VOLUME III, NO. 2 (SPRING 2010). Available at: http://www.ghgj.org (Accessed 14.01.2015).
8. Lewis D, Kanji N. Non-Governmental Organisations and Development. Routledge, 2009.
9. Michael G, Lavis JN, Guta A. C**ommunity-based organizations in the health sector: A scoping review.** Wilson et al. Health Research Policy and Systems 2012, 10:36. Available at: http://www.health-policy-systems.com/content/10/1/36 (Accessed 14.01.2015).
10. Piotrowicz M, Cianciara D. **The role of non-governmental organisations in the social and health systems.** PRZEGL EPIDEMIOL 2013; 67: 69 - 74.
11. Pfeiffer J, Johnson W, Fort M, Shakow A, Hagopian A, Gloyd S, Gimbel-Sherr K. **Strengthening health systems in poor countries: a code of conduct for nongovernmental organizations.** Am J Public Health. 2008 Dec;98(12):2134-40. doi: 10.2105/AJPH.2007.125989. Epub 2008 Oct 15.Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2636539/ (Accessed 14.01.2015).
12. Pfeiffer J. (2003) **International NGOs and primary health care in Mozambique: the need for a new model of collaboration.** *Social Science & Medicine* 56 (4):725-738.
13. Sale W. **Civil Society in Palestine: Approaches, Historical Context and the Role of the NGOs.** Palestine-Israel Journal. Vol. 18 No. 2 & 3, 2012.
14. Schurmann AT, Mahmud S. **Civil Society, Health, and Social Exclusionin Bangladesh.** J HEALTH POPUL NUTR 2009 Aug;27(4):536-544. Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2928100/pdf/jhpn0027-0536.pdf (Accessed 14.01.2015).

15. World Federation of Public Health Associations (WFPHA). **Non-Governmental Organizations and Primary Health Care.** Position Paper – Passed by the WFPHA General Assembly - 1978. Available at: http://www.wfpha.org/tl_files/doc/resolutions/positionpapers/global/NGO&PrimaryHealthCare.pdf (Accessed 14.01.2015).
16. World Bank Group. **The Role and Performance of Palestinian NGOs in Health, Education and Agriculture.** Available at: http://siteresources.worldbank.org/INTWESTBANKGAZA/Resources/294264-1166525851073/NGOreportDec06.pdf (Accessed 14.01.20115).
17. World Health Organisation**. WHO and civil society: linking for better health.** Geneva, Switzerland: World Health Organization; 2002.

Title:	**N 3.5 UNIVERSAL HEALTH COVERAGE, INCLUDING THE PRIVATE SECTOR AND TRADITIONAL MEDICINE**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Jose M. Martin-Moreno & Meggan Harris
Address for correspondence	Dr. Jose M. Martin-Moreno, Dr. Meggan Harris Department of Preventive Medicine and Public Health School of Medicine, University of Valencia Av. Blasco Ibañez 15 46010 Valencia, Spain
Key words	Universal Health Coverage, health financing transition, pooled financing, financial risk protection, public healthcare
Topics	Nearly half of all countries worldwide are pursuing policies to achieve Universal Health Coverage. This undertaking has the potential to improve health indicators dramatically, contributing to human development and more generally to global equity. However, the path towards UHC is often rocky, and every country must work to channel resources, adapt existing institutions and build health system capacity in order to accomplish its goals. Global health advocates must understand what elements contribute to the success of UHC strategies, as well as how to measure real progress, so that they will be prepared to substantially contribute to policies in their own country or worldwide.
Learning objectives	To understand the concepts and the rationale of studying Universal Health Coverage (UHC); To characterise the political, social, economic and technical aspects of the health financing transition; To develop skills in assessing progress towards UHC; To advance critical and strategic thinking when designing a UHC programme, both in a national context and as part of an external development strategy.
Teaching methods	Lectures, interactive small group discussions, case studies and mock group exercises.
Who should apply	Those who pursue an international career in public health management, policy development, research or advocacy; entrance requirements are to be determined by the institution offering the modules.
Career opportunities	Teaching and/or research careers in academic environments; Policy administration of public institutions, non-governmental organizations, development and aid organizations, and in consulting companies.
Assessment of students	Test and case problem presentations.
COMMENTS on the module by lecturers and students	**???**

Universal health coverage, including the private sector and traditional medicine

Introduction and key concepts

Universal health coverage (UHC), also known as Universal Health Care, basically refers to a system by which all members of a society have access to basic healthcare without assuming undue financial burden. The appeal of this concept, which implies reduced financial risk for individuals, improved health indicators across all population segments and increased efficiency of services, has resonated strongly throughout the world, and some have likened it to the dramatic public health improvements in hygiene and sanitation in the 19th century and epidemiological control of communicable diseases in the 20th (Rodin 2012). Indeed, the United Nations General Assembly has called on all Member States to work towards this goal (2012), and WHO Director General Margaret Chan, reflecting on global progress towards UHC, called it ―the single most powerful concept that public health has to offer‖ (2012). However, the concept of UHC is deceptively simple, masking a wide array of national models, practices, legal arrangements and funding mechanisms, which have evolved along variant pathways, albeit in the same general direction. Understanding these complexities is necessary for any health policy analyst interested in advancing—or preserving—UHC in their own country or in others.

UHC is generally achieved by means of two different financing systems:

> *Tax-based financing* (also known as the *Beveridge model* (Musgrove 2000) – a system in which healthcare is paid for through government revenue, whether from a single source (general tax revenue) or from a variety of different taxes (income tax, payroll tax, etc.).
>
> *Compulsory insurance* (also known as the *Bismarck model*) – a system whereby all members of a society are required to purchase insurance, either from a single government fund (*social health insurance* or *national health insurance*) or from an array of private insurance companies. Vulnerable populations may be offered subsidies or be covered by special funds.

These two financing models should not be considered the only options, but rather two extremes on a wide spectrum of health financing arrangements. In designing their own programmes, countries have adapted and combined them in a variety of ways, depending on which structures were already in place, with diverse roles for public and private healthcare providers, private insurers, out-of-pocket contributions, and government administrations.

The path towards UHC

Although the first sickness funds were first officially regulated in 1851 in Belgium, it is usually Otto von Bismarck of Germany who is credited with creating the first social health insurance system (a model which still bears his name) in 1883. Initially covering only 5%–10% of the population through mandatory insurance for certain blue-collar workers, it was not until 1988 that all socio-professional groups were formally included in the insurance schemes (Carrin 2004). This period—between the first public regulations on pooled financing of healthcare costs and the achievement of UHC—is called the *health financing transition*. It is usually associated with considerable increases in total public health expenditure, with the noteworthy exception of the USA (CBO 2014).

Although every country must forge its own path, a few political and economic trends are common. First, there must be considerable, persistent domestic pressure, coming from a number of different stakeholders, to provide equitable access to healthcare. Second, the government must be willing and capable of assuming a prominent and effective role in regulation and financing. Third, institutions must be negotiated according to the care structures already in place, whether that means standardising and integrating traditional medicine into modern practice (WHO 2013), or introducing new legislation to regulate existing providers and insurers (Jha 2013). Finally, the implementation of a scheme to provide UHC is invariably incremental, often lasting several decades (Savedoff 2012).

During the health financing transition, countries must also grapple with a number of difficult decisions. Who should initially be eligible for coverage? What should be included in the portfolio of covered services? Should population-based public health services be financed from the same funds? What fraction of the cost should be borne by citizens, enterprises and the government? Should there be a copayment for services, and if so, which ones, how much, and who should pay? How can existing health providers and structures be integrated into the reforms? What efficiency measures should be put into place to optimise expenditure? How should the government regulate standards, quality and coverage? How should health system performance and progress towards UHC be monitored? How can system sustainability be ensured?

The answers to these questions will have an important impact on the ultimate effectiveness and inherent equity of the health system. Although the relationship between pooled health expenditure and universal coverage is usually positive, empirical evidence reveals some important caveats. Particularly important elements include governance and planning, to ensure that increased funding is aligned with population needs, that quality controls and accountability are built into the system, and that explicit measures are implemented to extend coverage to remove financial and geographical barriers to access. In countries that receive considerable external aid to prop up their health system, the way this money is channelled is also important. Although this question has not been examined in-depth, some studies suggest that aid channelled to government sources may simply replace—rather than complement—domestic spending, while funds directed towards non-governmental sources can have the opposite effect (Lu 2010, Moreno-Serra 2012).

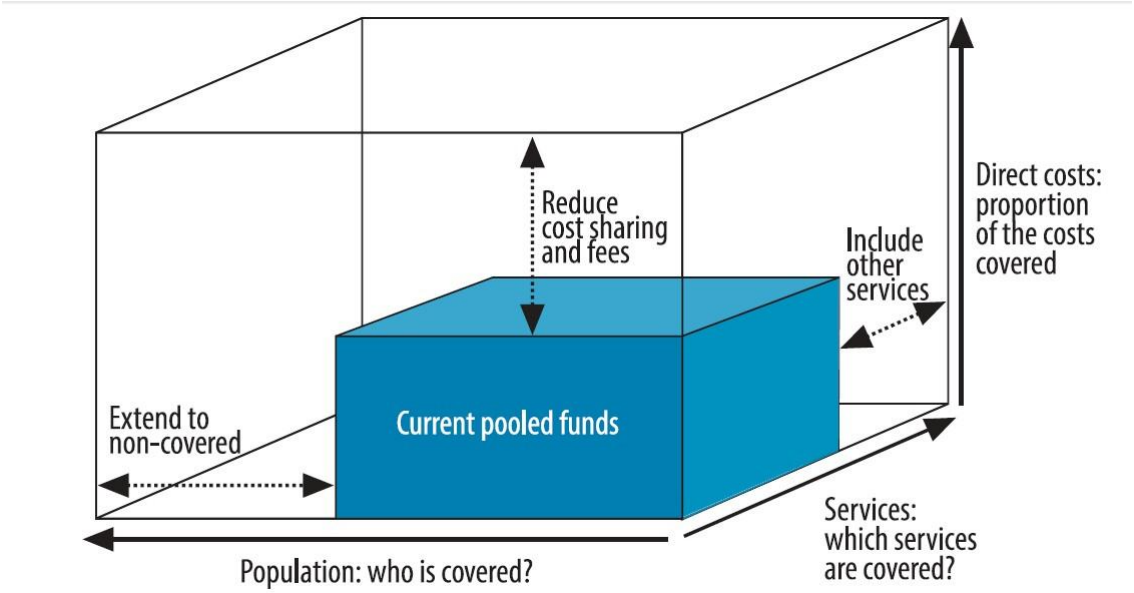
Today, nearly half of all countries worldwide, and across all income levels, are undergoing a health financing transition. Lower-income countries may be using UHC as a means to meet Millennium Development Goals; middle-income countries may wish to extend coverage or scale up service availability, and higher-income countries wishing to maintain UHC are usually more concerned with efficiency gains and adaptations of the service portfolio to the changing demographics of their populations (Boerma 2014).

Assessing progress towards UHC

The diversity of health system models as well as their heterogeneous levels of effectiveness, make it difficult to precisely measure progress towards UHC; all major assessment methods have certain drawbacks when examined in isolation (Savedoff 2012). Examining the legal right to healthcare, for example, overlooks the practical implications of implementation, which may lag behind political aims. Studying insurance coverage is also useful, but this method may ignore unequal geographical access, copayment requirements or a generally inadequate level of healthcare provision. Analysing health care utilisation is a third approach, but this does not take into account differences rooted in system efficiency, nor does it consider whether citizens are financially protected.

The World Health Organization and the World Bank Group have recently developed a global framework for monitoring progress towards UHC, dually examining both population coverage with essential health services and financial protection against catastrophic out-of-pocket health payments (figure 1) (Boerma 2014). This method, already tested on 13 countries (see list of case studies under reference list) represents the most current and rigorous attempt to establish a basis for international comparison of progress.

Figure 1: WHO-World Bank UHC Monitoring Framework: measuring progress towards Universal Health Coverage (Source: Boerma 2014).



Promoting UHC in global health

Advocacy for advancement of UHC is closely intertwined with overall efforts to strengthen health systems, including the important dimensions of service delivery; the health workforce; health information systems; medical products, vaccines and technologies; financing; and leadership and governance (WHO 2007). In generating and allocating resources at a national level, there will be constant trade-offs, and the balance between competing demands and interests must be constantly reassessed. Measures intended to enhance coverage may actually do the opposite if too much pressure is put on the system at once, so it is important to take an incremental approach and negotiate the system goals with all stakeholders, including those whose interests' conflict. In a report presented at a global conference on UHC, the Government of Japan and the World Bank (2013) highlighted a number of important lessons to keep in mind when working to advance UHC as a key pillar of global health:

Due consideration of the political economy and policy process

Varied interest groups may be well-entrenched in the political and economic culture of the country, and effective negotiation with them in making decisions on institutional and technological investments is crucial. Leveraging social pressure, societal upheaval and government power can erode opposition from some of these interests, but strategic planning and careful political manoeuvring will be necessary to engage the cooperation of all key stakeholders, so that health system reform has a broad base of ownership.

Tailored strategies to increase health financing capability

Given that UHC is generally associated with increased government expenditure, countries must work to expand the fiscal space that permits increased generation of resources; this is especially important when a movement towards UHC is not accompanied by economic growth. For countries that rely on external funding to buttress the national health system, a key question is how to channel aid in a way that stimulates additional domestic expenditures rather than undermining it. Developed countries such as France and Japan, on the other hand, have seen their resource availability shrink and are thus pursuing policies that diversify their revenue base, for example through consumption taxes or ―sin‖ taxes. At the same time, expenditure

management measures, such as Health Technology Assessment (HTA) and capitation systems (replacing fee-for-service arrangements), must be incorporated into the system early on so that costs do not escalate. In scaling up UHC programmes, risks must also be diversified through cross-subsidisation and risk pooling, not only across economic ranges (rich and poor), but also according to general health status (young and old; healthy and sick).

Capacity-building in human resources for health
Worldwide, there are acute shortages in qualified health professionals, so all countries must exert major efforts towards human resource recruitment and planning. Understanding the current skills mix is just as important as projecting the future disease burden, so that the health workforce meets population needs. Creating strategies to incentivise health workers to serve remote and rural regions is a special challenge, as is creating human resource training and management structures that raise performance and accreditation standards, especially when there are few qualified instructors to fill teaching positions and staff educational institutions.

Support for primary care and public health
Most countries that have achieved UHC have done so by directing resources first towards an expansion of primary care, often with a strong reliance on community health workers, including in traditional medicine. Population-based public health programmes, such as tobacco control, occupational health protection and communicable disease control, also play a key role in reducing the overall burden of disease, even if investments are not directly incorporated into health service delivery schemes.

Adaptive leadership
Because the transition to UHC can take decades, many potential pitfalls must be averted or mitigated. Increasing health system capacity has both interdependent links (e.g., human resource training and quality assurance) as well as competing interests (e.g., the pharmaceutical industry and government agencies responsible for financing health technology). Therefore, strategic compromises must be made without endangering the ultimate goals of sustainability and equitable coverage.

Exercises:
Group discussion questions:
Consider the role of each of the WHO building blocks for health systems (service delivery; health workforce; health information systems; medical products, vaccines and technologies; financing; and leadership and governance) in advancing Universal Health Coverage. What risks are entailed in neglecting any of these areas when developing a strategy for UHC? Are there any other key areas of the health system that should be considered?

What place does public health have in expanding access to healthcare?

Turkey's negotiations with pharmaceutical companies and global spending caps in 2008 led to lowered costs and increased access, but it has also eroded incentives to invest in health technology R&D. How could these interests be better balanced?

What population groups should be prioritised when expanding coverage? Does that measure need to be offset by cross-subsidising risk with another group?

What criteria should be followed when developing or revising the portfolio of services and medicines offered within the public healthcare system?

What are the advantages and disadvantages of imposing copayments on services, medicines or medical products? Is there a place for them in a context of resource constraints, or should all healthcare costs be pooled?

Mock group work
As a class, identify the major stakeholders in your country's health system, including health professional associations, academic institutions, patients, industry, government, private insurance companies and healthcare providers, and others.

As a class, make a list of gaps in UHC which may exist.

Divide the class into small groups according to interest groups, and formulate proposals to close gaps in coverage according to your group's perspective.

In a roundtable, discuss policy options, and if possible, come to a consensus.

Case studies:
Aguilera X, Castillo-Laborde C, Na´jera-De Ferrari M, Delgado I, Ibañez C (2014) Monitoring and evaluating progress towards universal health coverage in Chile. PLoS Med 11: e1001676.
Alebachew A, Hatt L, Kukla M (2014) Monitoring and evaluating progress towards universal health coverage in Ethiopia. PLoS Med 11: e1001696.
Ataguba JE, Day C, McIntyre D (2014) Monitoring and evaluating progress towards universal health coverage in South Africa. PLoS Med 11: e1001686.
Barreto ML, Rasella D, Machado DB, Aquino R, Lima D, et al. (2014) Monitoring and evaluating progress towards universal health coverage in Brazil. PLoS Med 11: e1001692.
Chahed MK, Arfa C (2014) Monitoring and evaluating progress towards universal health coverage in Tunisia. PLoS Med 11: e1001729.
Devadasan N, Ghosh S, Nandraj S, Sundararaman T (2014) Monitoring and evaluating progress towards universal health coverage in India. PLoS Med 11:e1001697.
Huda TM, Khan JAM, Jamil KZAK, El Arifeen S (2014) Monitoring and evaluating progress towards universal health coverage in Bangladesh. PLoS Med 11: e1001722.
Lai T, Habicht T, Jesse M (2014) Monitoring and evaluating progress towards universal health coverage in Estonia. PLoS Med 11: e1001677.
Meng Q, Xu L (2014) Monitoring and evaluating progress towards universal health coverage in China. PLoS Med 11: e1001694.
Mtei G, Makawia S, Masanja H (2014) Monitoring and evaluating progress towards universal health coverage in Tanzania. PLoS Med 11: e1001698.
Nyonator F, Ofosu A, Segbafah M, d'Almeida S (2014) Monitoring and evaluating progress towards universal health coverage in Ghana. PLoS Med 11:e1001691.
Tan KB, Tan WS, Bilger M, Ho CWL (2014). Monitoring and evaluating progress towards universal health coverage in Singapore. PLoS Med 11:e1001695.
Tangcharoensathien V, Limwattananon S, Patcharanarumol W, Thammatacharee J (2014) Monitoring and evaluating progress towards universal health coverage in Thailand. PLoS Med 11: e1001726.

References:
Boerma T, Eozenou P, Evans D, Evans T, Kieny M-P, et al. (2014) Monitoring Progress towards Universal Health Coverage at Country and Global Levels. PLoS Med 11(9): e1001731. doi:10.1371/journal.pmed.1001731.
Carrin G, James C. (2004) Reaching universal coverage via social health insurance: key design features in the transition period. Geneva: World Health Organization.
Chan M. (2012) Best days for public health are ahead of us, says WHO Director-General. Address to the Sixty-fi fth World Health Assembly; Geneva, Switzerland; May 21, 2012. http://www.who.int/dg/speeches/2012/wha_20120521/en/ (accessed Nov 11, 2014).

Congress of the United States Congressional Budget Office (CBO). (2014) Updated Estimates of the Effects of the Insurance Coverage Provisions of the Affordable Care Act, April 2014. (online). Available at: https://www.cbo.gov/sites/default/files/45231-ACA_Estimates.pdf (accessed Nov 12, 2014).
Government of Japan, World Bank. (2013) Global conference on universal health coverage for inclusive and sustainable growth: a global synthesis report. Presented at: Global conference on Universal Health Coverage for inclusive and sustainable growth; 5–6 Dec 2013; Tokyo, Japan. Available at: http://documents.worldbank.org/curated/en/2013/11/18606533/global-conference-universal-health-coverage-inclusive-sustainable-growth-global-synthesis-report.
Jha S, Baker T. (2012) The patient protection and affordable care act and the regulation of the health insurance industry. J Am Coll Radiol, 9:871-876.
Lu C, Schneider MT, Gubbins P, Leach-Kemon K, Jamison D, Murray CJL. (2010) Public financing of health in developing countries: a cross-national systematic analysis. Lancet, 375: 1375–87.
Moreno-Serra R, Smith PC. (2012) Does progress towards universal health coverage improve population health? Lancet, 380: 917–23.
Musgrove P. (2000) Health insurance: the influence of the Beveridge Report. Bull World Health Organ, 78 (6):845–46.
Rodin J, de Ferranti D. (2012) Universal health coverage: the third global health transition? Lancet, 380:861–62.
Savedoff W, de Ferranti D, Smith AL, Fan V. (2012) Political and economic aspects of the transition to universal health coverage. Lancet, 380: 924–32.
United Nations, General Assembly. (2012) Global health and foreign policy. Sixty-seventh session of the General Assembly, A/67/L.36 (6 Dec 2012). Available at: http://www.un.org/ga/search/view_doc.asp?symbol=A/67/L.36.
World Health Organization. (2007) Everybody business : strengthening health systems to improve health outcomes: WHO's framework for action. Geneva: World Health Organization.
World Health Organization. (2013) WHO traditional medicine strategy: 2014-2023. Hong Kong: World Health Organization.

Title:	**N 3.6 PUBLIC HEALTH LEADERSHIP IN A GLOBALISED WORLD**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Katarzyna Czabanowska, Tony Smith, Ken Rethmeier
Address for correspondence	Dr. Katarzyna Czabanowska, Dr. Tony Smith, Dr. Ken Rethmeier INTHEALTH Faculty of Health Medicine and Life Sciences, Maastricht University. Duboisdomain 30, 6229 GT Maastricht, The Netherlands Tel: 0031 43 3881592 Email: kasia.czabanowska@maastrichtuniversity.nl
Key words	Public Health, leadership, systems thinking, leading change, communication in globalised world, political leadership, leadership theories and global leadership values.
Topics	Leadership is a well-known concept within organisational science, public health leadership has still not been well-defined. A recent WHO report acknowledges that contemporary health improvement is more complex than ever before and requires leadership that is *"more fluid, multilevel, multi-stakeholder and adaptive"* rather than of a traditional command and control management variety. Today's public health professionals therefore need to be able to lead in contexts where there is considerable uncertainty and ambiguity, and where there is often imperfect evidence and an absence of agreement about both the precise nature of the problem and the solutions to it. There is a need to discuss the vital role of leadership and governance in public health globally . Indeed, the presence of competent leaders is crucial to achieve progress in the field. A number of studies have identified the capability of effective leaders in dealing with the complexity of introducing new innovations or evidence-based practice more successfully.
Learning objectives	This Course aims to introduce you to and help you to develop: 1. leadership competencies through the following: 2. Examining the key debates around Leadership in Public Health in relationship to modernism, postmodernism, technological change and their implications for leaders within organisations. 3. Introducing key theoretical frameworks that underpin leadership learning, and enable the critical use of this knowledge and understanding by applying theory to actual practice within the context of Public Health. 4. Developing the ability to reflect on the Public Health leadership role and development needs of individuals, so that personal and professional development planning for a leadership role is built upon sound analysis of self in context. 5. Stimulating self-assessment of leadership competencies by the participants to help identify knowledge gaps and further training needs in leadership.
Teaching methods	Blended learning, using online and face to face environment, interactive lectures, PBL and discussion.
Who should apply	Public health or health professionals and holding a master degree or an equivalent, aspiring for a leadership position or currently in a leadership position but aiming at improving their leadership attributes representing C1 – C2 level of English.
Career opportunities	Work for an organisation that advocates for health, insures health or supports stakeholders in the area of health (e.g.NGOs, associations), work for the local government, health department, authorities at local or international level, work for European or global institutions that deal with health issues, public

	health or health service provider working in international environment, in the educational field in the area of management and administration, teaching and research, health industry, pharmaceuticals, health insurance, medical devices and other related areas, which work on the global market and finally policy, administration of public institutions, non-governmental organizations and consulting firms.
Assessment of students	Two final assessment tasks are proposed: Written: A leadership development project that a participant would like to introduce in his/her professional practice and be aligned with the personal development goals. The level of detail that can be attained in the project description depends on e.g. the participants' views, goals, expectations…etc. Oral: A 15-minute presentation based on the content of the project and leadership development plan for the future public health career vision including global dimension. Selecting one theory of leadership and discuss how this might be applied to successfully implement change in one area of public health practice having global impact.
COMMENTS on the module by lecturers and students	**???**

Public Health Leadership in a Globalised World

The Rationale

Given the challenges facing public health professionals such as globalization, health threats, an ageing society, and social and health inequalities which result in the increased level of unpredictability, a multidisciplinary public health workforce needs to be supported by new skills and expertise. Developed countries face complex issues of ageing populations, a rising burden of chronic disease and the challenge of cost-containment, while confronted with rising expectations and new technologies. On the other hand the developing countries are still struggling with the control of infectious diseases, efficient delivery of vital health care services and adequate education. One of the functions of public health is to assure a competent and adequately trained public health workforce. A function that is also in line with WHO New European policy for health, Health 2020, where investing in capacity for public health, change, innovation and leadership constitute key actions principles. Therefore it is of crucial importance that educational needs of public health professionals are met with the adequate educational offerings targeting the deficit competencies.

The development of leadership skills is pivotal to delivering effective public health services. The rationale is that leadership skills are key to both the implementation of organisational changes necessary to improve the performance of healthcare systems, and to working successfully across traditional departmental, organisational, intersectoral and national boundaries to develop productive partnerships with a range of stakeholders, including service users and healthcare professionals, in order to develop impactful public health interventions. Professional development of public health leaders therefore requires the instruction which is competency-based to help them develop the abilities to address complex and evolving demands of health care systems in order to improve the health of served populations and understand unique cultural diversity and varied approaches to public health world wide. The development, acquisition and assessment of new skills should be supported by adequately tailored educational programs in order to improve health and tackle health inequalities, which are becoming a key priority for public health professionals and leaders.

Objectives of the course

The importance of understanding leadership as part of achieving Public Health goals is critical to reducing inequality and improving health. However the rapidly changing environment and huge variations in available health resources makes leadership in Public Health a complex and constantly evolving issue. It is important for those of us in public health, or entering public health roles for the first time, to have some understanding of leadership as it relates to our chosen field of work.

This Course aims to introduce you to and help you to develop leadership competencies through the following:

1. Examining the key debates around Leadership in Public Health in relationship to modernism, postmodernism, technological change and their implications for leaders within organisations.
2. Introducing key theoretical frameworks that underpin leadership learning, and enable the critical use of this knowledge and understanding by applying theory to actual practice within the context of Public Health.
3. Developing the ability to reflect on the Public Health leadership role and development needs of individuals, so that personal and professional development planning for a leadership role is built upon sound analysis of self in context.
4. Stimulating self-assessment of leadership competencies by the participants to help identify knowledge gaps and further training needs in leadership.

Theoretical Approaches

The course builds upon the Leadership for European Public Health Programme (Lephie) and is adapted to reflect the global public health leadership perspective through adequately tailored cases/problems. The proposed sessions in the course are built around the domains constituting public health leadership competency framework. *Systems Thinking, Political Leadership, Collaborative*

leadership: Building and Leading Interdisciplinary Teams, Leadership and Communication, Leading Change, Emotional Intelligence and Leadership in Team-based Organizations, Leadership, Organizational Learning and Development.

Hovever, it is proposed to include only several elements of the Framework such as:
Leadership theories,
Systems thinking
Collaborative leadership
Global Leadership values
Political Leadership
Leading change

Educational Approach

PBL is used as the instructional model in the development and implementation of the leadership curriculum. Students work on tasks in small groups attempting to solve real problems. They are viewed as active participants in learning, rather than passive recipients of knowledge and take responsibility for and plan their own learning as they construct or reconstruct their knowledge networks. Learning in PBL is also a collaborative process in which students have a common goal, share responsibilities, are mutually dependent on each other for their learning needs, and are able to reach agreement through open interaction. Knowledge transfer can be facilitated by learning in meaningful contexts, and problem-based learning nurtures the ability of learners to solve real-life problems whilst fostering communication and cooperation among students. PBL is also seen as highly impactful as an approach to LLL. Learning is contextual, collaborative, and constructive and the students can regulate their own learning. During small group discussions online, the participants collaborate to come up with possible explanations for the problem. Learners are required to use skills from different competency domains in order to solve any given problem. Understanding, in this context, develops knowledge of domains in a way that can be used frequently to assist in further problem solving.

Interactive lectures, tutorial group meetings and other collaborative session are offered to participants at a distance via a virtual learning environment such as Blackboard or Moodle, via which course material can be directly downloaded from the intranet (internal internet network). The combination of BL and PBL enables the participants to explore the main leadership theories in the context of public health by including a range of activities for self-development and assessment, face to face contact, e-learning, project work, problem solving and self-directed learning, supervised by international content experts as tutors.

Required Reading:

1. Czabanowska K, Smith T (2013) Module Book, Lephie Project Group
2. Czabanowska K, Rethmeier KA, Lueddeke G, Smith T, Malho A, Otok R, Stankunas M. Public Health in the 21st Century: "Working Differently Means Leading and Learning Differently" (A qualitative study based on interviews with European public health leaders). Eur J Public Health 2014; doi: 10.1093/eurpub/cku043.
3. Czabanowska K. Leadership in public health: reducing inequalities and improving health. Eurohealth incorporating Euro Observer 2014;20/3.
4. Czabanowska K, Malho A, Schröder-Bäck P, Popa D, Burazeri G. Do we develop public health leaders? Association between public health competencies and emotional intelligence: a cross-sectional study . BMC Medical Education 2014;14:83, doi: 10.1186/1472-6920-14-83.
5. Czabanowska K, Smith T, Könings KD, Sumskas L, Otok R, Bjegovic-Mikanovic V, Brand H. In search for Public Health Leadership: Competency Framework to support leadership curriculum - a consensus study. Eur J Public Health 2014;24/5:850-6, doi: 10.1093/eurpub/ckt158.
6. Gopee N, Galloway J. Leadership and Management in Healthcare. London: Sage Publications, 2007.

7. Maxwell JC. The 5 Levels of Leadership: Proven Steps to Maximize Your Potential. New York, Boston, Nashville: 2011.
8. Northouse PG. Leadership: theory and practice. 5th ed. USA: Sage Publications, 2010.
9. Rowitz L. Public Health Leadership. Sudsbury MA: Jones & Bartlett Publisher, 2003.
10. Schein EH. Organizational Culture and Leadership. San Francisco, CA: Jossey Bass Wiley, 2004.
11. Yukl G. Leadership in Organizations (6th ed.). Saddle River, NJ: Prentice Hall, 2005.

Title:	**N 3.7 PUBLIC HEALTH ETHICS**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Author	Aleksandra Jovic-Vranes
Address for correspondence	Dr. Aleksandra Jovic-Vranes Faculty of Medicine, University of Belgrade Centre-School of Public Health and Health Management Institute of Social Medicine Dr Subotica 15, 11000 Belgrade, Serbia E-mail: aljvranes@yahoo.co.uk
Key words	Ethics, Public health ethics, Public Health Code of Ethics
Topics	This module will introduce basic concept of public health ethics; • principles and values that support an ethical approach to public health practice and provide examples of some of the complex areas which those practicing, analyzing and planning the health of populations have to navigate; • the code of ethics which is the first explicit statement of ethical principles inherent to public health; and • key principles of the ethical practice of public health.
Learning objectives	After completing this module students should: • distinguish public health ethics from medical ethics • understand public health code of ethics • use principles of the ethical practice of public health • recognize an public health ethical issues in everyday practice
Teaching methods	Teaching methods include presentations and discussions, working groups, case studies, problem solving sessions, and round table discussion.
Who should apply	Those who pursue career in public health, law or policy development, research or advocacy; entrance requirements are to be determined by the institution offering the modules
Career opportunities	Teaching and/or research careers in academic environments; positions in the health care sector, and Non-Governmental Organizations; free lance consulting
Assessment of students	Written report on analysis of a given public health ethics problem
COMMENTS on the module by lecturers and students	**???**

Public health ethics

Ethics, as moral philosophy, is a branch of philosophy that involves systematizing, defending and recommending concepts of right and wrong conduct.

In general, ethics is concerned with the norms of "ought" and "ought not" in respect to values and behaviors between persons. Our ethical decisions involve reasoning, feelings, and emotions. When we take ethical decisions, we take into account not only what is important, but also how our choice will affect the lives those around us (Richard, Elder 2006; Bulger et al.1995).

There is no standard way of organizing the ethics of clinical practice, public health and biomedical science. Although these distinctive concerns are often captured under the umbrella term of bioethics, sometimes bioethics is presented as the equivalent of medical ethics or in contrast to public health or population-level bioethics. Biomedical ethics has often stressed the importance of individual interests of patients, notably the right to autonomy, privacy, and liberty. Ethicists, however, at least until recently, have given insufficient attention to the equally strong values of partnership, citizenship, and community. As members of a society in which we all share a common bond, we also have an obligation to protect and defend the community against threats to health, safety, and security. There remains much work to do in public health ethics (Gostin 2002).

What are Public Health Ethics?

Public health ethics may be defined as the principles and values that help guide actions designed to promote health and prevent injury and disease in the population. It involves a systematic process to clarify, prioritize and justify possible courses of public health action based on ethical principles, values and beliefs of stakeholders, and scientific and other information.

Public health ethics can be subdivided into a field of study and a field of practice. As a field of study, public health ethics seeks to understand and clarify principles and values which guide public health actions. Principles and values provide a framework for decision making and a means of justifying decisions.

As a field of practice, public health ethics is the application of relevant principles and values to public health decision making. In applying an ethics framework, public health ethics inquiry carries out three core functions, 1) identifying and clarifying the ethical dilemma posed, 2) analyzing it in terms of alternative courses of action and their consequences, and 3) resolving the dilemma by deciding which course of action best incorporates and balances the guiding principles and values (Stanford Encyclopedia of Philosophy 2015; Childress et al. 2002).

Public health has four characteristics that provide much of the subject matter for public health ethics: (1) it is a public or collective good; (2) its promotion involves a particular focus on prevention; (3) its promotion often entails government action; and (4) it involves an intrinsic outcome-orientation (Childress et al. 2002).

Public health ethics examines the principles and values that support an ethical approach to public health practice and provides examples of some of the complex areas which those practicing, analyzing and planning the health of populations have to navigate. Some professionals have thought about public health ethics in three overlapping fields: professional ethics (the values that help public health professionals to act in virtuous ways); applied ethics (the values that help to

illuminate hard problems in public health policy and practice); and advocacy ethics (the overarching value of population health and social justice).
Professional ethics are concerned with the ethical dimensions of professionalism and the moral trust that society bestows on public health professionals to act for the common welfare. This form of ethical discourse stresses the distinct history and traditions of the profession, seeking to create a culture of professionalism among public health students and practitioners. It instills in professionals a sense of public duty and trust.

Applied public health ethics are concerned not so much with the character of professionals as with the ethical dimensions of the public health enterprise itself. Here, scholars study the philosophical knowledge and analytic reasoning necessary for careful thinking and decision making in creating and implementing public health policy. This kind of applied ethics is situation or case-oriented, seeking to understand morally appropriate decisions in concrete cases.

In addition to "professional" and "applied" ethics, it is possible to think of an "advocacy" ethic informed by the single overriding value of a healthy community. Under this rationale, public health authorities think they know what is ethically appropriate, and their function is to advocate for that social goal. This populist ethic serves the interests of populations, particularly the powerless and oppressed, and its methods are principally pragmatic and political. Public health professionals strive to convince the public and its representative political bodies that healthy populations, reduced inequalities, and social justice are the preferred societal responses (Gostin 2002; CDC 2014).

Public Health Code of Ethics
The code of ethics is the first explicit statement of ethical principles inherent to public health. This code states key principles of the ethical practice of public health. An accompanying statement lists the key values and beliefs inherent to a public health perspective upon which the Ethical Principles are based.

A code of ethics for public health clarifies the distinctive elements of public health and the ethical principles that follow from or respond to those distinct aspects. It makes clear to populations and communities the ideals of the public health institutions that serve them. A code of ethics thus serves as a goal to guide public health institutions and practitioners and as a standard to which they can be held accountable.

The code demonstrates public health's belief in the interconnectedness and interdependence of individuals and their communities. It supports the need for public participation in the formation of health policy and the development and implementation of interventions. The code emphasizes the role of public health in the pursuit of social justice. The code also mandates that public health agencies seek out information and share it with the communities. The code stresses the responsibility of public health agencies to respond quickly to the needs of communities and to make the best use of information and resources available to them. The code stresses the need to plan for and be respectful of diversity. It recognizes the importance of the physical environment to health. Finally, the code emphasizes the need to protect the confidentiality of sensitive information about individuals or communities, to ensure professional competence, and to work in collaboration (Thomas et al. 2002).

Principles of the Ethical Practice of Public Health
1. Public health should address principally the fundamental causes of disease and requirements for health, aiming to prevent adverse health outcomes.

2. Public health should achieve community health in a way that respects the rights of individuals in the community.
3. Public health policies, programs, and priorities should be developed and evaluated through processes that ensure an opportunity for input from community members.
4. Public health should advocate for, or work for the empowerment of, disenfranchised community members, ensuring that the basic resources and conditions necessary for health are accessible to all people in the community.
5. Public health should seek the information needed to implement effective policies and programs that protect and promote health.
6. Public health institutions should provide communities with the information they have that is needed for decisions on policies or programs and should obtain the community's consent for their implementation.
7. Public health institutions should act in a timely manner on the information they have within the resources and the mandate given to them by the public.
8. Public health programs and policies should incorporate a variety of approaches that anticipate and respect diverse values, beliefs, and cultures in the community.
9. Public health programs and policies should be implemented in a manner that most enhances the physical and social environment.
10. Public health institutions should protect the confidentiality of information that can bring harm to an individual or community if made public. Exceptions must be justified on the basis of the high likelihood of significant harm to the individual or others.
11. Public health institutions should ensure the professional competence of their employees.
12. Public health institutions and their employees should engage in collaborations and affiliations in ways that build the public's trust and the institution's effectiveness (Public Health Leadership Society 2002; APHA n.d.).

Case study:
(Blacksher, accessed 25 March 2015):

Forced Treatment for Multidrug-Resistant Tuberculosis
"SJ is a 33-year-old man with multidrug-resistant tuberculosis (MDR-TB). He is homeless, and has a pattern of missing many of his scheduled clinic visits. Upon starting a multi-drug regimen for his condition, SJ initially comes to his scheduled clinic visits, but after a few weeks begins missing them. The provider contacts the social work case manager, who arranges supervised drug administration (also known as "directly observed therapy"). Nevertheless, SJ often cannot be found and this approach is deemed to be failing."
Should SJ be forced into treatment against his will?

Discussion:
This is a case in which the health of the public is clearly and seriously threatened. Multidrug-resistant tuberculosis has the potential of causing substantial morbidity and mortality for the population, particularly in large urban areas. Thus the need for the individual patient to be treated for the good of the public is high.
Similarly, the patient himself stands to benefit from the treatment. Ordinarily, patients have the right to refuse potentially beneficial treatment, provided they are competent and make an informed decision to do so. The tension created in this case is that the patient's refusal to follow the medication regimen puts others at substantial risk of harm. Hence it may be justifiable to compromise his autonomy to protect the health of others.
In such cases, every effort should be exhausted to enlist the patient's cooperation with the medical regimen. Interventions such as directly observed therapy are often effective ways to achieve the

desired result without compromising the patient's autonomy. Failing this, it would be justifiable to seek court permission to confine and treat the patient against his will. In the legal process that ensues, considerations will include the magnitude of harm, the degree to which specific individuals are exposed to harm, and the probability of harm.

References:

APHA: Principles of the Ethical Practice of Public Health Version 2.2
Available from URL: http://www.ehow.com/about_7547811_code-american-public-health-association.html. [Jan 20 2015].
Blacksher E, Public Health Ethics Case study 2. Ethics in medicine, University of Washington School of Medicine; Available from URL: http://depts.washington.edu/bioethx/topics/public.html [March 25 2015].
Bulger ER, Bobby ME & Fineberg VH (eds) 1995, Society's Choices: Social and Ethical Decision Making in Biomedicine. Committee on the Social and Ethical Impacts of Developments in Biomedicine, Institute of Medicine, National Academy Press, Washington D.C.
Centers for Disease Control and Prevention 2014, Public health ethics, Available from URL: http://www.cdc.gov/od/science/integrity/phethics/. , [October 29 2014].
Childress JF, Faden RR, Gaare RD, Gostin OL, Kahn RJ, Bonnie NE et al. 2002, Public Health Ethics: Mapping the Terrain, The Journal of Law, Medicine & Ethics, vol.30, no.2, pp. 170–178.
Gostin OL 2002, Public Health Law and Ethics: A Reader ,University of California Press and Milbank Memorial Fund, Berkeley and New York.
Public Health Leadership Society 2002, Principles of the Ethical Practice of Public Health, Available from URL: http://phls.org/CMSuploads/Principles-of-the-Ethical-Practice-of-PH-Version-2.2-68496.pdf. [Jan 8 2015].
Richard P, Elder L. 2006, The Miniature Guide to Understanding the Foundations of Ethical Reasoning. United States: Foundation for Critical Thinking Free Press.
Stanford Encyclopedia of Philosophy. Public health Ethics 2015, *Available* from URL: http://plato.stanford.edu/entries/publichealth-ethics/ [Feb 19 2015].
Thomas CJ, Sage M, Dillenberg J, Guillory VJ. 2002, Code of Ethics for Public Health, Am J Public Health, vol.92, no.7, pp. 1057–1059.

Title:	**N 3.8 THE GLOBAL PUBLIC HEALTH WORKFORCE**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Milena Santric Milicevic (MSM), Vesna Bjegovic-Mikanovic (VBM), Muhammad Wasiful Alam (MWA)
Address for correspondence	Dr. Milena Santric Milicevic[1], Dr. Vesna Bjegovic-Mikanovic[1], Dr. Muhammad Wasiful Alam[2] 1) University of Belgrade, Medical Faculty, Centre-School of Public Health and Health Management Institute of Social Medicine 15 Dr Subotica Street, 11000 Belgrade, Serbia E-mail: msantric@med.bg.ac.rs and bjegov@med.bg.ac.rs 2) Director Public Health and Safety Department Dubai Health Authority, Head Quarter P.O. Box: 4545, Dubai, United Arab Emirates E-mail: malam@dha.gov.ae
Key words	Public health workforce, needs assessment, planning, employment
Topics	The progress of health sciences and technological innovations including modern medicine and health care technologies has increased our expectations for quality of life and health care. That has influenced the public health vision, the scope of public health interventions, and the composition of public health workforce. The outline the text includes description of the current situation of the public health workforce globally; future needs assessment; public health workforce challenges and mitigation and opportunities- jobs globally. The text will also focus on the importance of Occupational Health in Public Health especially in context to fast developing countries like the Middle East, as well as to the description of the health workforce planning approaches and tools available for planners and decision-makers for health.
Learning objectives	• To improve students capacity to rehash definitions and facts about public health workforce; • To upgrade /develop skills needed for undertaking a situation analysis of the public health workforce; • To upgrade /develop skills for needs assessment; • To advance strategic thinking for public health workforce development in a specific context; • To understand the concepts and the rationale of workforce planning approaches and tools;
Teaching methods	Lectures, interactive small group discussions, case studies and field practice
Who should apply	Those who pursue an international career in public health management, policy development, research or advocacy; entrance requirements are to be determined by the institution offering the modules
Career opportunities	Teaching and/or research careers in academic environments; Policy administration of public institutions, non-governmental organizations and in consulting companies.
Assessment of students	Test and case problem presentations.
COMMENTS on the module by lecturers and students	**???**

The Global Public Health Workforce

Current situation of the public health workforce and needs assessment (MSM & VBM)

All health workers in a country, including public health professionals are human resources that are required to achieve the predefined objectives of government' policies for health of the population throughout the combined efforts and effects of the health and other sectors. Looking back to the last decade of the 20th century, the Centers for Disease Prevention and Control in Atlanta has identified the ten great public health achievements (CDC 2011), signifying the effectiveness and efficiency of the evidence-based multisectoral approach, and efforts.

The progress of health sciences and technological innovations including modern medicine, health care technologies, and governance has increased our expectations for quality of life and health care. That has influenced the public health vision, the scope of public health interventions, and the composition of public health workforce. The broader public health workforce can be seen as the combination of public health specialists (or professionals), people who are indirectly involved in public health activities through their work and people who should be aware of public health implications in their professional life (Whitfield 2004).

Contemporary public health faces many challenges such as risk behavior, natural disasters, wars, bioterrorism, chronic diseases, unequal distribution of resources, poor access, and quality of health care and so forth. In order to address them, current public health workforce has to strengthen its capacity and resources, and to make powerful partnerships, innovative methods, and advanced technologies for well-built public health activism.

A comprehensive global public health situation analysis that includes at least the assessment of the global health situation, external and internal context of the global public health workforce, stakeholder analysis and economic assessment of public health services and products will provide insight in particular needs of future and effective public health workforce.

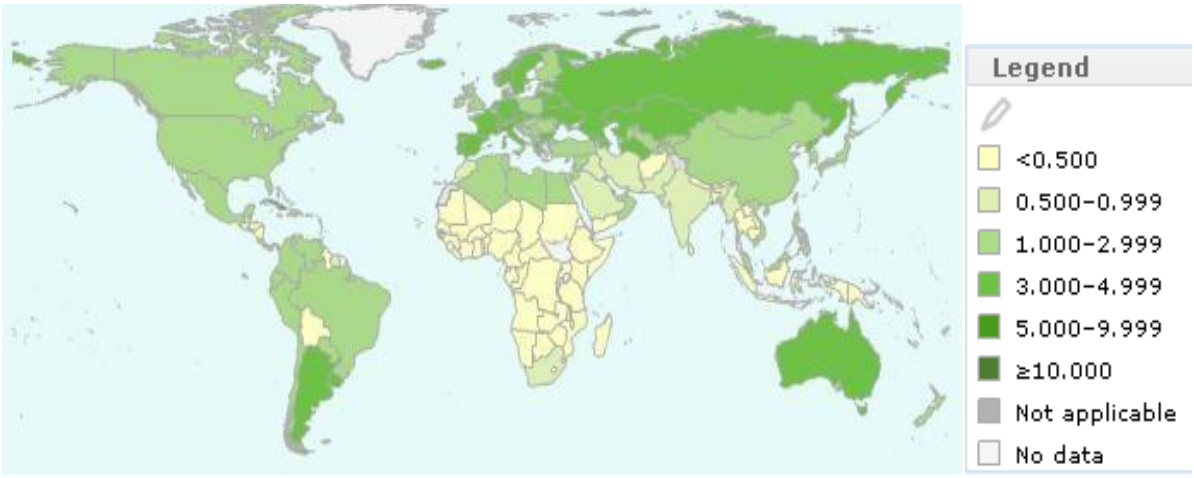
Based on the mixed methods of the workforce data in the WHO Global Health Observatory in 36 countries and horizon-scanning of the immediate future, Campbell J and associates (2013) have identified that more health workers will be required than previously thought, implying the importance of rethinking the usefulness of traditional models of health workers' education, deployment and management.

According to the WHO (WHO) estimates (WHO 2013), 4.3 million health workers are needed globally majority in African countries (figure 1 and 2).

Out of 4.3 million health workers 2.4 million are doctors, nurses, and midwives and among the remaining 1.9 million large share is of public health workers (WHO 2013). Bailey and Dal Poz (2010) emphasized that many of the health professionals in shortage are those who perform essential public health functions and support and manage health programmes and services. Furthermore, they have identified the deficiency of critical skills in public health, health policy, and management across both clinicians and managers. However, that situation is not new. At the end of the 20th century, ―many senior public health positions, especially those at the leadership level may be filled by those with no training in public health. Public health agencies may not have a majority of their staff with any public health training at all‖ (Lloyd 2000).

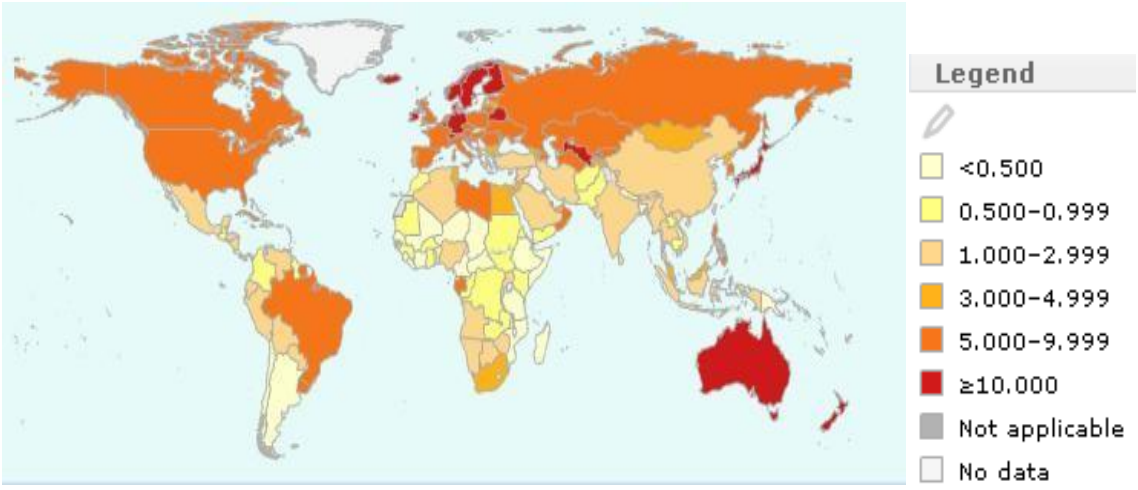
It is worth to emphasize that ―everyone can play a role in promoting health and wellbeing‖ but public health professionals are skilled and competent to achieve necessary changes for protecting and improving health and wellbeing by strong leadership, motivating on action, advocacy and strategic communication as well as by offering intelligence and applying information and evidence in prioritization, planning and collaboration (WHO/Europe).

Figure 1: Density of physicians (total number per 1 000 population), latest available data (2014).



Source: WHO (2013). The 2013 update, Global Health Workforce Statistics, Geneva: WHO, (http://www.who.int/hrh/statistics/hwfstats/).

Figure 2: Density of nursing and midwifery personnel (total number per 1000 population), latest available data (2014).



Source: WHO (2013). The 2013 update, Global Health Workforce Statistics, Geneva: WHO, (http://www.who.int/hrh/statistics/hwfstats/).

Global statistics on current professional public health workers offer a limited picture of their density, as a result of diversity of health worker roles, information sources and quality of the original data: „Some figures may be underestimated or overestimated when it is not possible to distinguish whether the data include health workers in the private sector, double counts of health workers holding two or more jobs at different locations, workers who are unpaid or unregulated but performing health care tasks, or people with education in health studies working outside the health care sector (e.g. at a research or teaching institution) or who are not currently engaged in the national health labour market (e.g. unemployed, migrated, retired or withdrawn from the labor force for personal reasons)— (WHO 2013). For instance, the density of environmental and public health workers globally is in the range from 1.3 (at Cook Islands 2009) to 0.001 (Peru 2012) per 1000 population (Table 1). The density of community and traditional health workers ranges from 2.2 (Maldivi in 2010) to 0.001 (Yemen in 2010)

per 1000 population, whilst total number of health management & support workers per 1000 population is the highest in Kuwait 2009 (4.1) and the lowest in Cameroon 2009 (0.001).

There is a conviction (Bjegovic-Mikanovic at al. 2013) that many European countries have insufficient institutional and professional capacity for public health compared to the United States of America (USA) and other industrialized countries. On the other hand, the USA Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions estimated that in 2005 ―only 20% of the nation's 400,000-500,000 public health professionals have the education and training needed to do their job effectively‖ (Kennedy and Baker 2005). It is reasonable to critically approach to policy of overproduction of public health graduates (in relation to the population) whilst the current public health professionals are not competent to practice in the field (Kennedy and Baker 2005). Furthermore, it is essential to balance the demand with the supply of public health professionals, meaning that employers' requirements are the key issue, in particular when they are scientifically based on the population needs. Otherwise, public health professional-excess will yield unemployment and low salaries and will deteriorate the image of these scientific workers. The need for detailed public health workforce planning, including professionals in public health is apparent and should not be ignored for the sake of population health and wellbeing.

Table 1: Density of environmental and public health workers, community and traditional health workers density and health management & support workers (per 1000 population)[1]

Country data, year	Environmental and public health workers[2]	Community and traditional health workers[3]	Health management & support workers
Bangladesh 2011	0.037	0.334	
Belize 2009	0.206	0.543	
Bhutan 2012		0.854	2.408
Bolivia 2011	0.008		0.919
Burkina Faso 2010		0.129	0.004
Cabo Verde 2009			0.004
Cameroon 2009			0.001
Central African Republic 2009	0.053	0.401	0.009
China 2010		0.806	0.701
Cook Islands 2009	1.278	0.5	1
Costa Rica 2013			0.131
Cuba 2010	0.246		0.189
Ecuador 2009			1.419
Ethiopia 2009	0.015	0.364	
Fiji 2009	0.135		0.302
Guinea-Bissau 2009	0.004		

[1] Notes extracted from WHO Indicator and Measurement Registry version 1.7.0: The classification of health workers is based on criteria for vocational education and training, regulation of health occupations, and the activities and tasks involved in carrying out a job, i.e. a framework for categorizing key workforce variables according to shared characteristics.

[2] Environment and public health workers refer to environmental and public health officers, environmental and public health technicians, sanitarians, hygienists and related occupations.

[3] Community health workers refer to community health officers, community health-education workers, community health aides, family health workers and associated occupations.

Guyana 2010		0.326	
Iceland 2011	0.166		
Indonesia 2012	0.181		0.513
Kuwait 2009			4.133
Lao People's Democratic Republic 2012	0.132		0.672
Malawi 2009	0.031		
Malaysia 2010	0.117	0.444	
Maldives 2010		2.17	
Mali 2010	0.03	0.007	0.256
Mauritania 2009	0.057	0.284	0.193
Mozambique 2012			0.014
Myanmar 2012	0.052	0.21	
Nauru 2009	0.714	0.214	1.071
Pakistan 2010		0.066	
Peru 2012	0.001		3.496
Rwanda 2010	0.012		0.103
Saudi Arabia 2009			2.647
Sierra Leone 2010	0.026	0.022	
South Africa 2013	0.064		
Swaziland 2009	0.114		0.25
Thailand 2010	0.566		
The former Yugoslav republic of Macedonia 2009			2.472
Timor-Leste 2011	0.079		0.537
Tonga 2009	0.359		0.485
Yemen 2010	0.024	0.001	0.432
Zambia 2010	0.089		0.036
Zimbabwe 2009	0.088		0.5

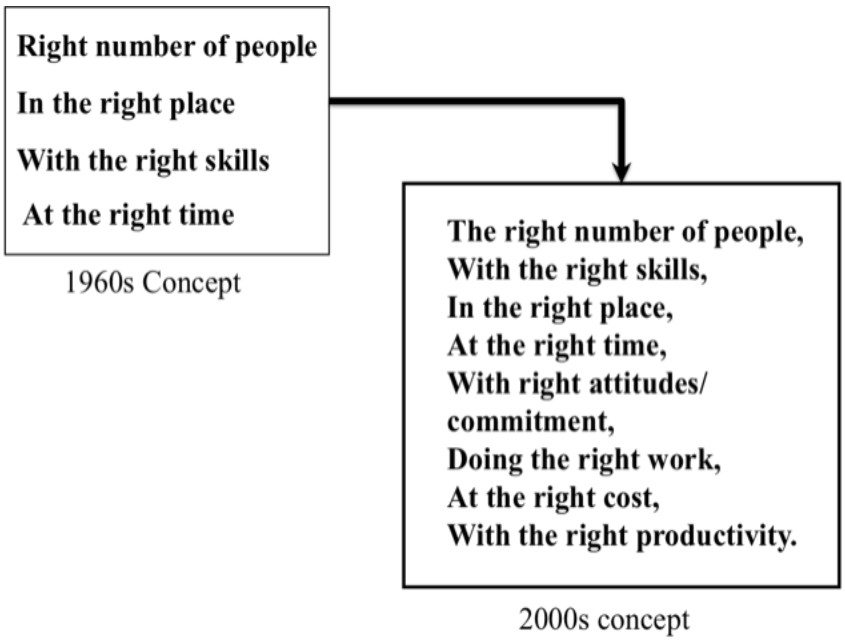
Source: Global Health Observatory Data Repository

Estimating public health professionals needs and methods and tools for planning (MSM & VBM)

Estimating requirements for public health professionals is complex process and is not single-person project. It requires a diversity of knowledge, skills and adequate technical, technological and information support as well as financials. If led by clear vision of the authorities regarding public health outcomes, and good quality of up-to date information it may yield estimates of high probability. Planning may comprise many relevant assumptions; therefore, it requires time and very informed teammates. Therefore, to be real in practice public health workforce planning needs the buy-in from the top level and should be undertaken by the governmental task force.

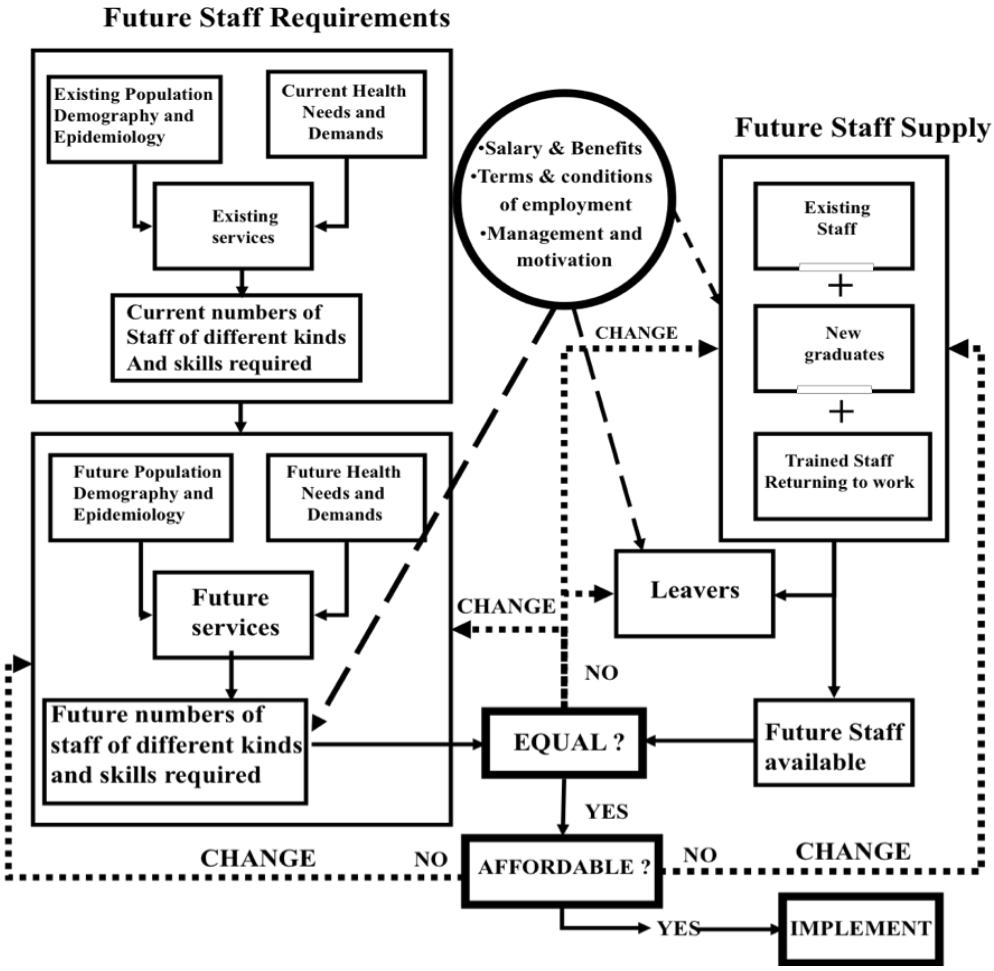
The concept of the contemporary workforce planning purpose and the modern framework for workforce planning process are illustrated in the figures 3 and 4.

Figure 3: The changing concept of the workforce planning



Source: Hornby, Santric Milicevic. 2011

Figure 4: The modern framework for workforce planning process



Source: Hornby, Santric Milicevic 2011

The baseline of workforce planning and projecting comprises the clear situation analysis and assessment. That means finding the relevant answers (by means of variety of research and analyses, data collection, collation and validation) on the following questions: Who are public health professionals, what is their skill mix, competencies and their purpose – scope of practice? What is the stock of the public health professionals and what are the training capacities in the selected territory (region/country)? How valid are data that quantify their entrance in and exit from the labor market and workplaces? What is the performance of the public health professionals in relation to their competences and in relation to the reality demand? Are there any professional, occupational standards and norms, or the like proposals and how well they correspond to the reality? What are the correlations between the stock number, skill-mix, performance, and labor costs with the labor and health care legislation, demographic and epidemiology profile of the population, terms of working conditions including technologies and wages, management and motivation, and other governance politics and policies? Those and many other questions purpose is to describe and explain where public health professionals are now in the public health practice and how well they are doing.

Further step is to clarify the objectives / expected outputs related to the vision, goals and mission of the effective and efficient public health professionals in the future dynamics. That means also the identification how far we are from the desirable future. Then, the decision should be made how to approach the objectives and expected outputs at the best and the most realistic way. Simplistic division of methods for approaching them is the supply-side planning of the public health professional, the

demand-side planning (or requirements-side) and on both sides planning. A balanced planning approaches with likely combine some of the techniques for supply-side planning method (for instance the numerous clauses or the cohort estimation) and some of the techniques on the demand-side planning method (for example, the workforce-to-population ratio, the health needs based requirements, the service demands, the service targets) (Hall 2000).

Those planning phases comprise creation of the likely scenarios, related economics, and consequences with regard to the desired objectives / expected outputs. Laying scenarios usually incorporate assumptions at least about macro and microeconomic progression / limitations, advancements in technology accessibility and applicability, epidemiological, demographical, and environmental developments and econometrics analyses. In this part of the planning process, the task force should address and resolve possible ethical dilemmas, as well.

The computation of the scenarios (with links or without to econometrics analyses) is the technical side of the planning, than. For that, today at our disposal are both simple and sophisticated tools and software (WHO 2010). Let us name some already applied such as the WHO Western Pacific Regional Office, Regional Training Centre health workforce planning model (Dewdney 2001), the United Nations Development Programme's integrated health mode (UN Millennium Project 2007), Western Pacific Workforce Projection Tool (WHO 2008) and the iHRIS Plan software package (Capacity Project 2008), the Workload Indicators of Staffing Needs (WHO 1998), etc.

Needs assessed so far (MSM & VBM)

Many countries, in particular those with developing economies, has being undertaking health sector structural reforms in order to meet contemporary and future challenges. A number of them were disorganized and vague, therefore resulting in failure (Laaser and Nasim 2006). Since „*little is known about the size, structure, performance, and training needs of the public health workforce... little is known about the real contribution of this workforce to the achievement of esential public health functions*―(Baily and Dal Poz 2010). Recently, Bjegovic-Mikanovic et al. (2014) have provided a rough estimate of needs:

"The public health services, comprising qualified and certified public health professionals, have to address the four main deficits of: information[4]*, prevention*[5]*, social equity*[6] *and a weak regulatory framework*[7]*...For a projected population of 325 million in 2010, a total of 715,000 professionals working in the area of public health are required corresponding to 220 health professionals per100,000 population. Recalculated for the population of the 27 EU Member States of 501 million (January 2010), this results in a workforce of 1.1 million public health workers using the same ratio. Given an average attrition rate of around 2% per year, up to 22,000 professionals would have to finish some education in public health each year in order to fulfill these needs… Almost three times the present educational capacity is needed to provide these numbers."*

As of the beginning of the 20th Century, health economists have being placing a definite responsibility upon public health authorities for efficient administration of allocated funds, thus implying the

[4] „*The information deficit:* Public health professionals can provide health surveillance by promoting the development of indicator-based comprehensive health monitoring systems, published as reports to the general public‖.

[5] ―*The prevention deficit:* Public health professionals can promote healthy behaviour and lifestyles, and reducing risk factors; for example, smoking, alcohol and drug use, sedentary behaviour, unhealthy diet and overeating are examples of poor lifestyle choices that directly affect health‖.

[6] „*The social deficit:* Public health professionals can work to help reduce inequity in health. Two objectives have been set for interventions: (1) mortality and morbidity should decline particularly for those causes of death and age groups in which a defi ned population is lagging behind other populations (*level objective*); and (2) socioeconomic differences in mortality and morbidity should shrink, which requires reductions faster than average among less fortunate groups (*distributionobjective*) (Valkonen, Sihvonen & Lahelma, 1997) ‖.

[7] „*The regulatory deficit:* Public health professionals can help to coordinate care among many different players. The decision-making in health care is organized by a regulatory framework, which in most countries is characterized by a continuous shift from the old vertical model to a more horizontal one, with a moderating instead of a directive role for governmental agencies. A number of decision-making centres, acting more or less in parallel, have to be coordinated, but cannot be directed (Laaser, 2001) ‖.

competency requirements for personnel that undertake public health procedures of proven, scientific methods (Sydenstricker 1936). What has been observed then was the global need of modern tools and competencies in public health as well as commitment, networking, collaboration among public health workforce. The new millennium commenced with the general agreement was that time has arrived for credentialing process of for public health workforce, for enhancement of public health practitioners status in the community and for establishing public health competencies (Lloyd 2000). Precisely, the key needs were recognition of the importance of the public health practice and creation of skilled professionals for community public health work. Increasing diversity of public health graduates, including minorities, was seen as positive feature that will help the discipline better alignment with the array of local needs (Kennedy and Baker 2005; Frenk et al., 2010). Still the analysis of the job market for public health workers is important step for achieving the desired impact on population health and wellbeing.

The profile of public health professionals in a region / country and public heath workforce future largely depends on the vision of the public health services and capacities, whether is shared and adopted among key partners, how well is legitimized their mission and resourcefulness, and how prominent supportive arrangements have public health professionals in the environment.

Experts' efforts to rationalize the complex role, services and performance of public health, as well as to contribute formulation of compelling evidences of its impact to society' health and wellbeing, has resulted in defining the essential public health functions/operations (Table 2). Realisation of essention public health functions will require the fullest possible commintment of health stakeholders, authority dedication and wise leadership by the public health professionals.

Table 2: Comparison of select regional public health functions / operations

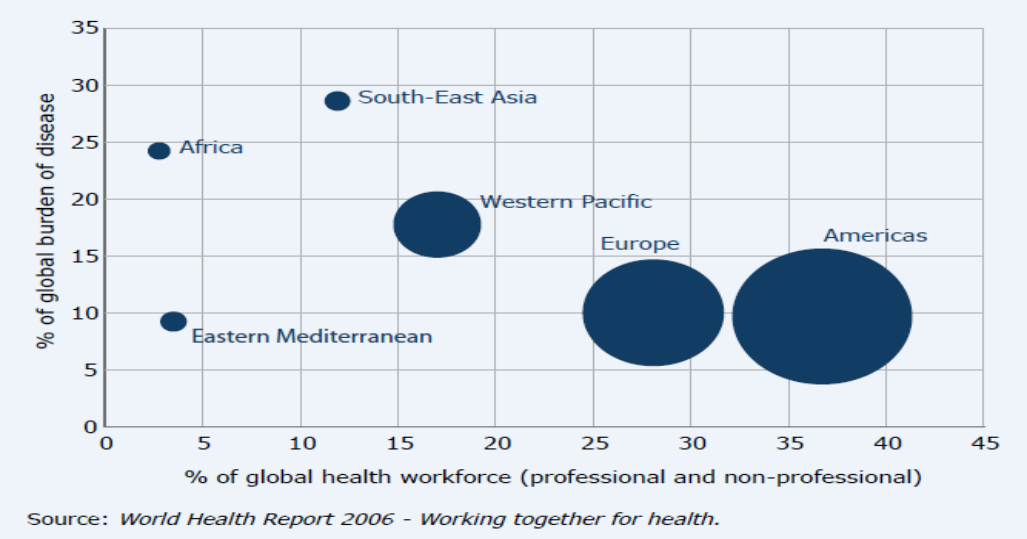
WHO Europe's Essential Public Health Operations (EPHO)	Western Pacific Essential Public Health Functions (EPHF)	CDC's Essential Public Health Services (EPHS)	PAHO's Essential Public Health Functions (EPHF)
1. Surveillance of diseases and assessment of the population's health	1. Health situation monitoring and analysis	1. Monitor health status to identify community health problems	1. Monitoring, evaluation and analysis of health status
2. Identification of priority health problems and health hazards in the community	2. Epidemiological surveillance/ disease prevention and control	2. Diagnose and investigate health problems and health hazards in the community	2. Public health surveillance, research and control of risks and threats to public health
3. Preparedness and planning for public health emergencies	n.a.	n.a.	11. Decreasing emergencies and disasters in health including prevention, mitigation, preparedness, response and rehabilitation
4. Health protection operations (environmental, occupational, food safety and others)	5. Regulation and enforcement to protect public health	6. Enforce laws and regulations that protect health and ensure safety	n.a.
5. Disease prevention	As part of function 2	n.a.	As part of function 11
6. Health promotion	7. Health promotion, social participation and empowerment	4. Mobilize community partnerships to identify and solve health problems 5. Develop policies and plans that support individual and community health efforts	3. Health promotion
7. Assuring a competent public health and personal health care workforce	6. Human resources development and planning i n public health	8. Assure a competent public and personal health care workforce	8. Human resource development and training in public health
8. Core governance, financing and quality assurance for public health	8. Ensuring the quality of personal and population-based health services 3. Development of policies and planning in public health 4. Strategic management of health systems and services for population health gain	9. Evaluate effectiveness, accessibility and quality of personal and population-based health services 7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable	9. Quality assurance in personal and population-based health services 5. Development of policies and institutional capacity for planning and managing public health 6. Strengthening of institutional capacity for planning and management in public health 7. Evaluation and promotion of equitable access to necessary health services
9. Core communication for public health	n.a.	3. Inform, educate and empower people about health issues	4. Social participation in health
10. Health-related research	9. Research, development and implementation of innovative public health solutions	10. Research for new insights and innovative solutions to health problems	10. Research on public health

Source: Bjegovic Mikanovic at al. 2014.

Public health workforce challenges: The case of the Middle East (MWA)

Scaling up educational programs to produce more doctors, nurses, midwives and other health professionals is clearly urgent and essential. However, increasing the number of graduates will not be enough. The shortage of professional health workers is compounded by the fact that their skills, competencies, clinical experience, and expectations are often poorly suited to the health needs of much of the population they serve. The figure 5 below depicts that in Africa the % of global burden of disease is 25% whereas it has only 4% of the global health workforce. Similarly, in the Middle East if we compare the distribution of health workforce with Americas and Europe we see a huge inequality in the distribution of global health workforce in spite of an equal percentage of global burden of disease.

Figure 5: Distribution of the health workforce relative to the global burden of disease



Source: *World Health Report 2006 - Working together for health.*

In the Middle East in particular, the educational methods are static and fragmented and shortages of teaching staff severe. Post-graduate education is inadequate or non-existent in some of the Arab countries. Regulatory mechanisms designed to ensure the quality of education, such as accreditation, are rarely standardised, and are often weak and inconsistently applied, especially in the case of private sector institutions. The mix of skills they have acquired during their professional education is often not well oriented to their eventual workplace. The scientific content of their education may be poorly matched to the epidemiology of the communities in which they work.

As there is considerable variation in the disease burden across national and intra-national income levels, reforms will need to address increased retention and better distribution of the public health workforce across underserved areas through innovative student selection, recruitment, and preparation for public health professional education. At the institutional level, reforms will need to address: the production capacity of educational institutions, including the need for teaching staff; adequate equipment and teaching methodologies; enabling learning environments; curricula that address the realities of local epidemiology and service delivery; and the need to promote a culture of social accountability among public health professionals. Appropriate regulation, including certification and licensing of graduates and accreditation systems to ensure the quality of educational programs, will need to match and support such changes.

Some of the items of the 59th World Health Assembly (WHO 2006), which urges Member States to affirm their commitment to the training of more health workers, are especially relevant
:

> (1) giving consideration to the establishment of mechanisms to mitigate the adverse impact on developing countries of the loss of health personnel through migration, including means for

the receiving developed countries to support the strengthening of health systems, in particular human resources development, in the countries of origin;
(2) promoting training in accredited institutions of a full spectrum of quality professionals, and also community health workers, public health workers and paraprofessionals;
(4) promoting the concept of training partnerships between schools in industrialized and developing countries involving exchanges of faculty and students;
(6) using innovative approaches to teaching in developed and developing countries with state-of-the-art teaching materials and continuing education through the innovative use of information and communications technology.

Migration and opportunities - jobs globally (MWA)
Public Health educational institutions need to increase capacity and reform recruitment, teaching methods and curricula in order to improve the quality and the social accountability of graduates. The international community has an important role to play by partnering to support country-led efforts.
The following human resources for health themes are common to most countries:

There are shortages of some categories of health workers. The health workforce is ageing, and replacement is a challenge. WHO analyzed the workforce implications of new global health targets in the context of the Millennium Development Goals, universal health coverage, and the post-2015 agenda to highlight the scope of future challenges. It is estimated a global deficit of about 12.9 million skilled health professionals (midwives, nurses and physicians) by 2035. While this estimate was produced for illustrative purposes and should not be seen as a planning target, it implies the need to rethink the traditional models of education, deployment, and remuneration of the health workforce. If the country's health goal is to reduce the burden of communicable and non-communicable diseases and minimize injuries and accidents then emphasis has to be given in recruiting Public Health and Preventive Medicine professionals and not building more and more hospitals and trauma centers. The burden of disease may never be significantly decreased by curative health care professionals like clinicians and pathologists and radiologist. Nevertheless, it may be reduced by public health and preventive medicine trained professional.

To an extent, The Kampala declaration and agenda for global action (GHWA 2008), and the WHO Global Code of Practice on the International Recruitment of Health Personnel (WHO 2013) offer existing global benchmarks. The accountability report from the meeting of the G8 (2013), provides evidence that some countries are monitoring their recommended actions. However, the international community has yet to fully grasp the inherent value of these documents in fostering accountability. The 2013 progress report on the Global Code of Practice (Amani et al. 2013), for example, is a sober reminder that existing health workforce recommendations are not being implemented at scale in all WHO regions. Healthcare depends on Human Resources more than any other sector. Globally 35 million persons are employed in the health sector (ILO 2015).

Despite changes in the way care is provided, people are always central in the provision of care whether it is preventive, promotional, diagnostic, curative, or rehabilitative. Therefore health services mission, strategies, initiatives are useless unless there is appropriate policies and procedures for managing health labor market. Most notably, Qatar, UAE and Kuwait - the largest per capita recipients in the world of labor immigration. Expatriates in the labor force is estimated at 83% for Kuwait and 80% for the UAE and averaging 35.7% of total population for the member countries of the Gulf Cooperation Council (GCC) overall. Over the past few decades, UAE has become a popular Westerner's destination for temporary labor migrants seeking employment opportunities and higher standards of living. However, most are nontechnical, unprofessional labor force. Public health professionals, physicians, nurses, radiologists, laboratory personnel and paramedics account smaller portion of the total immigrants.

Some of the challenges of Arab World are effects of war and conflict: population movements, institutional paralysis, and discontinuity of care; furthermore uncontrolled migration to cities: pressure on social services, health and economics, and the paucity of premier public health educational and

training institutes in the Middle East. Mismatch and imbalances exist between staff management, practices, and national policy objectives (e.g. prioritizing hiring and training of clinical specialists where preventive care would be the most effective policy).

Occupational Health in Public Health (MWA)

The availability of Occupational Health (OH) services in the Middle East has numerous challenges along with its high demand. Much of this is due to the scarcity of OH Physicians and personnel. The question is: What is the need of occupational health bodies for public health knowledge? What is the future of OH globally and what is it in the Arab World?

The ILO Convention No. 161(1985) defines ―Occupational Health Services‖ as essentially preventive functions, responsible for establishing and maintaining a safe and healthy working environment which will facilitate optimal physical and mental health. It is multidisciplinary and multi-sectoral and it warrants workers participation (table 3. The Harvard University study (Baicker et al. 2010) found that for every $1.00 spent on workplace prevention and wellness programmes medical costs fall by $3.27 and absenteeism costs fall by $2.73. Occupational Health services are unevenly distributed in the world (WHO 2006), even in the European Region, variation of coverage is wide (between 5% and 90% of the required workforce). Only a few countries (United States, Canada, Japan, and Australia) show about 50% coverage, developing regions 5 to 10% at best. WHO (1994) warns against the combined effect of workers lifestyles and their occupational safety.

Occupational health is an essential part of industrial and economic development. ILO convention161 states: ―all member states to provide OH services & all workers shall be informed of health hazards involved in their work‖.

The global plan of action on workers' health 2008-2017 (WHO 2013) urges member states to ―work towards full coverage of all workers, including small- and medium-sized enterprises, agriculture, and migrant and contractual workers, with essential interventions and basic occupational health services for primary prevention of occupational and work-related diseases and injuries‖. According to ILO ―The prime responsibility for health and safety of workers rests with the employers‖. The developing and newly industrialized countries make up for approximately 80% of the world's workers hence the need of Occupational Health in a Public Health setting.

Table 3: Key functions of occupational health in a public health setting vs. in a department for occupational health services

Key functions	Occupational health in a public health setting	Occupational health in the ministerial Labour Department
Expertise	Doctors, epidemiologists, nurses, Industrial Hygienist and research scientists	Managers, regulators, engineers and safety officers
Implementing laws and regulations	Advisory (NIOSH like)	Authority (OSHA like)
Regulation/enforcement of laws	No	Yes
Health and safety surveillance/Risk assessment	Yes	Yes
Injuries notifications	Supplements	Yes
Disease notification	Yes	Supplements
Injury incident investigation	Supplements	Responsible
Pre-employment medical	Yes	No
Advisory role: Education/training	Much	less
Periodic medical exam and Exit medical exam	Yes	No
Injury management and return to work	Yes	No
OHS research	Yes	No

Exercises:

Exercise 1: Public Health Workforce strategic Thinking

Instruction to facilitator:
Select a region; Prepare short description of public health situation of the selected region, including some data, indicators, links to databases and relevant documents and reports. Divide participants in four small groups. Introduce participants with the tasks and expected output of the exercise (5 min).

Instruction for small group task (40 min):

- The first group: Analyse the strengths of public health workforce capacity in a defined (selected) region and rank them according to the relevance/importance, i.e. from the 1 (the most) to 10 (the least)
- The second group: Analyse the weaknesses of public health workforce capacity in a defined (selected) region and rank them according to the relevance/importance, i.e. from the 1 (the most) to 10 (the least)
- The third group: Analyse opportunities from the external context for public health workforce in a defined (selected) region and rank them according to the relevance/importance, i.e. from the 1 (the most) to 10 (the least)
- The fourth group: Analyse threats from the external context for public health workforce in a defined (selected) region and rank them according to the relevance/importance, i.e. from the 1 (the most) to 10 (the least)

Instruction for whole group discussion (45 min):
Answer the following four questions and facilitate the discussion in order to define the final output of a strategy:

- What strategy will maximize the strengths of public health workforce capacity in a defined (selected) region and maximize opportunities of the external context?
- What strategy will minimize the weaknesses of public health workforce capacity in a defined (selected) region and maximize opportunities of the external context?
- What strategy will maximize the strengths of public health workforce capacity in a defined (selected) region and minimize threats of the external context?
- What strategy will minimize the weaknesses of public health workforce capacity in a defined (selected) region and minimize threats of the external context?

Exercise 2: Migration of Public Health Professionals - What are the Issues?

- Is lack of qualified personnel the main issue regarding healthcare quality in the MENA region?
- What are some of the other issues relating to quality of healthcare and how may migration trends impact on these issues?
- Is effective migration management of Public Health Professionals addressing the cause or only the symptoms?

Case studies:

1. U.S. Department of Health and Human Services, Public Health Service- USDHHS PHS. The Public Health Workforce: An Agenda for the 21st Century. A Report of the Public Health Functions Project http://www.health.gov/phfunctions/pubhlth.pdf
2. CDC Summit Report - Modernizing the Public's Health Workforce http://www.cdc.gov/ophss/csels/dsepd/documents/ph-workforce-summit-report.pdf

3. Czabanowska K, Otok R, Foldspang A. System of shaping the professional public health workforce in Europe – shapePH initiative. In: Bjegovic-Mikanovic V, Czabanowska K, Flahault A, Otok R, Shortell S, Wisbaum W, Laaser U. Addressing needs in the public health workforce in Europe. Policy summary 10 http://www.aspher.org/foto/BULLETIN032014/Addressing-needs-in-the-public-health-workforce-in-Europe.pdf
4. Bjegovic-Mikanovic V. Regional cooperation: the development of a regional public health strategy in South Eastern Europe In: Bjegovic-Mikanovic V, Czabanowska K, Flahault A, Otok R, Shortell S, Wisbaum W, Laaser U. Addressing needs in the public health workforce in Europe. Policy summary 10 http://www.aspher.org/foto/BULLETIN032014/Addressing-needs-in-the-public-health-workforce-in-Europe.pdf
5. U.S. Department of Health and Human Services Health Resources and Services Administration Bureau of Health Professions. Public Health Workforce Study http://bhpr.hrsa.gov/healthworkforce/reports/publichealthstudy2005.pdf
6. Health & Safety Developments, Public Health Workforce Development New Zealand, www.publichealthworkforce.org.nz/.../WEB%20PH%20WDP%20Literat

References:

Amani Siyam, Pascal Zurn, Otto Christian Rø, Gulin Gedik, Kenneth Ronquillo, Christine Joan Co, Catherine Vaillancourt-Laflamme, Jennifer dela Rosa, Galina Perfilieva, and Mario Roberto Dal Poz (2013) Monitoring the implementation of the WHO Global Code of Practice on the International Recruitment of Health Personnel. Bull World Health Organ 91/11: 816–823; PMC3853953. Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3853953/ (Accessed 07.01.2015).

Baicker K, Cutler D, Song Z (2010) Workplace Wellness Programs Can Generate Savings. Health Affairs 29/2; doi: 10.1377/hlthaff.2009.0626. Available at: http://www.ohsu.edu/xd/research/centers-institutes/oregon-institute-occupational-health-sciences/oregon-healthy-workforce-center/education-outreach/upload/Harvard-Meta-Analysis.pdf (Accessed 07.01.2015).

Campbell J, Dussault G, Buchan J, Pozo-Martin F, Guerra Arias M, Leone C, Siyam A, Cometto G. A universal truth: no health without a workforce. Forum Report, Third Global Forum on Human Resources for Health, Recife, Brazil. Geneva, Global Health Workforce Alliance (GHWA) and WHO, 2013.

Capacity Project (2008b). iHRIS Plan: workforce planning and modeling software (http://www.capacityproject.org/hris/suite/ihris_plan.php, accessed 19 November 2009).

Centers for Disease Control and Prevention - CDC. Ten Great Public Health Achievements—United States, 2001-2010 JAMA, July 6, 2011—Vol 306, No. 1

Bangdiwala SI, Fonn S, Okoye O, Tollman S. (2010). Workforce Resources for Health in Developing Countries. Public Health Reviews 32 (1): 296-318

Bailey Rebecca J., Dal Poz M. (2010). Building the public health workforce to achieve health-related development goals: Moving forward in collaboration Journal of Public Health Policy 31:494-497.

Dewdney J, Kerse L (2000). Health workforce planning: developing expertise in Eastern Asia and the Pacific Islands. Human Resources Development Journal, 4(3) (http://www.who.int/hrh/hrdj, accessed 19 November 2009).

Frenk J et al. (2010). Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *The Lancet*, 376(9756):1923–1958.

G8 Summit (2013) Lough Erne, Northern Ireland. Avalable at: http://www.g8.utoronto.ca/evaluations/2013lougherne/kirton-prospects-2013.html (accessed 07.01.2015)

GHWA (Global Health Workforce Alliance) (2008) The Kampala declaration and agenda for global action. Available at: http://www.who.int/workforcealliance/knowledge/resources/kampala_declaration/en/ (Accessed 07.01.2015).

Hall TL (2000). WHO simulation models for intermediate–term health workforce planning. Toolkit for planning, training and management.

Hazarika I. (2013) Health workforce in India: assessment of availability, production and distribution. WHO South-East Asia Journal of Public Health, 2(2)

Hornby P, Santric Milicevic M. Human resources in health planning. In: Basics of health care system management. Health management guides, readings and references. Training in Health Service management in Serbia Belgrade: Ministry of Health of the Republic of Serbia, 2011; p.109-127.
Kennedy C., Baker T. (2005). Changing Demographics of Public Health Graduates: Potential Implications for the Public Health Workforce. Public Health Reports 120(3): 355-357.
International Labour Organisation (ILO) (1985) C161 - Occupational Health Services Convention (No. 161). Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:55:0::NO::P55_TYPE,P55_LANG,P55_DOCUMENT,P55_NODE:CON,en,C161,%2FDocument (Accessed 07.01.2015).
International Labour Organisation (ILO) (2015) Health services sector. Available at: http://ilo.org/global/industries-and-sectors/health-services/lang--en/index.htm (Accessed 07.01.2015).
Laaser U, Nasim ASM. (2006). Editorial: Public Health Workforce. The New Role. Journal of Public Health Policy 27(3): 309-315
Lloyd DS. Credentialing the Public Health Workforce Its Time Has Arrived. Public Health Reports 2000; 115(6): 582.
Sydenstricker E. (1936). Economy in Public Health. The Milbank Memorial Fund Quarterly14 (1):3-12.
United Nations Millennium Project (2007). MDG needs assessment methodology: integrated health costing tool. New York, UNDP
Whitfield M (2004). Public health job market. In: Czabanowska K, Włodarczyk C, eds. *Employment in Public Heath in Europe (Zatrudnienie w Zdrowiu Publicznym w Europie)*. Kraków, Jagiellonian University Press, 122–165.
WHO (1994) Global strategy on occupational health for all: The way to health at work. Recommendation of the second meeting of the WHO Collaborating Centres in Occupational Health, 11-14 October 1994, Beijing, China. Available at: http://www.who.int/occupational_health/publications/globstrategy/en/index6.html (Accessed 07.01.2015).
WHO (1998). Workload indicators of staffing need (WISN): a manual for implementation. Geneva, WHO
WHO (2006) World Health Assembly, WHA 59.23: Rapid scaling up of health work production. Available at: http://www.who.int/hrh/resources/WHA_59-23_EN.pdf (Accessed 07.01.2015).
WHO (2008). WWPT: WPRO workforce projection tool, version 1.0. Manila, WHO Western Pacific Regional Office
WHO Department of Human Resources for Health, Health Information and Governance Team and contributors, (2010) Models and tools for health workforce planning and projections. Human Resources for Health Observer, 3. Geneva: WHO
WHO / Europe. (2012). Strengthening public health services and capacity: an action plan for Europe. Promoting health and well-being now and for future generations.
WHO (2013). The 2013 update, Global Health Workforce Statistics, Geneva: WHO, (http://www.who.int/hrh/statistics/hwfstats/).
WHO (2013) WHO Global Code of Practice on the International Recruitment of Health Personnel. Available at: http://www.who.int/hrh/migration/code/WHO_global_code_of_practice_EN.pdf (Accessed 07.01.2015).
WHO (2013) Global Plan of Action on Workers' Health (2008-2017): Baseline for Implementation. Available at: http://www.who.int/occupational_health/who_workers_health_web.pdf (Accessed 07.01.2015).

Links:

World Federation of Public Health Associations www.wfpha.org
Association of Schools of Public Health United States of America http://www.aspph.org/
Association of Schools of Public Health in European Region http://aspher.org/
CDC's Public Health Workforce Development Initiative
http://www.cdc.gov/ophss/csels/dsepd/documents/ph-workforce-initiative-factsheet.pdf

Canadian Public Health Association
WHO / Europe, Public health services EPHO Essential Public Health Operations
http://www.euro.who.int/
European Programme of Public Health Core Competences
www.ecdc.europa.eu/.../publications/Publications/training-core-competencies-EU-public-health-epidemiologists.pdf
EPHA European Public Health Alliance www.epha.org
Pan American Health organization, EPHF Essential Public Health Functions
http://www.paho.org/hq/index.php?option=com_content&view=category&layout=blog&id=3175&Itemid=3617
Public Health Workforce Development New Zealand. Available at:
http://www.publichealthworkforce.org.nz/default.aspx

Title:	**N 3.9 EDUCATION AND TRAINING OF PROFESSIONALS FOR GLOBAL PUBLIC HEALTH**
Module information	This module is organized for 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: 50 contact hours and 100 hours assigned to voluntary work and a field visit and report.
Authors	Suzanne Babich & Egil Marstein
Address for correspondence	Dr. Suzanne Babich, Dr. Egil Marstein 1103D McGavran-Greenberg, CB #7411 Department of Health Policy and Management Gillings School of Global Public Health University of North Carolina at Chapel Hill Chapel Hill, NC 27599-7411 USA
Key words	Global public health, education, training, health professions, stakeholders, culture, governance
Topics	By addressing the critical need for public health education and training within the global public health workforce, we have in this program an opportunity to contribute substantially to efforts to improve the health of people worldwide. Topics introduced and discussed address the complexities of working with country specific agents, organizational representatives and formal and informal stakeholders who may influence the outcome of global health operations.
Learning objectives	1) Understand how political, organizational and socio-economic conditions affect critical operational premises in a global health context. 2) Understand the makeup and workings of context specific forces as these impact global health initiatives; e.g. (i) identify key stakeholders and their impacts on health governance and leadership; (ii) evaluate culture-specific traits relevant for the professions, teams and organizational processes; (iii) analyze institutional governance as it applies to fieldwork planning and program execution; and (iv) recognize the dynamics of the global health field and how this need be incorporated in operational strategies and actions.
Teaching methods	Lectures, interactive small group discussions, case studies and field observations. To meet the challenges of time and distance, the student – teacher dialogue will use a flexible, hybrid approach that incorporates online learning in addition to face-to-face sessions such as at fieldwork site locations. Resources include relevant and updated textbook readings, relevant reports, research documentation and other publications addressing issues in global health. Classroom teaching, whether online or face-to-face, will emphasize highly interactive, experiential approaches to learning such as PBL (Problem Based Learning), discussion, debate, and case analyses. Teaching approaches will foster: a) Recognition of major challenges and opportunities to good global health policies, programs and practices; b) Identification of concepts and approaches for developing education and training programs for global health practitioners/representatives; c) Establishment of best practices.
Who should apply	Academic leaders, higher education instructors, educators in other settings including NGOs, government agencies, foundations, the private sector, health systems, and any setting in which training and education takes place for the global public health workforce.
Career opportunities	Teaching and/or research careers in academic environments; practice-based positions in non-governmental organizations and other settings within global

	health.
Assessment of students	Applied exams, case presentations, peer evaluations, team projects, and other modalities.
COMMENTS on the module by lecturers and students	**???**

Education and Training of Professionals for Global Public Health

Background
The majority of the global public health workforce has had no formal education or training in public health. An understanding of the population perspective on health and key concepts in leading change are vital to establishing priorities for public health policies, programmes, and practices with the potential to improve health status on a large scale. By addressing the critical need for public health education and training within the global public health workforce, we have an opportunity to contribute substantially to efforts to improve the health of people worldwide.

Special attention has to be paid to orienting students to the importance of the political, organizational and socio-economic conditions that comprise the work environment for global public health professionals. Key global health stakeholders will be identified and discussed as to their impact on health governance and leadership. The significance of culture relevant for individual health professionals, teams, institutions and their governance will be analyzed and discussed as applied to fieldwork planning and execution. Recognizing the dynamics of the global health field is also important.

Traditional and Emerging Competencies
Core content for public health has long been defined as including five main disciplinary areas: epidemiology, biostatistics, health behavior, health policy and management, and environmental health. Advanced education in public health integrates content across these disciplinary areas to simulate real-world practice in which complex problems require equally sophisticated solutions that take into consideration multiple and varied factors.

Core competencies
Defined core content areas in public health education and training largely have been replaced by competencies that precisely describe key knowledge, abilities and skills needed by professionals. Competencies describe what a health professional should know or be able to do upon mastery of the competency. In academic settings, competencies are also described by expected level of attainment. A number of competency models have emerged. A global public health competency model recently was developed by the Association of Schools and Programs in Public Health (Ablah et al. 2014) for master's level education. New approaches to designing global public health curricula address these competencies through integration of course material through cases, team projects and complex problem-solving activities that simulate real-world practice settings and require professionals to work effectively in teams to find solutions to complex public health challenges.

Millennial development goals (MDG), chronic diseases (CD) and non-communicable diseases (NCD)
The definition of "global public health" has been discussed and debated, and consensus has not yet been reached with regards to the exact domain and how it may – or may not – differ from "public health." Discussions about global public health, however, typically reference the WHO Millennium Development Goals (MDG) now being updated for 2015. The MDGs are a set of public health

priorities for the world that give special emphasis to communicable diseases (CD) and the needs of low- and middle-income countries. Criticism of the MDGs includes insufficient attention to the increasing burden of non-communicable diseases (NCD).

Challenges to good global public health practice include the need for international consensus on terminology and key concepts and a core curriculum for education and training of health professionals, as well as content that stays current with core knowledge and the rapidly evolving environmental conditions surrounding global public health (Hobbs S et al. 2011). Mobility and migration of the global public health workforce and lack of investment in health systems infrastructure are additional challenges, particularly in low- and middle-income countries that are often poorly equipped to respond when crises such as the Ebola epidemic emerge. Opportunities for good global public heath practice include progressive approaches to designing and implementing education and training programmes.

Addressing competencies in education and training programs
Effective education and training programs for global public health must apply sound principles of teaching and learning conducive to improving access to and the quality of learning outcomes for students. This includes greater use of online education to increase access to education and training programs for health professionals who work and cannot attend a full-time, residential program as well as those who live in areas not conveniently located near bricks-and-mortar schools or universities (Anderson S et al. 2013).

Innovative uses of technology and methods of teaching that emphasize an integrative and applied approach to program curricula are best suited to preparing public health professionals to work in real-world practice settings. A variety of new programs targeting working public health professionals are in use around the world (Bjegovic-Mikanovic V et al. 2013). Many use blended learning or hybrid (online and residential) approaches to teaching as well as problem-based learning and other techniques that emphasize a high level of interaction among students and opportunities to apply learning objectives in practice settings (Sherlaw W et al. 2011).

Program Learning Focus
The majority of the global public health workforce today has little or no formal education or training in public health content and leadership. Building and disseminating such knowledge holds significant potential for improving global health, resource consumption, and effectiveness in the provision of health services and needed systems support.

An understanding of a given location's cultural peculiarities, organizational complexities, and political governance over and above awareness of a location's epidemiology is vital to securing timely and adequate pubic health services. Only from such a knowledge base can one hope to establish priorities for programs and practices with the potential to improve public health. *By addressing the critical need for public health education and training within the global public health workforce, we have an opportunity to contribute substantially to efforts improving the health for people worldwide.*

In the course/program outlined, students get a comprehensive introduction to the (i) political, (ii) organizational and (iii) socio-economic conditions comprising the most important knowledge prerequisites for a public health professional.

Public and private governance institutions will be analyzed and discussed as they apply to fieldwork planning and execution. Organizational characteristics will be brought forward and discussed as to mandates, interplay of decision-making processes, formal and informal communication, authority, and supervisory practices. The significance of culture relevant for supervising individual health professionals and teams will be studied, as will the socio-economic patterns expressed through nations' values, politics and practices as evident in public health services. Recognizing these dynamics of the global health field is paramount to student comprehension and later success in the development of specific education and training programs in global health leadership.

Content Specifics

Within the framework of political, organizational and socio-economic conditions, students will examine the working mechanics unique to a locale, i.e. its specific context. They will particularly focus on (i) stakeholder interests, (ii) the relevancy of culture, (iii) institutional frameworks, and (iv) dynamics of change in global health

(i) Stakeholder interests

The ability to identify and recognize the impact of stakeholders on health governance and leadership is central to understanding the environmental context of global public health policies, programs and practices. Stakeholder or interest group theory is a broad topic within the domain of political science, organizational behavior, and strategic management. Concern over stakeholder management overlaps in many ways with awareness of culture-specific conditions. Expectations of stakeholder groups need to be recognized in a decision-making setting in which impact and effect of chosen priorities are evaluated. Maintaining a dialogue with key stakeholders, public and private, is critical to the success of any global health effort. Mastering the practical application of this knowledge can be accomplished in many ways in education and training programs and is especially well-suited to higher-level learning activities such as case analyses and in-depth discussions and debates.

(ii) The relevancy of culture

Culture is a reflection of the thoughts, beliefs, values and practices of different ethnic, religious or social groups and it has profound implications for the way health information is received and acted upon (or not), how health problems are perceived, how the symptoms or problems are expressed, and how decisions are made about whom should receive treatment and what kind of treatment should be given. Within the context of education and training for health professionals, cultural competency refers to a set of behaviors, attitudes, policies, and practices of organizations or individuals that enable them to be effective when working in cross-cultural circumstances.

Cultural competency should be viewed as a crosscutting theme to be integrated into all aspects of education and training programs for global public health professionals. Similar to stakeholder considerations, practical application of concepts in cultural competency can be accomplished best through higher-order teaching and learning approaches such as case analyses and in-depth discussions and debates.

(iii) Institutional frameworks

Global health provisions extend across national boundaries and regions. Within each locale some form of institutional structure or framework governs issues at stake to the global health provider. The program addresses how to identify and approach representatives with a mandate to govern/decide on issues vital to public health provisions. Commonly the law of the land will be the best guide to interpreting questions of importance where the goal is to deliver effective and efficient health services by an outside provider. The transparency of institutions and their governance may vary between locations. Being cognizant of the structural features, infrastructure and procedures are of vital importance to the global health provider. Often this calls for an ability to read signs evident in cultural traits, language and/or ethnicity. A realistic assessment is necessary of the time requirements and procedures associated with seeking institutional acceptance, approval, and necessary support. The program will share evidence for building appreciation for and general knowledge of the significance of institutional frameworks in the field of global health.

(iv) The dynamics of change in global health

Global public health professionals should be able to identify the critical evolutionary stages of the world from ancient times to the present day. Past inventions and innovations have brought continuously new knowledge and experiences that have influenced the way we look at the world and how we relate to people, places, and events. As the pace of change has increased so has the urgency of the call for us to adapt. Both time and distance have been largely removed as barriers to change. Consequently we all act in real time worldwide as major issues governing health and quality of life have become global in nature. We all are experiencing the challenges created by political decisions

impacting the way global health works. Public health is perceived and acted upon differently in different parts of the world. Evidenced in the growing interaction of nations and regions there is a call for continuous revisions of laws, policies and regulations. Global health concepts, organisations, and operations need to change accordingly. This program will examine the most common change agents and resulting outcomes. Aside from relevant changes in international law, one will look at how new networks evolve, the changing nature of professions, international institutions, NGOs, and other key industries and actors. The section on institutional dynamics primarily addresses issues of strategic nature in global health management.

Summary

There is a critical need to increase access to high quality public health education and training among the global public health workforce. Underserved sectors include working professionals and those living and working in areas where they do not have ready access to traditional, residential programs. Development of curricula in global public health should include recognition of the importance of the political, organizational and socio-economic conditions that comprise the context for educating and training global public health professionals. Key global health stakeholders should be identified and discussed as to their impact on health governance and leadership. The significance of culture relevant for health professionals, institutions and their governance should be analyzed and discussed as they apply to fieldwork planning and execution. Curricula should be designed to leverage advantages of technologies, including online learning, and approaches to teaching that best prepare global public health professionals for optimal performance in practice settings.

References:

Ablah E, Biberman DA, Weist EM, Buekens P, Bentley ME, Burke D, Finnegan JR Jr, Flahault A, Frenk J, Gotsch AR, Klag MJ, Rodriguez Lopez MH, Nasca P, Shortell S, Spencer HC (2014) Improving global health education: development of a Global Health Competency Model. Am J Trop Med Hyg; Mar 90(3): 560-5; DOI: 10.4269/ajtmh.13-0537. Epub 2014 Jan 20.

Bjegovic-Mikanovic V, Vukovic D, Otok R, Czabanowska K, Laaser U (2013) Education and training of public health professionals in the European Region: variation and convergence. Int J Public Health 2013: 58/6: 801-810; DOI: 10.1007/s00038-012-0425-2

Anderson, S., Hobbs, S. and Helm-Murtagh, S. (2013) "The internationalization of professional doctorate programmes: challenges and opportunities for networking by students of global health leadership," Work Based Learning e-Journal, 3-1, 1-10.

Hobbs S, Marstein E, Anderson, S. and Cockerill R. (2011) "Development of a common curriculum core for doctoral training in health leadership: perspectives from an international collaboration," Work Based Learning e-Journal, 2, 1, 303-317.

Sherlaw, W., S. Hobbs, V. Sychareun, S. Marquez, C. Volel, A. Magdelaine, J. Pommier, K. Czabanowska. "Using Problem-based Learning in Development of Crosscutting Competencies for Global Public Health Practice. Proceedings of ICERI2011 Conference, 14-16 November, 2011, Madrid, Spain, 005499-005508.

Title:	**N 3.10 BLENDED LEARNING**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Željka Nikolić & Suzanne Babich
Address for correspondence	Dr. Željka Nikolić[1], Dr. Suzanne Babich[2] 1) Medical Faculty University of Belgrade Centre-School of Public Health and Health Management Institute of Social medicine 15 Dr Subotica Street, 11000 Belgrade, Serbia 2) 1103D McGavran-Greenberg, CB #7411 Department of Health Policy and Management Gillings School of Global Public Health University of North Carolina at Chapel Hill Chapel Hill, NC 27599-7411 USA
Key words	Blended learning, online environment, face-to-face, blended learning models, education
Topics	Blended learning is an educational model with great potential to increase student learning outcomes and to create new roles for teachers. In this course you will learn about and then develop tools to build your own blended learning programme.
Learning objectives	(i) To understand the concept of blended learning and different blended learning models (ii) To upgrade /develop skills for creating a blended learning program. To understand the impact of blended learning on the way schools are designed including staffing models and use of time
Teaching methods	Lectures, interactive small group discussions, case studies and field practice
Who should apply	Educators as well as members of the education technology sector, non-profits, NGOs, health systems, etc.
Career opportunities	Teaching and/or research careers in academic environments; non-governmental organizations and other settings
Assessment of students	Applied exams, case presentations, peer evaluations, team projects, and other modalities.
COMMENTS on the module by lecturers and students	**???**

Blended learning

The definition of blended learning and basic blended learning models

Plenty of buzz exists about blended learning and its transformational potential. But what does blended learning really mean?

Blended learning (BL) is a relatively new educational model with huge potential to increase student outcomes and create exciting new roles for teachers. In its basic and simplest definition, blended learning is an instructional methodology, a teaching and learning approach that combines face-to-face classroom methods with online activities (Graham et al. 2004). It was created as a cost-effective way to overcome the issue of overcrowded classrooms, add flexibility for students and to generally offer a convenient alternative for learning. But it has quickly become much more than that. Institutions with blended learning models may also choose to reallocate resources to boost student achievement outcomes (Jacob 2011; Dowlin et al. 2003).

Blended learning entails more than simply replacing class time with online course elements or supplementing an online course with face-to-face meetings (Jones 2013). Depending on one's starting point, a blended course may be viewed as either a face-to-face course with online enhancement or an online course with face-to-face enhancement. To be successful, the computer mediated activities and face-to-face modes need to be integrated, considering and planning very carefully learning objectives and the affordances of each mode and deliberately linking what occurs in each mode (Friesen 2012; Staker and Horn 2012).

Blended Learning is a big concept, an umbrella term that contains several other sub-methods. Corporate and higher education settings have adopted blended learning for a variety of reasons. Some of those reasons are: (1) pedagogical richness, (2) access to knowledge, (3) social interaction, (4) personal agency, (5) cost effectiveness, and (6) ease of revision. (Osguthorpe and Graham 2003; Bonk et al. 2002) In the BL literature, the most common reason provided is that BL combines "the best of both worlds". Beyond this general statement, Graham et al. found that overwhelmingly people chose BL for three reasons: (1) improved pedagogy, (2) increased access/flexibility, and (3) increased cost effectiveness. (Graham et al. 2003)

The majority of blended-learning programs resemble one of four models: Rotation, Flex, A La Carte, and Enriched Virtual (Staker and Horn 2012; Friesen 2012; Freeland 2014).

1. Rotation Model

In this form of blended learning, within a given course or subject, students rotate on a schedule or at the teacher's discretion between a period of face-to-face interaction and a period of online study. In some cases, online study may be done remotely (at home, for example). The results have shown that students became more active learners and often challenged themselves to work harder and learn material that had not yet been introduced in their math classroom. The Rotation Model includes four sub-models: Station Rotation, Lab Rotation, Flipped Classroom, and Individual Rotation.

Station Rotation - In the Rotation Model, students rotate on a schedule or at the teacher's discretion among classroom-based learning modalities, of which at least one is for online learning. Activities like small groups, group projects, or pencil and paper assignments are based in other classrooms. The Station-Rotation Model differs from the Individual-Rotation Model because students rotate through all of the stations, not only those on their custom schedules.

Lab Rotation - In the Lab Rotation-model, students rotate on a schedule or at the teacher's discretion among locations on the bricks-and-mortar campus, of which at least one is a learning lab provided for online learning. The Lab-Rotation Model differs from the Station-Rotation Model because students rotate among locations on the campus instead of staying in one classroom for the blended course or subject.

Flipped Classroom - In the Flipped Rotation-model, students rotate on a schedule between face-to-face teacher-guided practice on campus during the standard school day and online delivery of content and instruction of the same subject from a remote location (often home) after school.

Individual Rotation - In the Individual Rotation-model, it is not necessary for students to rotate between each available station and modality. Every student has its own individually customized, fixed schedule set by a teacher or an algorithm. Among learning modalities, at least one has to be online learning.

2. Flex Model

The Flex Model is usually used in schools that support students who are open for non-traditional ways of learning. With this approach, material is primarily delivered online. Teachers are in the classroom ready to provide on-site support as needed, but learning is primarily self-guided. This model provides independence and new concepts in a digital environment. (Face-to-face teaching is still available, but for small groups or individuals on an as-needed basis through activities such as small-group instruction, group projects, and individual tutoring).

Although this model directs students to office activities at times, students are able to move flexibly through different learning modalities with the goal of optimizing their learning experiences based on their specific needs. Each student in essence has a customized, fluid schedule among learning modalities.

3. A La Carte Model (formerly known as self-blend model)

The A La Carte Model of blended learning is a fully individualized approach where students have the possibility to take classes beyond what is already offered at their school. However, this is not necessarily the model followed by all students in the school. Students attend regular face-to-face classes, but they also chose to improve their knowledge through online courses offered remotely. High self-motivation is a predictor for successfully completing courses in the A La Carte Model.

4. Enriched Virtual model

The Enriched Virtual Model is a form of blended learning in which students have required face-to-face learning sessions with their teacher of record and then are free to complete their remaining work remote from the face-to-face teacher. Material is primarily delivered via an online platform and students have total freedom and flexibility in their daily schedules. Although face-to-face check-in is optional, students seldom meet face-to-face with their teachers every day.

Blended learning – how to integrate face-to-face and online modes

As blended learning means more than simply replacing class time with online course elements or supplementing an online course with face-to-face meetings, there is a need for integrating the online and face-to-face modes by taking into account the learning objectives and the affordances of each mode and deliberately linking what occurs in each mode. (Graham 2005; Kelly 2012)

In order to achieve success in blended learning it is important to focus on the following key points:

- *Determine the learning goals*
- *Make careful modality decisions*

  There are several factors to take into account when making modality decisions, including:

  - The affordances of each modality. For example, a case study assignment that has students make decisions about using reading assessments works better online or there is an ability to hear from every student, while limited time in the classroom makes this unlikely).
  - Workload/logistics. Since the goal with modality decisions is to maximize the effectiveness of the learning experience, consideration should be given to the amount of work required to create each learning activity versus the benefits to the learners, and then put in the extra effort where the biggest difference can be made.

- *Be deliberate in providing opportunities for interaction*
  "In terms of integration, communication is the key, and I think if students are allowed to communicate in meaningful ways—both online and face to face—that will help bridge the gap" (Kelly 2012).
- *Reinforce one modality in the other*
  For example, using something that occurs in a face-to-face session to begin an online discussion makes these connections go a long way toward using student-to-student interaction so as to support integration of the online and face-to-face modes of a blended course (Kelly 2012).

Carman (2005) identified five key ingredients that emerge as important elements for successfully accomplished blended learning process:

- *Live Events*: Synchronous, instructor-led learning events in which all learners participate at the same time, such as in an online or virtual classroom;
- *Self-Paced Learning*: Learning experience that the learner completes individually, at his own and in his own time, such as interactive, Internet-based or CD-ROM training;
- *Collaboration*: Environments in which learners communicate with others, for example, e-mail, threaded discussions or online chat;
- *Assessment*: A measure of learners' knowledge. Pre-assessments can come before live or self-paced events, to determine prior knowledge, and post-assessments can occur following live or self-paced learning events, to measure learning transfer;
- *Performance Support Materials*: On-the-job reference materials that enhance learning retention and transfer, including downloads, and printable references, summaries, and job aids.

The Benefits of Blended Learning

Blended learning offers many opportunities for both the teacher and the student that a traditional bricks and mortar classroom may not. With the increasing demands of state standards and busy school days, blended learning permits students to learn a portion of the academic content at home and gives teachers the ability to engage students in a richer, deeper, and more meaningful context in the classroom. (U.S. Department of Education, Office of Planning, Evaluation, and Policy Development 2010)

Results of a survey distributed among students who took part in blended learning have showed that students prefer and enjoy the blended course format. Here are collected some of the main reasons why students prefer blended rather than traditional learning (adapted from: UW-Milwaukee Learning Technology Center 2009; Bonk and Graham 2005):

- Time flexibility, freedom, and convenience of working part of the time online from home due to decreased commuting and parking hassles.
- Asynchronous online courses allow students to work around job schedules and other activities. Many students must work in order to afford school.
- More interaction with the teacher and colleagues by using plenty of opportunities to do so both in class and online.
- Access to unlimited and 24/7 up-to-date online resources available via the Web.
- Developing skills related to time management, critical thinking, and problem solving.
- More participation during the discussion in class since the student can choose the environment in which they feel most comfortable.
- More time to reflect and refer to relevant course materials when working online.
- More frequent feedback from their teacher.
- Acquiring useful skills via PC technology.

On the other hand, blended learning has different benefits for teachers, enabling them to become greater participants in student learning. Teachers may find it facilitates student mastery of content by enriching learning activities when the class meets face to face. (U.S. Department of Education, Office of Planning, Evaluation, and Policy Development 2010)

Teachers find the advantages to be:

- ***New teaching opportunities*** by using a variety of online and in-class techniques to achieve course goals and to develop solutions to course problems (Bonk and Graham 2005)
- ***Greater student engagement*** that results in building connections between instructor and student even more than in traditional or online courses. (Dziuban, Hartman, & Mescal, 2004) Discussions started in class are continued online and online interaction often carries over into traditional face-to-face classes. Students who rarely take part in class discussions are more likely to participate online. (Garnham & Kaleta 2002)
- ***Increased student learning*** assessed through better written papers, high scores on exams, more meaningful discussions on course material and far more often applying what they have learned. At the same time students develop higher-order skills of critical thinking, problem-solving, and the ability to apply theoretical models to real-world data. (Donoghue 2011)
- ***New pedagogical approaches*** that leads to using more participatory and student-centered learning activities. This transforms the teacher-student relationship to be more centered on student learning. Instead of being the "sage on the stage," teachers become more facilitative and learner-centered. (Bonk and Graham 2005)
- ***Documentation*** of the process as well as the product of learning provides easy and clear organization of the course with improvement in efficiency through automation of some basic activities such as quizzes, grading, and surveys. (Bersin 2004)

Insights / Advantages of digital media

When it comes to digital content, it is important to note that it is very useful for handling. Appropriate use of technology can increase time on task and thus improve learning. Everyone has the same content to learn by reading, watching tutorials, doing quizzes or listening to the teacher online. Online materials can easily be copied, transferred, and distributed. Regardless of illness or other reasons for absence, no one misses out on a lecture. A very positive approach of blended learning also implies that for people with special needs or for those with different learning styles, digital media are far more accommodating. Learning online is often considered to be isolating, however digital media, in fact, can be made interactive. They can be incorporated into learning activities that are shared with a peer-learning network. (Chickering and Ehrmann 1996; Eduviews 2009)

The Benefits of Blended Learning in Public Health

A number of institutions offer blended learning courses in public health education, including Manchester Metropolitan University (UK), Tufts University (US), University at Buffalo (US), University of North Carolina at Chapel Hill's (US), University of Texas (US), London School of Hygiene and Tropical Medicine (UK), Education for Health (UK), University of Massachusetts Amherst (US) etc. The evidence so far has confirmed that this mode of learning suits PH education well. Student evaluations of the blended approach in public health were very highly rated and the majority of students would recommend blended learning. The key point of the success of this approach was the association between face-to-face interaction and meaningful collaborative learning, the integration of technology components, and the course instructors. (Kiviniemi 2014; So 2009)

The Public Health Leadership Programme at Sheffield Hallam University is one representative example of a blended learning programme. It began as a pilot course using Elluminate and Blackboard to bring students and instructors together from across Europe. Plainly blended learning as a mode of PH learning has already developed, has become established, and is respectable. The program is based on a product of the ERASMUS Multilateral Curriculum Development Project and now the faculty of the course consists of international public health and leadership experts and educationalists with various educational backgrounds. Schools of Public Health have to consider the current trends in designing blended learning programmes. (LEPHIE 2014)

Directions for the Future / A Step Forward

Modern technology and globalization has brought rapid changes in all aspects of human life. Digital technologies are increasingly an integral part of our day-to-day lives. It is almost impossible to imagine learning without the Internet. Online learning allows users to participate in high-quality

teaching, even if physical attendance is not possible. We can choose the time that we devote to learning and the place where we observe the learning materials. Whether we are primarily interested in creating more effective learning experiences, increasing access and flexibility, or reducing the cost of learning, a blend of both face-to-face and online experiences is the way of the future.

Ross and Gage (2005) have summarized the essence of BL's future when they stated: "Future learning systems will be differentiated not based on ***whether*** they blend but rather by ***how*** they blend. This question of how to blend face-to-face and online instruction effectively is one of the most important we can consider as we move into the future. Like any design problem, this challenge is highly context dependent with a practically infinite number of possible solutions.

References:

Bersin J (2004). The Blended Learning Book. San Francisco, CA: Pfeiffer.

Bonk CJ, Graham CR (Eds.) (2005). Handbook of blended learning: Global Perspectives, local designs. San Francisco, CA: Pfeiffer Publishing.

Bonk CJ, Olson TM, Wisher RA and Orvis KL (2002). Learning from focus groups: An examination of blended learning. Journal of Distance Education, 17(3):97-118.

Carman JM (2005). Blended Learning Design: Five Key Ingredients. Agilant Learning.

Chickering AW, Ehrmann SC (1996). Implementing the seven principles: Technology as lever. AAHE Bull, 49(2):3-6.

Donoghue F (2011). The Strength of Online Learning. The Chronicle of Higher Education. http://chronicle.com/blogs/innovations/the-strengths-of-online-learning/29849 (Accessed on November 13, 2014).

Dowling C, Godfrey J, Gyles N (2003) Do hybrid flexible delivery teaching methods improve accounting students' learning outcomes? Acc Educ, 12(4):373-391.

Dziuban CD, Hartman JL, Moskal PD (2004). Blended learning. Educause Center for Applied Research. http://www.educause.edu/ir/library/pdf/ERB0407.pdf (Accessed on November 13, 2014).

Eduviews, (2009), Blended Learning: Where Online and Face-to-Face Instruction Intersect for21st Century Teaching and Learning, Blackboard K-12, Washington DC: Worldwide Headquarters.

Freeland J (2014) Blending toward competency. Early patterns of blended learning and competency-based education in New Hampshire. http://disruption.wpengine.com/publications/blending-toward-competency/ (Accessed on November 13, 2014).

Friesen, N. (2012). Report: Defining blended learning. http://learningspaces.org/papers/Defining_Blended_Learning_NF.pdf (Accessed on November 13, 2014).

Garnham C, Kaleta R (2002). Introduction to hybrid courses. Teaching with Technology Today, 8(6). http://www.uwsa.edu/ttt/articles/garnham.htm (Accessed on November 13, 2014).

Graham CR, Allen S, Ure D (2004). Benefits and challenges of blended learning environments. In M. Khosrow-Pour (Ed.), Encyclopedia of Information Science and Technology I-V. Hershey, PA: Idea Group Inc.

Graham CR, Allen S, Ure D (2003). Blended learning environments: A review of the research literature. Unpublished manuscript, Brigham Young University at Provo, UT.

Graham CR (2005). Blended learning systems: Definition, current trends, and future directions. In C. J. Bonk & C. R. Graham, (Eds.), Handbook of blended learning: Global perspectives, local designs. San Francisco, CA: Pfeiffer Publishing.

Jacob AM (2011). Benefits and Barriers to the Hybridization of Schools. Journal of Education Policy, Planning and Administration, 1(1): 61-82.

Jones M (2013). Blended Learning for Public Health Education and Training. In: ASPHER Working Group on Good Practice in Public Health Education. Lage/Germany: Jacobs Publishing Company, 2013

Kelly R (2012). Blended Learning: Integrating Online and F2F. Online Classroom 12: 1,3.

Kiviniemi MT (2014). Effects of a blended learning approach on student outcomes in a graduate-level public health course. BMC Med Educ, 11;14:47.

LEPHIE. Leaders for European Public Health. http://www.lephie.eu (Accessed on November 13, 2014).
Osguthorpe RT, Graham CR (2003). Blended learning systems: Definitions and directions. Quarterly Review of Distance Education, 4(3), 227-234.
Ross B, Gage K (2005). Blended Learning Systems: Definition, Current Trends, and Future. In: Bonk and Graham (Eds). The Handbook of Blended Learning: Global Perspectives, Local Designs, San Francisco, CA: Pfeiffer.
So HJ (2009). Is Blended Learning a Viable Option in Public Health Education? A Case Study of Student Satisfaction With a Blended Graduate Course. Journal of Public Health Management & Practice, 15(1):59-66.
Staker H, Horn M (2012). Classifying K-12 blended learning. Innosight Institute. http://www.christenseninstitute.org/wp-content/uploads/2013/04/Classifying-K-12-blended-learning.pdf (Accessed on November 13, 2014).
U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies, Washington, D.C., 2010.
UW-Milwaukee Learning Technology Center (2009). Learning Technology Center, Hybrid Courses. http://www4.uwm.edu/ltc/hybrid/student_resources/?printformat=TRUE (Accessed on November 13, 2014).

Title:	**N 3.11 GLOBAL HEALTH LAW**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Author	Joaquin Cayon
Address for correspondence	Joaquin Cayon Research Group on Health Law & Bioethics Foundation Marques de Valdecilla/ University of Cantabria Av. Valdecilla, s/n, Planta 5ª Escuela de Enfermería, 39008 Santander, Spain. joaquin.cayon@unican.es
Key words	International law, Global Health Law, binding rules, human rights, Global Health Diplomacy, interdisciplinary approach, governance, challenges.
Topics	Transnational public health problems have been traditionally addressed through international health law whose proper implementation faces two important handicaps: the absence of an international authority that can enforce it, and the absence of a comprehensive concept. Despite this, international agreements and treaties are among the most important intermediate public health goods because they provide a legal foundation for many other intermediate products with global public health benefits. Nowadays, according to the emergence of the idea of global public health, a new concept -"Global Health Law"- has been born. There is an important distinction between international health law and Global Health Law. International health law connotes a more traditional approach derived from rules governing relations among states. On the other hand, Global Health Law is developing an international structure based on the world as a community, not just a collection of nations. There is also an important international trend leaded by some prestigious scholars who have urged adoption of a legally binding global health treaty: a framework convention on global health grounded in the right to health. In this context, an interdisciplinary approach to global public health inevitably requires the study of Global Health Law for any healthcare professional. It is undoubtedly necessary to study and analyze the emergence and development of Global Health Law just because it arises as an important tool to address the phenomenon of globalization of health. In this regard, the future of global public health is directly dependent on the strength of Global Health Law understood in a comprehensive way.
Learning objectives	-To understand the concept and the rationale of studying Global Health Law; -To acquire knowledge and skills needed for undertaking a local burden of disease study; -To upgrade /develop skills for critical analysis of the legal data and health information in an interdisciplinary approach; - To advance strategic thinking for setting a new global health diplomacy.
Teaching methods	Lectures, interactive small group discussions, case studies and field practice
Who should apply	Those who pursue an international career in public health management, policy development, research, diplomacy or advocacy; entrance requirements are to be determined by the institution offering the modules
Career opportunities	Teaching and/or research careers in academic environments; leadership positions in the health care sector, policy makers; non-governmental organizations, freelance consulting; consulting companies; professionals of health care systems.
Assessment of students	Test and case problem presentations.
COMMENTS on the module	**???**

by lecturers and students	

Global Health Law

Rationale, Purpose and Future of Global Health Law

Globalization of Health and Health Law
Globalization implies a growing interdependence of the world's people. In this regard, globalization has been defined as "the process of increasing economic, political and social interdependence, and global integration that occurs as capital, traded goods, people, concepts, images, ideas and values diffuse across national boundaries" (Ruggie 1995). Obviously, globalization impacts the health systems and the social determinants of health. In fact, globalization of health shows that alongside the national health problems, there are other important issues that affect the humanity as a whole. Actually, contemporary globalization encompasses many "interconnected risks and opportunities that affect the sustainability of health systems worldwide" (Yach & Bettcher 1998).

If the national states do not coordinate their measures, internal health problems can affect the rest of the world. In the light of this consideration, global health involves mutual vulnerability (Aginam 2001) just because national borders can distribute health responsibilities but can not avoid risks (Lederberg 1996). At the beginning of the 21st century there is widespread recognition that national and international health are inseparable (Taylor & Bettcher 2002).

Historically the health sector had been closed and nationally focused, but this approach began to change in the 90s. The globalization in the public health level includes the following issues: trade, travel, migration, changes in individual behavior, urbanization, environmental degradation, war, civil conflict and instability, poverty, and the evolutionary powers of pathogenic microbes (Fidler 1999). All these changing processes will have a significant influence in the birth of a new Global Health Law.

International Law, Global Health Law, and Global Health Jurisprudence
Transnational public health problems have been traditionally addressed through international law. We must make a distinction between two different levels in international law. Firstly, the binding international rules, also called "hard law", closely related to the concept of sovereignty of states: they are binding just because states consent that they should be. This consent appears in different ways: from the current practice of states in the case of customary international law and from ratifications in the case of treaties. Therefore treaties are binding on the parties to them and must be executed in good faith. International law related to public health date back to the 1850s, when the first treaties on the control of infectious diseases were signed. A specific body of law on communicable disease control has emerged since then. According to that regulation, the concept of international health law emerged and was defined as set of rules whose main or subsidiary purpose is to protect human health (Bélanger 1989).

Nevertheless there are two important handicaps for proper implementation of international health law. Firstly, it is limited by the absence of an international authority that can enforce it, so compliance is voluntary. Secondly, there is not a comprehensive concept of international health law, which is a scattered and fragmentary body. In fact, no international treaty of general application is dedicated to regulate the international protection of health. Certainly the WHO Constitution is an international treaty with a general outreach but is mainly engaged in the regulation of the organization and not a kind of framework for the protection and promotion of global health. However, the absence of an international reference in the field of public health should not be surprising because that deficiency also occurs in the internal law, where sanitary regulation commonly is disperse (Grad 1998).

More recently, it has been suggested that the sources of international law may not be confined to those defined by the statute. "Soft law", for instance non-binding resolutions of international organizations, is also mentioned as credible source because it consists of rules that are not actually binding, but that are expected to be and usually are complied with, and that may gradually harden into binding law.

Accordingly we can mention the two most remarkable examples of the importance of international conventions to public health: the revised International Health Regulations (2005 IHR) focused on infectious diseases and the WHO Framework Convention on Tobacco Control (2003 FCTC) focused on chronic diseases. In fact FCTC is the first treaty negotiated under the auspices of the WHO and represents a paradigm shift in developing a regulatory strategy to address addictive substances.

It is also important to take into account that the WHO Constitution grants the agency extensive normative powers to adopt conventions (article 19), promulgate binding regulations (article 21), make recommendations (article 23), and monitor national health legislation (article 63) and these powers are noteworthy (Gostin 2008a). Nevertheless, important authors have strongly chastened the WHO for its reluctance to create binding rules, despite the bold mission and important powers granted in its Constitution (Fidler 1998). In any case, international agreements and treaties are among the most important intermediate public health goods because they provide a legal foundation for many other intermediate products with global public health benefits, including research, surveillance, technical assistance programmes, and information clearing-houses (Taylor & Bettcher 2000). In addition, institutional mechanisms often established in international agreements -such as compulsory meetings of the parties, monitoring or supervising compliance and international infrastructure- contribute towards the provision of final global public goods (Kaul et al. 1999).

Nowadays, according to the emergence of the idea of global public health, a new concept -"Global Health Law"- has been born. In this regard, Global Health Law is developing quite different from the thin body of international treaties and agreements which minimally regulated interstate health matters. It is penetrating into national law so that the global approach is present in the domestic health policies (Harrington 2004).

There is an important distinction between international health law and Global Health Law. International health law connotes a more traditional approach derived from rules governing relations among states. On the other hand, Global Health Law is developing an international structure based on the world as a community, not just a collection of nations. This structure is inclusive of individuals and nongovernmental organizations, especially where health problems are seen as truly global. Globalization has heightened the need for worldwide public health cooperation (Ruger 2008). Nevertheless, we should asume that Global Health Law is not an organized legal system, with a unified treaty-monitoring body (Gostin & Sridhar 2014).

The idea of Global Health Law has been criticized by prominent scholars who note how definitions of this concept are ethereal. In fact, no definition of international health law has been accepted worldwide just because public health law does not come in a single, tidy legislative package marked "public health law". It consists of many different types of legislation which have little in common except for the benign purpose of advancing public health (Grad 1998, Taylor et al. 2002, Fidler 2008).

This is why Fidler has proposed a broader concept called "global health jurisprudence" . In the light of this consideration, this concept attempts to capture how the increased use of law in public health reveals a deeper importance for law in public health endeavors within and between countries. Implicit in the idea of global health jurisprudence is the principle that national and international public health activities should, wherever possible, be subject to the rule of law. Terms such as "Global Health Law" only partially would illuminate the relationship between law and public health. The diverse ways in which "Global Health Law" is used make finding analytical clarity in this idea difficult. In this context, Fidler proposes a more helpful concept to think about the transformed relationship between law and public health through the lens of *jurisprudence*, in three possible meanings: as knowledge or

skill in law; as a legal system; and as the philosophy of law (Fidler 2008). Central to the concept of global health jurisprudence as legal framework for public health in a globalized world is the need to think about law and public health holistically. Global health jurisprudence cannot only be about improving WHO's international legal capacities because the efficacy of international law in the public health context often depends on national law (Fidler 1999). In this way there is a strong connection between international and national law so that international instruments are useless without the national capacity to implement them (L'hirondel & Yach 1998).

The Challenge of a New Binding Global Health Convention

There is an important international trend leaded by some prestigious scholars who have urged adoption of a legally binding global health treaty: a framework convention on global health grounded in the right to health. Guided by principles underlying the right to health and mutual responsibility, a framework convention would universally ensure three conditions that are essential for a healthy life: a well-functioning health system providing quality health care; a full range of public health services, such as nutritious food, clean water, and a healthy environment; and broader economic and social conditions conducive to good health, such as employment, housing, income support and gender equality. In this way, several legal pathways towards a framework convention could be available: a) Placing WHO at the centre of the convention regime could be achieved through its constitutional mandate to negotiate conventions; b) the United Nations (UN) General Assembly could lead the treaty process; c) the UN Human Rights Council could spearhead the framework convention; or d) the treaty could be even developed outside the UN system. For this proposal, a framework convention would establish a health financing framework with clear obligations, and would create an accountability regime with robust standards, monitoring, and enforcement. It would advance health justice through engaging marginalized and underserved populations in making and evaluating policies and through comprehensive strategies and targeted interventions designed to overcome the barriers that prevent these populations from enjoying the conditions required for good health. Governments would be held to high standards of good governance, namely inclusive participation, transparency, honesty, accountability and stewardship and the framework convention would empower people to claim their right to health (Gostin et al. 2013). Shortly afterwards, the interest of a framework convention on global health at the WHO level has been focused on one particular purpose: achieving universal health coverage (Ooms et al. 2014).

In this context, the need for fresh thinking about international law in global public health is an important message now being delivered by legal and public health experts (Fidler 1999). In fact, there are three important reasons for studying Global Health Law at the present time. First, the current globalization of public health problems provides a context in which the development of global norms and standards becomes increasingly necessary. Second, the experience of elaborating international agreements in other areas closely related to international health, particularly environmental matters, demonstrates how international agreements can make an impact and how scientific evidence has been employed to support the development of international law. Finally, the experience in negotiating the WHO Convention provides a case study of how transnational public health problems can be addressed by an international approach, and also how scientific evidence in both public health and economics provided a foundation for the development of binding global agreements (Taylor & Bettcher 2000).

The development of binding global public health rules is becoming increasingly important as global interdependence accelerates and nations increasingly feel the need to co-operate to solve essential problems. Although international health law is still in a rudimentary stage of development relative to other fields of international concern, the impact of globalization in public health, both positive and negative, has become key global policy issue. Accordingly health development in the 21st century is likely to include expanded use of international rules. As the world becomes more interdependent, innovative global health development strategies are needed to address the increasingly complex and interrelated health problems (Taylor et al. 2002).

An interdisciplinary approach to global public health inevitably requires the study of Global Health Law for any health care professional. It is undoubtedly necessary to study and analyze the emergence

and development of Global Health Law just because it arises as an important tool to address the phenomenon of globalization of health. Therefore, binding or not, the legal standards of public health are an excellent opportunity for the new context that must be addressed. In this regard, I dare to point out that the future of global public health is directly dependent on the strength of Global Health Law understood in a comprehensive way. Moreover, it should be noted that Global Health Law sometimes acts on public health in an imperceptible way: like the light rain that seems harmless but finally wets the whole body.

Global Health Law and Global Health Diplomacy

International health diplomacy began in 1851, when European states gathered for the first International Sanitary Conference to discuss cooperation on cholera, plague, and yellow fever. National policies not only failed to prevent the spread of the disease but also created discontent among merchants, who bore the brunt of quarantine measures and urged their governments to take international action (Fidler 2001). Nowadays, global health diplomacy brings together the disciplines of public health, international law and economics and focuses on negotiations that shape and manage the global policy environment for health. The relationship between different disciplines is at the cutting edge of global health diplomacy. In this regard, this new interdisciplinary approach promotes the development of a more systematic and pro-active design to identify and understand key current and future changes impacting global public health. Another important task of global health diplomacy consists on building capacity among all the states for the necessary collective action to take advantage of opportunities and mitigate the risks for health.

The academic response for those goals must be the design of specific programs across different and complementary disciplines to train health professionals through cross-disciplinary didactic and experiential learning. There is an additional need for training that brings health and foreign policy professionals together to define the field of health diplomacy within global health (Kickbusch et al. 2007). Of course, Global Health Law must play an important role in this training program.

Configuration and Content of Global Health Law

Overview

The current content of International Health Law includes many different issues. Different authors have mentioned topics as ageing; HIV/AIDS; biomedical science; blood safety; chemical safety; child health; communicable disease control; disabled people; environmental protection; food safety; health services; human experimentation; infant feeding and nutrition; mental health; narcotics and psychotropic substances; nuclear safety and radiation protection; occupational health; organ transplantation; patients‟ rights; pharmaceuticals, medical devices, and cosmetics; refugees, detainees, and internally displaced people; reproductive health; right to health; tobacco control; trade and health; weapons systems; or women‟s health (Taylor et al. 2002). Most of these issues can been systematized in six branches of international law: a) international law in global communicable disease control; b) international trade law; c) international human rights law; d) international environmental law; e) international humanitarian law; and f) international labour law.

International Law in Global Communicable Disease Control

International law played a prominent role in the infectious disease diplomacy of the 19th century. In the modern era, the constitutions, charters and legal framework of most international organizations (WHO, World Trade Organization -WTO-, FAO -Food and Agriculture Organization-) provide international legal mechanisms in forging consensus on a range of issues related to transboundary spread of communicable diseases (Aginam 2002).

Globalization creates challenges for infectious disease policy. These challenges can be horizontal and vertical. Horizontal challenges constitute problems that arise between states from global traffic. Vertical challenges, such as inadequate surveillance capacity, are problems that countries face inside their territories that require responses within states. States cannot handle horizontal or vertical

challenges without cooperating with each other. Unilateral efforts have limited impact when the source of the problem is beyond national jurisdiction. Similarly, unindustrialized countries need assistance to improve domestic public health. International cooperation mechanisms, including international law, are crucial to respond to both types of challenges.

In 1995 WHO recognized that the old IHR did not achieve their twin goals of maximum protection from the spread of international diseases while incurring minimum interference with world traffic. WHO launched an effort to revise the regulations to update the classical regime for new globalization challenges. Furthermore, the WTO became the central horizontal regime for international law on infectious diseases after its creation in 1995. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), and the WTO‟s powerful dispute settlement mechanism made WTO more important for infectious disease control policy than the old and discredited IHR (Fidler 2003).

In the last decades, the world has undergone rapid changes including demographic explosions and massive urbanization, population movement, increase in international trade and travel, emergence of new pathogens, use of techniques which induce new risks, chemical and nuclear accidents, environmental disasters, and introduction of the threat of criminal acts and bioterrorism. To respond to this changing environment, the IHR were revised by World Health Assembly of WHO in 2005 (WHO 2014). This binding agreement significantly contributes to global public health security by providing a new framework for the coordination of the management of events that may constitute a public health emergency of international concern, and improves the capacity of all countries to detect, assess, notify, and respond to public health threats. These regulations also contain a broad range of binding provisions to address the risks of international disease spread in international travel, trade and transportation. Important elements include multiple provisions, whether denominated in terms of human rights or other terminology that are protective of interests of individuals who may be subject to public health measures in this international context (Plotkin 2007).

The purpose and scope of the 2005 IHR, according to article 2, are “to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade”. Moreover, the IHR contain a range of innovations, including: (a) a scope not limited to any specific disease or manner of transmission, but covering “illness or medical condition, irrespective of origin or source, that presents or could present significant harm to humans”; (b) state party obligations to develop certain minimum core public health capacities; (c) obligations on states parties to notify WHO of events that may constitute a public health emergency of international concern according to defined criteria; (d) provisions authorizing WHO to take into consideration unofficial reports of public health events and to obtain verification from states parties concerning such events; (e) procedures for the determination by the Director-General of a “public health emergency of international concern” and issuance of corresponding temporary recommendations, after taking into account the views of an Emergency Committee; (f) protection of the human rights of persons and travellers; (g) the establishment of National IHR Focal Points and WHO IHR Contact Points for urgent communications between states parties and WHO (Foreword of IHR). However, the revised IHR do not create a new enforcement mechanism for addressing compliance failure (Ruger 2008).

Since 15 June 2007 the world has been implementing the IHR. States parties had until 15 June 2012 to meet their IHR core surveillance and response requirements, including at designated airports, ports and certain ground crossings. A majority of states parties, however, have requested and obtained a two-year extension to this deadline and, in exceptional circumstances, may be granted an additional extension, not exceeding two years. As shown, the complete and universal implementation of the IHR seems to be an important task but not without difficulties.

International Trade Law

International trade agreements that liberalize trade between countries usually recognize that states may restrict trade to protect public health. Article XX (b) of the General Agreement on Tariffs and Trade (GATT) only allows each state party to set its measures for protecting human, animal or plant life or health if these restrictions do not represent an „unjustifiable discrimination or a disguised restriction on international trade". Similar provisions exist in other multilateral trade agreements, such as the Treaty on the Functioning of the European Union (2012 TFUE -consolidated version) and the 1992 North American Free Trade Agreement (NAFTA). The conclusion of the Uruguay Round, marked by the Final Act (1994 GATT), transformed the General Agreement on Tariffs and Trade to a permanent organization, the WTO.

The multilateral agreements establishing the WTO have been explained with the metaphor of a tricycle: a driver (WTO), two large wheels (the multilateral agreements on trade in goods and the General Agreement on Trade in Services), and a smaller one, the Agreement on Trade-Related Aspects of Intellectual Property (Berrod & Gippini 1995).

It should be noted that there have been several health controversies in international trade law about the legitimacy of some trade restrictions. In the opinion of Fidler, "their existence at least demonstrates that health affects the dynamics of international trade law and vice versa. It should come as no surprise, then, that scholars have urged WHO to pay more attention to international trade law as part of its mission to protect and promote human health" (Fidler 1999).

We must also remark other international agreements relevant to public health:

a) The Agreement on Sanitary and Phytosanitary Measures (SPS): it sets forth the standards for testing a health measure. Measures must meet both science-based standards and "least restrictive" trade rules. Thus it is more specific than article XX (b) of GATT. SPS Agreement also recognizes the standards of the FAO/WHO *Codex Alimentarius*.

b) The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS): it establishes minimum levels of intellectual property protection that each state must afford to creators. In this way, TRIPS attempts to harmonize protection of intellectual property rights among WTO members using norms developed in industrialized countries. According to article 33, patents for inventions must last for at least 20 years. Some experts had raised concerns that the TRIPS heightened protection of pharmaceutical patents will adversely affect access to patented drugs in low-income countries by raising prices (Fielder 1999). This is why the Doha Declaration on the TRIPS agreement and public health, adopted on 14 November 2001, sets that the TRIPS Agreement does not and should not prevent members from taking measures to protect public health. Accordingly, while reiterating its commitment to the TRIPS Agreement, the Declaration affirms that the Agreement can and should be interpreted and implemented in a manner supportive of WTO members' right to protect public health and, in particular, to promote access to medicines for all. For this purpose, the Declaration recognizes that each member has the right to determine what constitutes a national emergency or other circumstances of extreme urgency, it being understood that public health crises, including those relating to HIV/AIDS, tuberculosis, malaria and other epidemics, can represent a national emergency or other circumstances of extreme urgency.

c) The Agreement on Technical Barriers to Trade (TBT): it sets different rules regarding for the preparation, adoption and application of standards. According to article 2.1, members shall ensure that in respect of technical regulations, products imported from the territory of any member shall be accorded treatment no less favourable than that accorded to like products of national origin and to like products originating in any other country.

International Human Rights Law

The human rights approach constitutes an important tool for challenging globalization's effects. As well known, human rights belong to the universal and indivisible core values and principles of the UN. The right to health as a fundamental right of every human being has been enshrined numerous

international and regional human rights treaties as well as national constitutions. Although the interdependence and interrelatedness of all human rights- civil, cultural, economic, political and social- has been endorsed by all UN Member States, it is only in recent years that health is gaining prominence on the international human rights agenda. Increased efforts are required to ensure that health is addressed as a human right on the same footing, and with the same emphasis, as other human rights in foreign policy processes of UN Member States (WHO 2009).

We have several examples of human rights treaties at the UN level. In this regard, we must mention not only the 1948 Universal Declaration of Human Rigths, that cited health as part of the right to an adequate standard of living (article 25), but the 1966 International Covenant on Economic, Social and Cultural Rights (ICESCR) as well. Article 12 of this covenant explicitly sets out a right to health and defines steps that states should take to "realise progressively... to the maximum available resources...(the) highest attainable standard of health...(including) the reduction of the stillbirth-rate and of infant mortality and for the healthy development of the child...the improvement of all aspects of environmental and industrial hygiene...the prevention, treatment and control of epidemic, endemic, occupational and other diseases...(and) the creation of conditions which would assure to all medical service and medical attention in the event of sickness".

In the other hand, the Constitution of WHO was the first international instrument to enshrine the enjoyment of the highest attainable standard of health as a fundamental right of every human being ("the right to health"). The right to health in international human rights law requires a set of social arrangements - norms, institutions, laws, and an enabling environment - that can best secure the enjoyment of this right. It is an inclusive right extending not only to timely and appropriate health care but also to the underlying determinants of health. In this way, the right to health is subject to progressive realization and acknowledges resource constraints. However, it also imposes on states various obligations which are of immediate effect, such as the guarantee that the right will be exercised without discrimination of any kind and the obligation to take deliberate, concrete and targeted steps towards its full realization. According to WHO, the right to health includes access to timely, acceptable, and affordable health care of appropriate quality and means that states must generate conditions in which everyone can be as healthy as posible (WHO 2013).

In addition to the ICESCR, several regional treaties, such as the 1948 American Declaration of the Rights and Duties of Man; the 1950 European Convention for the Protection of Human Rights and Fundamental Freedoms, or the 1981 African Charter on Human and Peoples' Rights, recognize health as a rights´ issue reflecting a broad consensus on the content of the norms. A review of the international instruments and interpretive documents makes it clear that the right to health as it is enshrined in international law extends well beyond health care to include basic preconditions for health, such as potable water and adequate sanitation and nutrition (Yamin 2005).

The human rights strategy adopted by recent international legal instruments relating to biomedicine seems to be the most appropriate way to manage bioethical issues from a global perspective. Certainly, the search for a global consensus in this area is not free from difficulties, especially because it would be impossible, and indeed unfair, to impose a monolithic, detailed legal framework on societies with different social, cultural and religious backgrounds. This is why the harmonization of principles about biomedical activities must focus on some basic rules (Andorno 2002). The best current example of how to promote the protection of human rights in the biomedical field at a transnational level is the 1997 Oviedo Convention (Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine) which is the first comprehensive multilateral treaty addressing biomedical human rights issue. Some of the principles it contains were already included in more general terms in previous international human rights treaties. However this is the first time that patients´ rights have been developed in one single, multilateral, and binding instrument (Andorno 2005).

International Environmental Law

The vast field of international environmental law is not typically thought of as part of international public health law. But it should not be forgotten that the first objective of the protection of the environment is the safeguard of nature (Kiss 1998). The conceptual link between the human health and environmental protection has been strengthened by the gradual recognition and integration of "sustainable development" within the global environmental agenda. In 1987, the World Commission on Environment and Development defined „sustainable development" as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Taylor 2002).

It is possible to mention a non exhaustive list of treaties or agreements on enviromental protection: the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1989); the Convention for the Prevention of Marine Pollution from Land-Based Sources (1974); the Convention for the Protection of the Ozone Layer (1985); the Convention on Nuclear Safety (1994), the International Convention for the Prevention of Pollution from Ships (1973); the Convention on Persistent Organic Pollutants (2001); the Convention on the Law of the Sea (1982); the UN Framework Convention on Climate Change (1992) developed by the Kyoto Protocol (1997); the Copenhage Accord (2009); the Cancun Agreements (2010); and the Durban Platform for Enhanced Action (2011).

In this regard, international organizations should seek to strengthen capacities to facilitate more fully and effectively the integration of environmental law into efforts to promote global health. A more robust approach to facilitating the development and implementation of international environmental law in the interest of health can be expected to result in significant gains in this area (Von Schirnding et al. 2002).

International Humanitarian Law

This body of international law imposes health-related obligations on belligerents and grants health-related rights to individuals (Fidler 1999). Therefore international humanitarian law includes rules regarding: (a) refugees, detainees, and internally displaced people; and (b) control of weapons, prohibiting the use of any weapon that causes superfluous injury or unnecessary suffering.

It is interesting to bring up the advisory opinion of the International Court of Justice (ICJ) on "Legality of the Use by a State of Nuclear Weapons in Armed Conflict", adopted on 8 julio 1996, that raised some controversial issues in the relationship between public health and nuclear arms control. WHO asked the ICJ for an advisory opinion on whether the use of nuclear weapons by a state could be lawful under international law given the adverse health and environmental consequences of the use of a nuclear weapon. Although the ICJ rejected the claim that WHO had competence under its Constitution to raise the question, the court finally held that international law did not directly prohibit the use of nuclear weapons but required that any use of a nuclear weapon had to comply with all requirements in international humanitarian law (Fidler 1999).

International Labour Law

The working conditions have been typically recognized as determinants of health. The Constitution of International Labour Organization (ILO) sets forth the principle that workers should be protected from sickness, disease and injury arising from their employment. The ILO has adopted more than 40 standards specifically dealing with occupational safety and health, as well as over 40 Codes of Practice. Nearly half of ILO instruments deal directly or indirectly with occupational safety and health issues. These are part of the selected ILO instruments:

a) The 1981 Occupational Safety and Health Convention (No. 155) and its 2002 Protocol. The convention provides for the adoption of a coherent national occupational safety and health policy, as well as action to be taken by governments and within enterprises to promote occupational safety and health and to improve working conditions. This policy shall be developed by taking into consideration national conditions and practice. The Protocol calls for the establishment and the periodic review of

requirements and procedures for the recording and notification of occupational accidents and diseases, and for the publication of related annual statistics.

b) The 1985 Occupational Health Services Convention (No. 161). It provides for the establishment of enterprise-level occupational health services which are entrusted with essentially preventive functions and which are responsible for advising the employer, the workers and their representatives in the enterprise on maintaining a safe and healthy working environment.

c) The 2006 Promotional Framework for Occupational Safety and Health Convention (No. 187). It aims at promoting a preventative safety and health culture and progressively achieving a safe and healthy working environment. It requires ratifying states to develop, in consultation with the most representative organizations of employers and workers, a national policy, national system, and national programme on occupational safety and health.

Other ILO specific instruments for protection against specific risks are the 1960 Radiation Protection Convention (No. 115); the 1974 Occupational Cancer Convention (No. 139); the 1997 Working Environment (Air Pollution, Noise and Vibration) Convention (No. 148); the 1986 Asbestos Convention (No. 162); and the 1990 Chemicals Convention (No. 170).

References:

Aginam O (2001): From Isolationism to Mutual Vulnerability and Back: International Law and Unfair Distribution of Global Disease Burdens, Proceedings of the 95th Annual Meeting of the American Society of International Law: 58-63.
Aginam O (2002): International law and communicable diseases. Bull World Health Organ. 80(12): 946–951.
Andorno R (2002): Biomedicine and international human rights law: in search of a global consensus. Bull World Health Organ 80 (12): 959–963.
Andorno R (2005): The Oviedo Convention: A European Legal Framework at the Intersection of Human Rights and Health Law. Journal of International Biotechnology Law 2 (4): 133-143.
Bélanger M (1989): The future of international health legislation. International Digest of Health Legislation 40 (1): 1-28.
Berrod, F & Gippini, FE (1995): The common institutional framework of the new world trade system. In: The Uruguay Round results: a European lawyer‟s perspective. European Interuniversity Press.
Fidler DP (1996): Globalization, International Law, and Emerging Infectious Diseases. Emerging Infectious Diseases 2 (2): 77-84.
Fidler DP (1998): The Future of the World Health Organization: What Role for International Law?, Vanderbilt journal of Transnational Law 31(5): 1079-1126).
Fidler DP (1999): International Law and Global Public Health. 48 Kansas Law Review 1: 1-58.
Fidler DP (2001): The globalization of public health: the first 100 years of international health diplomacy. Bull World Health Organ 79 (9): 842-849.
Fidler DP (2003): Emerging Trends in International Law Concerning Global Infectious Disease Control, Emerg Infect Dis 9(3): 285–290.
Fidler DP (2008): Global Health Jurisprudence: A Time of Reckoning. Georgetown Law Journal 96 (2) 393-412.
Freeman M, Hawkes S & Bennet B (2014): Law and Global Health. Oxford University Press.
Grad, F. (1998): Public health law: Its forms, function, future and ethical parameters. International Digest of Health Legislation: 49, 19–40.
Gostin LO (2008a): Meeting Basic Survival Needs of the World‟s Least Healthy People Toward a Framework Convention on Global Health. Georgetown Law Journal 96 (2): 333-392.
Gostin LO (2008b): National and Global Health Law: A Scholarly Examination of the Most Pressing Health Hazards. Georgetown Law Journal 96 (2): 317-329.
Gostin LO, Friedman EA, Buse K, Waris A, Mulumba M, Joel M, Dare L, Dhai A & Sridhar D (2013): Towards a framework convention on global health, Bulletin of the World Health Organization; 91:790-793.
Gostin LO (2014): Global Health Law, Harvard University Press.
Gostin LO & Sridhar D. (2014): Global Health and the Law, N Engl J Med; 370:1732-1740.
Harrington J (2004): Towards a Global Health Law (Editorial). Law, Social Justice & Global Development 1: 2-11.
Kaul I, Grundberg I & Stern MA (1999): Defining global public goods. In: Kaul I, Grundberg I, Stern MA, eds. Global public goods. New York, Oxford University Press: 2–19.
Kickbusch I, Novotny TE, Drager N, Silberschmidt G & Alcazar S (2007): Global health diplomacy: training across disciplines. Bull World Health Organ 85(12): 971–973.
Kiss, A (1998): Health legislation and the environment. International Digest of Health Legislation, 49, 207–20.
Lederberg J (1996): Infection emergent. Journal of the american Medical Association, 275(3):243-245.
L'hirondel A & Yach D (1998), Develop and Strengthen Public Health Law, World Health Stat. Q 51(1): 79-87.
Ooms G, Marten R, Waris A, Hammonds R, Mulumba M & Friedman EA (2014): Great expectations for the World Health Organization: A Framework Convention on Global Health to achieve universal coverage. Public Health 128: 173-178.
Plotkin B (2007): Human rights and other provisions in the revised International Health Regulations (2005), Public Health 121: 840–845.

Ruggie R (1995): At home abroad -abroad at home- international liberalization and domestic stability in the new world economy. Millennium Journal of International Studies 24:447-470.
Ruger JP (2008): Normative Foundations of Global Health Law. Georgetown Law Journal 96 (2): 423-443.
Taylor AL & Bettcher DW (2000): WHO Framework Convention on Tobacco Control: a global "good" for public health. Bull World Health Organ 78(7): 920–929.
Taylor AL & Bettcher DW (2002): International law and public health. Editorials. Bull World Health Organ 80 (12): 923.
Taylor AL (2002): Global governance, international health law and WHO: looking towards the future. Bull World Health Organ 80 (12): 975-980.
Taylor AL, Bettcher DW, Fluss SS, DeLand K, & Yach D (2002): International health instruments: an overview. In Oxford Textbook of Public Health, eds. Detels R, et al..Oxford University Press: 359-86.
Von Schirnding Y, Onzivu W & Adede AO (2002): International environmental law and global public health. Bull World Health Organ 80(12): 970–974
WHO (2008): International Health Regulations (2005). Available at: http://whqlibdoc.who.int/publications/2008/9789241580410_eng.pdf?ua=1 (accessed 23.12.2014).
WHO (2009): Consultation Background Document, Global Health and Foreign Policy: Strategic Opportunities and Challenges. Available at: http://www.who.int/hhr/unga_consultation_Eng.pdf (accessed 23.12.2014).
WHO (2013): Fact sheet N°323 Reviewed. Available at: http://www.who.int/mediacentre/factsheets/fs323/en/ (accessed 23.12.2014).
WHO (2014): Early detection, assessment and response to acute public health events: implementation of early warning and response with a focus on even-based surveillance. Interim version. WHO/HSE/GCR/LYO/2014.4. Available at:http://apps.who.int/iris/bitstream/10665/112667/1/WHO_HSE_GCR_LYO_2014.4_eng.pdf(accessed 23.12.2014)
Yach D & Bettcher D (1998): The globalization of public health 1: Threats and opportunities. American Journal of Public Health 88:735-7388.
Yamin AL (2005): The Right to Health Under International Law and Its Relevance to the United States, Am J Public Health. 95(7): 1156–1161.

Links:

University of Georgetown: Global Health Law Research Guide
http://www.law.georgetown.edu/library/research/guides/globalhealthlaw.cfm

University of London: international programmes.
http://www.londoninternational.ac.uk/courses/queen-mary-ucl/specialisation-public-international-law

University Queen Mary University of London: global health, law and governance.
http://www.qmul.ac.uk/postgraduate/coursefinder/courses/121432.html

World Health Organization (WHO): Global school health initiative
http://www.who.int/school_youth_health/gshi/en/

World Health Organization (WHO): fact sheets
http://www.who.int/mediacentre/factsheets/en/

World Trade Organization (WTO): Documents and resources
http://www.wto.org/english/res_e/res_e.htm

International Labour Organization (ILO): Labour standards
http://www.ilo.org/global/standards/lang--en/index.htm

Title:	**N 3.12 HUMAN RIGHTS AND HEALTH**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Fiona Haigh
Address for correspondence	Fiona Haigh Centre for Health Equity Training Research & Evaluation (CHETRE) Part of the UNSW Centre for Primary Health Care & Equity A Unit of Population Health, South Western Sydney and Sydney Local Health Districts, NSW Health A Member of the Ingham Institute Liverpool Hospital Locked Bag 7103 Liverpool BC 1871 E-mail: f.haigh@unsw.edu.au; www.hiaconnect.edu.au
Key words	Human Rights, Human Rights Based Approaches
Topics	Human Rights and Health are intrinsically linked. Health policies and practice can impact positively or negatively on rights and in turn human rights infringements and enhancements can influence health. Increasingly human rights based approaches are being used to strengthen public health policies and programs and as a powerful tool to advocate for the action on the social determinants of health.
Learning objectives	Gain an overview of key human rights concepts and the UN treaty system. Learn about the relationship between human rights and health. Understand the rationale for using human rights based approaches to health.
Teaching methods	Lectures, interactive small group discussions, case studies, and international field practice
Who should apply	Those who pursue an international career in public health management, policy development, research or advocacy; entrance requirements are to be determined by the institution offering the modules
Career opportunities	Teaching and/or research careers in academic environments; leadership positions in the health care sector, policy makers, private industry and Non-Governmental Organisations; free lance consulting
Assessment of students	Report on international field visit (2nd module) and case problem presentations.
COMMENTS on the module by lecturers and students	**???**

Human Rights and Health

Background

Human rights are about the way we live our lives. They set out entitlements that all people possess and corresponding obligations that governments have to respect, protect, and fulfil these rights. The promotion and protection of human rights and the promotion and protection of health are fundamentally linked. The relationship between human rights and health began to gain attention during the HIV/AIDS pandemic in the 80s (Mann et al. 2013). Since then human rights approaches have been adopted by a number international bodies such as the World Health Organisation and UNICEF and health related NGOs such as Amnesty International and the People's Health Movement. There has been growing awareness of the relevance of human rights to global health issues such as HIV/AIDS, tuberculosis and inequalities in access to basic health services and the determinants of health (e.g.Mann et al. 2013). There is a journal dedicated to Health and Human Rights (http://www.hhrjournal.org/), conferences on the topic and a breadth of academic literature available. The links between health and human rights are now well accepted. A systematic review of health and human rights scientific literature spanning 1999-2008 reviewed 928 articles and noted an increase in publications over the time period (Mpinga and Verloo 2011).

Some characteristics of human rights are:

- Human rights approaches have both normative and procedural aspects (ways of thinking and ways of doing).
- Universal - inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion, or any other status.
- Focus on the inherent dignity and equal worth of all human beings
- Are equal, indivisible and interdependent
- Cannot be waived or taken away
- Impose obligations of action and omission, particularly on States and State actors
- Have been internationally guaranteed
- Are legally protected
- Protect individuals and, to some extent, groups

Human Rights Law

International human rights legal obligations arise when a State voluntarily endorses a human rights treaty. All countries have signed up to at least one human rights treaty. To comply with its international human rights obligations, a State must ensure, before it adopts any proposed law, policy, programme or project, that it is consistent with its human rights, as well as other, legal obligations. The main source of human rights law is the Universal Declaration of Human Rights (UDHR) adopted at the United Nations General Assembly 1948, which contains a list of basic rights and proclaiming ―a common standard of achievement for all people and all nations‖. These rights have been implemented through the human rights treaties (United Nations 1948).

There are ten human rights treaty bodies composed of committees of independent experts of recognized competence in human rights that monitor implementation of the core international human rights treaties. In addition to the treaty-based bodies (committees), the UN system also has charter-based bodies. Charter bodies include the Human Rights Council and Special Procedures (and also the former Commission on Human Rights, which has been replaced by the Human Rights Council (HRC)). The HRC is an intergovernmental body, which is composed of 47 elected United Nations Member States who serve for a period of 3 years. The HCR is a forum for discussing human rights. The universal periodic review is one the key elements of the HRC. It involves a review of the human rights records of all 192 UN Member States once every four years. Special Procedures address either specific country situations or thematic issues in all parts of the world. Special Procedures are either an individual –a special rapporteur or independent expert—or a working group. They work on a

voluntary basis, appointed by the Human Rights Council. They examine, advice, and publicly report on human rights situations (the current Special Rapporteur on the Right to Health is Anand Grover).

The Right to Health

The right to health has been enshrined in international human rights law since the Universal Declaration of Human Rights in 1948. The International Covenant on Economic, Social and Cultural Rights (ICESCR) gave it legal force recognising the ―right of everyone to the enjoyment of the highest attainable standard of physical and mental health‖ (United Nations General Assembly 1966). The right is also found in numerous regional and national human rights legislation. All countries are party to at least one human rights covenant that includes the right to health.

In 2000 the Committee on Economic, Social and Cultural Rights (CESCR) produced a general comment clarifying the content of the right to health (United Nations Committee on Economic, Social and Cultural Rights 2000). The General Comment states that the right to health extends not only to timely and appropriate health care but also to the underlying determinants of health, such as access to safe and potable water and adequate sanitation, an adequate supply of safe food, nutrition and housing, healthy occupational and environmental conditions, and access to health-related education and information, including on sexual and reproductive health (Hunt & Leader 2010; United Nations Committee on Economic, Social and Cultural Rights 2000).

The Relationship between Health and Human Rights

Health policies and practice can impact positively or negatively on rights and human rights infringements and enhancements can influence health. For example: mandatory testing and vaccination can infringe on an individual‘s right to liberty and security; compulsory isolation and restriction of movement can infringe one‘s right to liberty of movement and/or right to peaceful assembly; prioritisation of health needs based on existing discrimination rather than actual needs can infringe peoples‘ right to be free of discrimination; or if the government refuses to disclose on what basis it has reached a health policy decision, peoples‘ right to ―seek, receive, and impart information and ideas‖ and ―to take part in the government... directly or through freely chosen representatives‖ may be violated.

Conversely, human rights infringements can also affect individual‘s health. Some health effects are obvious, such as when people are tortured or imprisoned under inhumane conditions. However, there are also less obvious effects, which are at times more far-reaching. They include a) the long-term effects of torture on victims and family; b) the impact on women‘s and children‘s health due to discrimination against women; and c) the inability of people to protect themselves against unwanted pregnancy and sexually transmitted diseases, including human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS), because their right to information is infringed by laws that forbid the provision of contraception information (Haigh 2002).

Human Rights Based Approaches

Traditionally the main approaches to addressing rights violations consist of: litigation; ‗naming and shaming‘; and campaigning (Friedman & Gostin 2012; Hunt 2007). These focus on addressing past and current violations. Recently there has been a move towards broadening the traditional approaches to include tools to incorporate the consideration of rights into policy-making processes. These tools can be used for monitoring the progressive realisation of rights and also to consider potential impacts on human rights before they happen. There are now a number of Human Rights Impact Assessment tools, a few of which focus on the right to health (Bakker et al. 2010; Lor 2011; People‘s Health Movement 2006).

Rights Based Approaches (RBA) are being used by UN organisations, governments, academics and civil society organisations as a way of integrating or mainstreaming human rights into their activities. Alongside this is a growing body of literature (e.g. Aberese Ako et al.2013; Boesen & Martin 2007; Campese et al. 2009; Gready 2009; Gruskin et al. 2010; London 2008; United Nations

2006; Seuba 2006; Tadesse 2012; Yamin 2008). The UN has identified three core components of RBA:

- The main objective of policies and programmes should be the fulfilment of human rights;
- Rights holders and duty bearers are identified and the capacities of rights holders to make claims on duty bearers to meet their obligations should be strengthened;
- Principles and standards from international human rights treaties should guide all development cooperation and programming in all sectors and all phases of the programming process. (United Nations 2006).

As well as calls for new methodologies and tools there has also been a development in the spaces within which human rights are understood to operate. There is movement of human rights fields beyond the traditional spaces of judiciary and governments providing new avenues for the realisation of rights: ―although state officials often intend only lip service to human rights ideals, ―global civil society‖, by which they mean NGOs, then use these legal documents as a basis for calling them to account, with important effects for human rights‖ (Nash 2011). An increasing number of international and civil society organisations have developed right to health campaigns (e.g. People's Health Movement and Amnesty International) and organisations have adopted rights based approaches (e.g. UNICEF, Medecins Sans Frontieres, OXFAM, WHO, Save the Children, World Vision).

Why Human Rights?

Human rights change how we conceptualise problems and people. By applying a human rights framework to health, health is placed in the context of social justice and linked with principles of equity and non-discrimination. Human rights contribute a legally binding and morally compelling framework that allows duty bearers to be held accountable drawing attention to the legal and policy context within which interventions occur (Friedman & Gostin 2012; Gruskin & Tarantola 2013; MacNaughton & Hunt 2009; Scott-Samuel & O'Keefe 2007; Tarantola et al. 2008). Utilising human rights language reconstructs social problems and failures of the poor as rights violations and failures of macro-economic policy (Pemberton et al. 2013). It has been proposed that human rights provide ―the appropriate conceptual structure within which to advance towards health equity through action on the Social Determinants of Health‖ (Solar & Irwin, 2007). The Committee on Economic, Social and Cultural Rights describes how:

> ―The real potential of human rights lies in its ability change the way people perceive themselves vis-à-vis the government and other actors. A [human] rights framework provides a mechanism for reanalyzing and renaming ‗problems' like contaminated water or malnutrition as ‗violations' and, as such, something that need not and should not be tolerated.…Rights make it clear that violations are neither inevitable nor natural, but arise from deliberate decisions and policies. By demanding explanations and accountability, human rights expose the hidden priorities and structures behind violations and challenge the conditions that create and tolerate poverty.‖

Additional Material:

Figure 1: Key health rights concepts

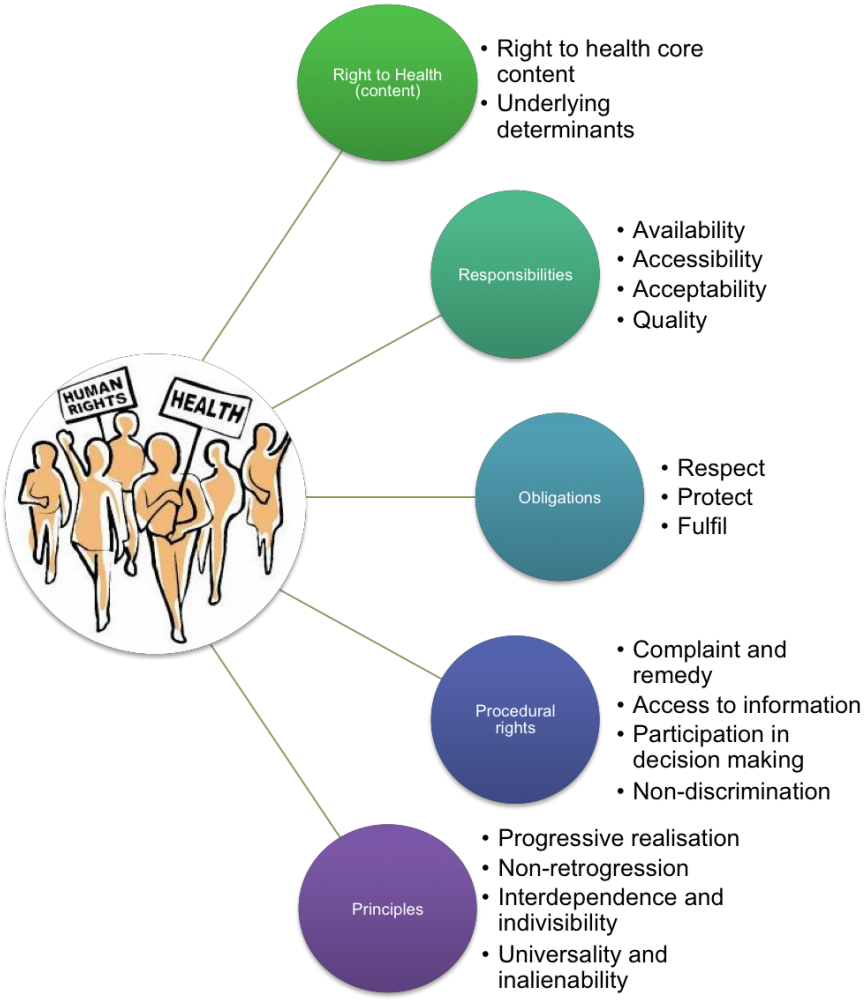


Figure 2: The UN Treaty System (United Nations 2012)

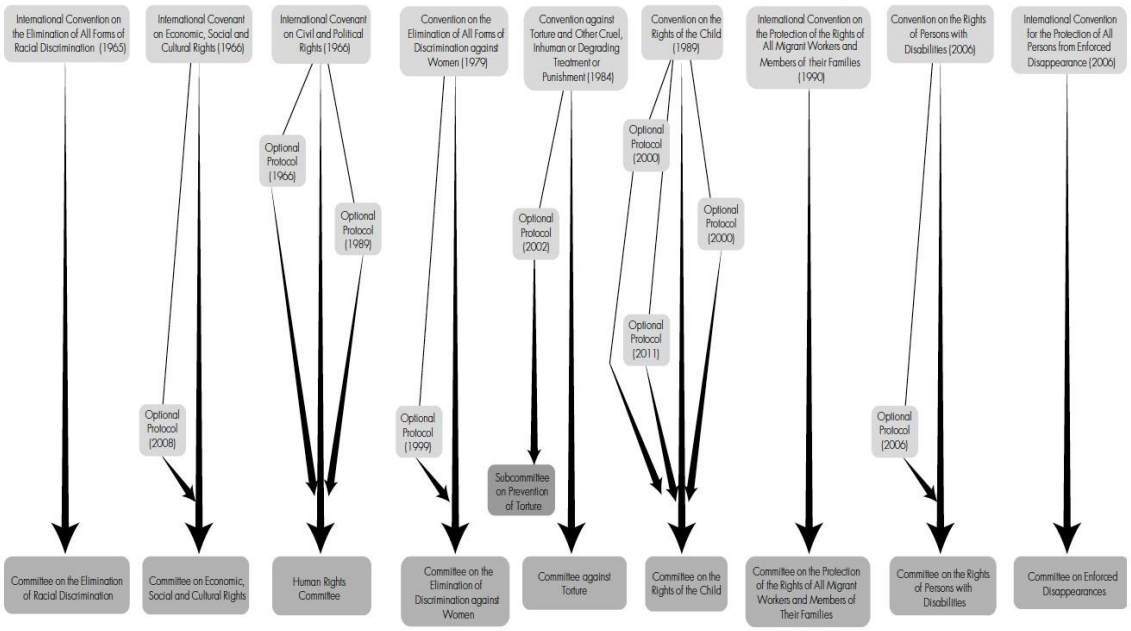


Table 1 Universal Declaration of Human Rights Articles

Article 1	Right to Equality	Article 16	Right to Marriage and Family
Article 2	Freedom from Discrimination	Article 17	Right to Own Property
Article 3	Right to Life, Liberty, Personal Security	Article 18	Freedom of Belief and Religion
Article 4	Freedom from Slavery	Article 19	Freedom of Opinion and Information
Article 5	Freedom from Torture and Degrading Treatment	Article 20	Right of Peaceful Assembly and Association
Article 6	Right to Recognition as a Person before the Law	Article 21	Right to Participate in Government and in Free Elections
Article 7	Right to Equality before the Law	Article 22	Right to Social Security
Article 8	Right to Remedy by Competent Tribunal	Article 23	Right to Desirable Work and to Join Trade Unions
Article 9	Freedom from Arbitrary Arrest and Exile	Article 24	Right to Rest and Leisure
Article 10	Right to Fair Public Hearing	Article 25	Right to Adequate Living Standard
Article 11	Right to be Considered Innocent until Proven Guilty	Article 26	Right to Education
Article 12	Freedom from Interference with Privacy, Family, Home and Correspondence	Article 27	Right to Participate in the Cultural Life of Community
Article 13	Right to Free Movement in and out of the Country	Article 28	Right to a Social Order that Articulates this Document
Article 14	Right to Asylum in other Countries from Persecution	Article 29	Community Duties Essential to Free and Full Development
Article 15	Right to a Nationality and the Freedom to Change It	Article 30	Freedom from State or Personal Interference in the above Rights

Table 2: The AAAQ Plus Six Concepts Framework (Hunt & Macnaughton 2006)

AAAQ	Four essential elements of the right to health.
Available	Health goods, facilities and services must be available in sufficient quantity everywhere in the country.
Accessible	Health goods, facilities and services must be accessible to everyone without discrimination.
Acceptable	Health goods, facilities and services must be culturally acceptable to all people.
Quality	Health goods, facilities and services must be scientifically and medically appropriate and of good quality.
Six concepts	Six concepts crucial to the right to health.
Progressive Realization	The right to health is subject to progressive realization. This means that states must take clear steps toward realizing the right to health for all.
Core Obligation	States have a core obligation for the right to health that applies now. It requires, at least, essential primary health care, and a national health strategy and plan.
Equality and Non-Discrimination	The right to health prohibits discrimination in access to or provision of health care.
Participation	The right to health requires participation by the population in all health-related decision-making at the community, national and international levels.
Information	Access to health information is also essential to the right to health. States must ensure that health information is available and accessible to all.
Accountability	The right to health demands access to effective mechanisms of accountability. This includes judicial remedies at national and international levels.

Exercise:
A total of 14 413 confirmed, probable, and suspected cases of Ebola virus disease (EVD) have been reported in six affected countries (Guinea, Liberia, Mali, Sierra Leone, Spain, and the United States of America) and two previously affected countries (Nigeria, Senegal) up to the end of 11 November 2014. There have been 5177 reported deaths (as of November 2014). Following the WHO Ebola Response Roadmap structure, country reports fall into two categories: 1) those with widespread and intense transmission (Guinea, Liberia, and Sierra Leone); and 2) those with or that have had an initial case or cases, or with localized transmission (Mali, Nigeria, Senegal, Spain, and the United States of America). A total of 570 health-care workers are known to have been infected with EVD: 93 in Guinea; 332 in Liberia; 2 in Mali; 11 in Nigeria; 128 in Sierra Leone; 1 in Spain; and 3 in the United States of America (2 were infected in the USA and 1 in Guinea). A total of 324 HCWs have died.

1. What are some of the human rights issues are involved in the Ebola outbreak?
2. What are the links between the human rights issues and health? Think about how human rights issues are impacting on health and how measures taken to deal with Ebola are potentially impacting on human rights.
3. What steps could you take to help deal with these issues using a human rights based approach?

References:

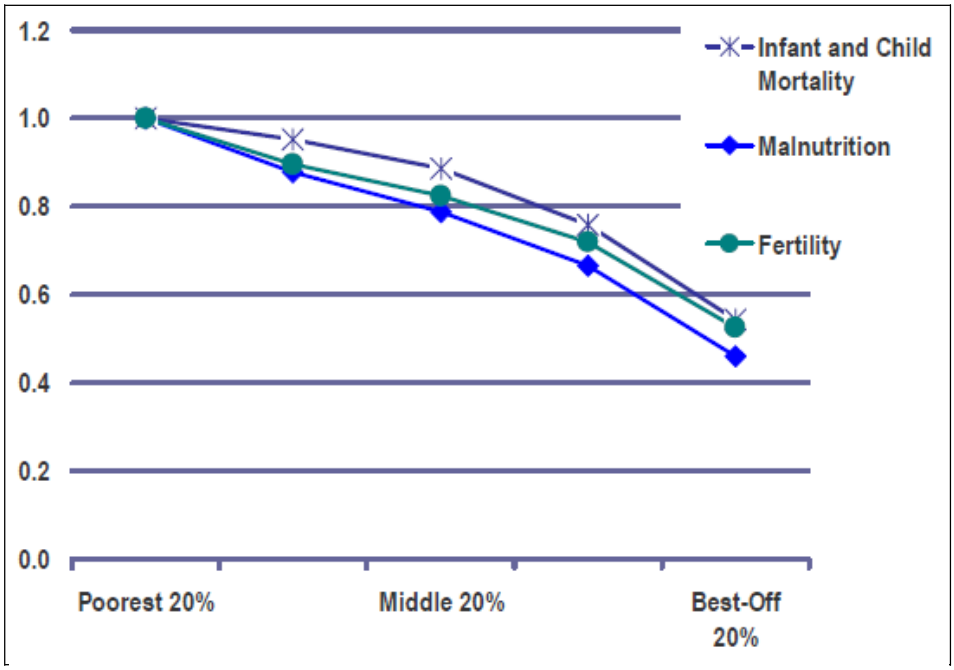
Aberese Ako, M., Anyidoho, N. A., & Crawford, G. (2013). NGOs, Rights-Based Approaches and the Potential for Progressive Development in Local Contexts: Constraints and Challenges in Northern Ghana. *Journal of Human Rights Practice, 5*(1), 46-74. doi: 10.1093/jhuman/hus031
Bakker, S., Plagman, H., & Nederveen, M. (2010). Health Rights of Women Assessment Instrument (HeRWAI). Utrecht.
Boesen, J., & Martin, T. (2007). Applying a Rights-Based Approach. Copenhagen [Denmark].
Campese, J., Sunderland, T. C. H., Greiber, T., Oviedo, G., & eds. (2009). *Rights-based approaches: Exploring issues and opportunities for conservation*. Bogor, Indonesia: Center for International Forestry Research (CIFOR) and and The International Union for Conservation of Nature (IUCN).
Friedman, E., & Gostin, L. (2012). Pillars for Progress on the Right to Health: Harnessing the Potential of Human Rights Through a Framework Convention on Global Health *Georgetown Law: The Scholarly Commons* (Vol. Georgetown Public Law and Legal Theory Research Paper No. 12-075).
Gready, P. (2009). Reasons to Be Cautious about Evidence and Evaluation: Rights-based Approaches to Development and the Emerging Culture of Evaluation. *Journal of Human Rights Practice, 1*(3), 380-401. doi: 10.1093/jhuman/hup021.
Gruskin, S., Bogecho, D., & Ferguson, L. (2010). ‗Rights-based approaches' to health policies and programs: Articulations, ambiguities, and assessment. *Journal of Public Health Policy, 31*, 129-145.
Gruskin, S., & Tarantola, D. (2013). Bringing Human Rights into Public Health. In M. Grodin, D. Tarantola, G. Annas & S. Gruskin (Eds.), *Health and Human Rights in a Changing World*. New York and Abingdon: Taylor and Francis.
Hunt, P. (2007). Report of the United Nations Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of mental and physical health. *UN Doc A/HRC/4/28, 17 January 2007*.
Hunt, P., & Leader, S. (2010). Developing and applying the right to the highest attainable standard of health: The role of the UN Special Rapporteur (2002-2008). In J. Harrington & M. Stuttaford (Eds.), *Global health and humanrights: Legal and philosophical perspectives* (pp. 28-61). New York: Routledge.
Hunt, P., & Macnaughton, G. (2006). Impact assessments, poverty and human rights: A case study using the right to the highest attainable standard of health. Colchester, England.
London, L. (2008). *What is a human rights-based approach to health and does it matter?*

Lor, A. (2011). Public Health and Human Rights Impact Assessment. Publisher: Health and Human Rights Workgroup: Centre for Global Health, Centres for Disease Control and and Prevention; available at: http://www.humanrightsimpact.org/resource-database/toolsets/resources/view/81/user_hria_toolsets/ (Accessed 29 December 2014).
MacNaughton, G., & Hunt, P. (2009). Health impact assessment: The contribution of the right to the highest attainable standard of health. *Public Health, 123*(4), 302-305.
Mann, J., Gostin, L., Gruskin, S., Brennan, T., Lazzarini, Z., & Fineberg, H. (2013). Health and Human Rights. In M. Grodin, D. Tarantola, G. Annas & S. Gruskin (Eds.), *Health and Human Rights in a Changing World*. New York and Abingdon: Taylor and Francis.
Mpinga, E. K., Verloo, H., London, L., & Chastonay, P. (2011). *Health and human rights in scientific literature: A systematic review over a decade*.
Nash, K. (2011). States of Human Rights. *Sociologica, 1*, 1-20.
Pemberton, S., Gordon, D., Nandy, S., Pantazis, C., & Townsend, P. (2013). Child Rights and Child Poverty: Can the International Framework of Children's Rights be used to improve Child Survival Rates. In M. Grodin, D. Tarantola, G. Annas & S. Gruskin (Eds.), *Health and Human Rights in a Changing World*. New York and Abingdon: Taylor and Francis.
People‘s Health Movement (P. s. H) (2006). The Assessment of the Right to Health and Health Care at the country level: A People's Health Movement Guide.
Scott-Samuel, A., & O'Keefe, E. (2007). Health impact assessment, human rights and global public policy: a critical appraisal. *Bulletin of the World Health Organization, 85*(3), 212-217. doi: 10.2471/blt.06.037069
Seuba, X. (2006). A human rights approach to the WHO Model List of Essential Medicines. *Bulletin of the World Health Organisation, 84*, 405-407. doi: 10.2471/BLT.04.019133
Solar, O., & Irwin, A. (2007). A conceptual framework for action on the social determinants of health: Social determinants of health discussion. Geneva.
Tadesse, M. (2012). *A rights-based approach to HIV prevention, care, support and treatment: A review of its implementation in Ethiopia.* (Ph.D), The University of Alabama.
Tarantola, D., Byrnes, A., Johnson, M., Kemp, L., Zwi, A., & Gruskin, S. (2008). Human Rights, Health and Development. *Australian Journal of Human Rights, 13*(2), 1-32.
United Nations General Assembly (1948) Universal Declaration of Human Rights (UDHR). G.A. res. 217A (III), U.N. Doc A/810; available at: http://www.un.org/en/documents/udhr/ (Accessed 29.12.2014).
United Nations General Assembly (1966). International Covenant on Economic, Social and Cultural Rights: Adopted by General Assembly Resolution 2200 (XXI) of 16 December 1966: Art. 12.1; pursuing the Convention of Elimination of All Forms of Racial Discrimination 1965 (Art 5(e) (iv)); and amended by the Convention of Elimination of All Forms of Discrimination Against Women 1979 (Arts. 11.1(f) and 12); and the Convention on the Rights of the Child 1989 (Art 24).
United Nations Committee on Economic, Social and Cultural Rights (2000). Substantive Issues Arising in the Implementation of the International Covenant on Economic, Social and Cultural Rights: The Right to the Highest Attainable Standard of Health *General Comment No. 14, 22nd Session, Agenda Item 3. UN Doc. E/C.12/2000/4*. (Reprinted from: Not in File).
United Nations High Commissioner for Human Rights (2006). Frequently asked questions on a human rights-based approach to development cooperation. Geneva: United Nations HR/PUB/06/8 (ISBN 9211541743).
United Nations (2012). The United Nations Human Rights Treaty System: Fact Sheet No. 30/Rev.1. New York and Geneva: United Nations.
Yamin, A. E. (2008). *Will we take suffering seriously? Reflections on what applying a human rights framework to health means and why we should care*.

Title:	**N 3.13 GLOBAL FINANCIAL MANAGEMENT FOR HEALTH**
Module information	This module can be organized for up to 2 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 20 contact hours of lecturing/supervision; in total: up to 10 contact hours and up to 40 hours assigned to voluntary work, including a field visit and report.
Authors	Dr. Ulrich Laaser[1]
Address for correspondence	1) Faculty of Health Sciences University of Bielefeld D 33501 Bielefeld, Germany POB 100131 E-mail: ulrich.laaser@uni-bielefeld.de
Key words	Global health, global finance, global structures and management, monitoring aid effectiveness, Good Global Governance
Topics	World population growth takes place predominantly in the poor countries of the South whereas most of the resources are available in the North. The economic inequalities are related to key health indicators. Although Official Development Assistance (ODA) and Development Assistance for Health (DHA) grew considerable during the last decade the objective of 0.7% of the Northern GDP to be transferred to the South has not been reached by far. In order to correct the main weaknesses the international community agreed on the so-called Paris indicators but failed the set objectives. The underlying reasons may be sought in the fragmentation and incoherence of international financial assistance.
Learning objectives	(i) To understand international financial management in the health sector (ii) To initiate first international contacts in related areas of interest
Teaching methods	Lectures, interactive small group discussions, case studies and field practice
Who should apply	Managers in global organisations or NGOs, economists, public health specialists etc.
Career opportunities	Management careers in global organisational or academic environments and NGOs
Assessment of students	Written or oral exams, case studies, peer evaluations, team projects
COMMENTS on the module by lecturers and students	Please comment

Background:
We live in a rapidly globalising world, already Horten et al.[1] speak of a planetary health to underline that we all are passengers of a spaceship earth[2], a still growing world population, growing too fast, presently with around 1.5% per year[3,4]; however, this growth takes place mainly in the South whereas the Northern and Western countries have small or even negative growth rates, partly compensated by in-migration from the South. The gap in growth corresponds to vast disparities in wealth, health, and opportunities. Figure 1[5] demonstrates the close link of key health parameters expressed in quintiles which reach a factor around 2 relating highest to lowest quintiles.

Figure 1. Economic Inequalities with Respect to Selected Indicators of Health, Nutrition, and Population Status (The findings are expressed in relative terms, with the level prevailing in the poorest quintile set at 1.0)



Similarly with few exceptions a low Gross Domestic Product per capita (GDP) goes hand in hand with limited access to food and water, low housing standards, incomplete educational coverage, high levels of (hidden) unemployment and high emigration. Not surprisingly also limited access to and low quality of health care services and population health measured as (healthy) life expectancy are running in parallel[6].

Key global strategies to reduce the North-South gap include the primary health care strategy inaugurated by the World Health Organisation (WHO) in Alma Ata 1978[7], and the Millennium Development Goals (MDGs) agreed on by the United Nations in 2000[8] as well as the recent attention to social determinants of health (Rio de Janeiro 2011[9]) and health in all policies (Helsinki 2013[10]). The MDGs will be followed by the Sustainable Development Goals (SDGs) adopted September 2015 by the UN General Assembly[11]. The World Health Organisation (WHO) is the lead global health actor together with other global and regional organisations[12], although not always effectively executing this role[13].

Global financial assistance:
In order to realize better the declared objectives a financial framework has been initiated in the years after World War II and decolonization, originally termed "Foreign Aid", replaced meanwhile by a terminology favouring more equal relationships i.e. cooperation and global solidarity. Assistance to developing countries is increasingly considered a moral obligation, however, more often declared in resolutions than in deeds.

For Official Development Assistance (ODA) a target of 0.7% of the GDP of economically developed countries has been set 35 years ago in paragraph 43 of the 1970 UN General Assembly Resolution, since affirmed repeatedly, e.g. in Monterrey, Mexico in 2002[14]: "We urge developed countries that have not done so to make concrete efforts towards the target of 0.7% of gross national product (GNP) as ODA to developing countries." The reality, however, is as follows: The largest national donors are the US, followed by Germany, Britain and France. However, as percent of their GDPs the US does not even reach 0.2 percent and the other three leading ODA donors are only close to 0.4 percent which corresponds also to the general EU average.

Nevertheless, in absolute terms ODA has over the years increased considerably together with Development Assistance for Health (DAH). DAH nearly doubled from $5.7 billion in 1990 to $10.8 billion in 2001, (again nearly tripling to $28.1 billion by 2011). In 1990 NGOs and private foundations accounted for 11.2% but increased their share up to 30.6% in 2011 with continuing trend. Though, bilateral aid including the European Union[15] still accounts for 46.6%[16]. Another main trend indicates that DAH is channelled increasingly bypassing governments[17] due to an ever more important role of Non Governmental Organisations (NGOs)[18]. Furthermore, in spite of the declarations serious imbalances of DAH can be observed,i.e. the resources are not allocated according to the highest disease burdens, which are found in South Asia and Sub-Saharan Africa[19], but according to e.g. political and economic interests[20]. The Institute for Health Metrics and Evaluation (IHME)[21] revealed that out of 20 countries with the highest all-cause disability adjusted life years (DALYs), only 12 are among the top 20 recipients of DAH. Many scholars consider the General Agreement on Trade in Services (GATS) an even more important determinant of global economic imbalances[22,23], especially with regard to dept management. For every $1 US dollar that Northern countries provide in aid, over $3 comes back in the form of debt servicing. Debt relief would be an important step towards addressing the massive inequalities that currently deform our global relationships and enable debtor countries to make a fresh start towards genuine social and economic development[24].

Moon & Omole[25] summarised deficits in a most scholarly way (see also Ottersen et al.[26]):

a. Existing financial resources dedicated to health fall short of needs.
b. Aid disbursement is irregular and information on future financial flows is uncertain.
c. External financing may displace rather than augment domestic financing for health.
d. Donors continue to drive decision-making at the cost of meeting recipients' greatest needs, which also undermines country ownership.
e) Spending is not rationally allocated on the basis of objective indicators such as recipient income or disease burden.
f) The proliferation of actors involved in DAH has exacerbated the problem of coordination among them, with the predictable consequences of system fragmentation, inefficiencies, confusion, gaps and transaction costs.

g) The existing DAH system has weak mechanisms of accountability.

Monitoring aid effectiveness:
Conferences in Paris 2005[27] and Accra 2008[28], and then in Busan end of 2011[29] agreed on so-called Paris indicators of Aid Effectiveness in order to remedy the system‟s weaknesses. The Paris Declaration on Aid Effectiveness was signed by more than 100 countries and international organizations and confirmed the five principles of ownership, alignment, harmonization, results and mutual accountability. The indicators set for the receiving countries referred to good national development strategies, reliable country systems for procurement and public financial management systems, development and use of results based frameworks, and mutual assessment of progress. On the side of donors, the indicators cover: alignment with country priorities, joint analytic work, use of common arrangements and strengthened country systems, harmonised support for capacity building, and more predictable aid[30].

Table 1[31]: Indicators for Monitoring the Paris Declaration
Note: Whereas in 2005 32 countries participated in the OECD survey, 47 did so in 2007 and 76 in 2010. Some indicator values are based on lower participation.

INDICATORS		**PROGRESS**			**TARGET BY 2010**	**STATUS**
		2005	**2007**	**2010**		
1	Operational Development Strategies % of countries having a national development strategy rated “A” or “B” on a five-points scale	19%	17%	37%	75%	Not met
2a	Reliable public financial management (PFM) system % of countries moving up at least one measure on the PFM/CPIA scale since 2005 (Country Policy and Institutional Assessment)	0%	--	38%	50%	Not met
2b	Reliable Procurement systems % of countries moving up at least one measure on the four-points scale since 2005	--	--	--	--	Too small sample of countries with data to allow for meaningful analysis
3	Aid flows are aligned on national priorities % of aid for the government sector reported on the government‟s budget	44%	48%	41%	85%	Not met
4	Strengthen capacity by coordinated support % of technical cooperation	49%	60%	57%	50%	Met

INDICATORS		PROGRESS			TARGET BY 2010	STATUS
		2005	2007	2010		
	implemented through co-ordinated programmes consistent with national development strategies					
5a	Use of country PFM systems % of aid for the government sector using partner countries‟ PFM systems.	40%	--	48%	55%	Not met
5b	Use of country procurement systems % of aid for the government sector using partner countries‟ procurement systems	40%	43%	44%	No target	--
6	Strengthen capacity by avoiding parallel Project Implementing Units (PIUs) Total number of parallel PIUs	1,696	1,525	1,158	565	Not met
7	Aid is more predictable % of aid for the government sector disbursed within the fiscal year for which it was scheduled and recorded in government accounting systems	42%	47%	43%	71%	Not met
8	Aid is untied % of aid that is fully untied	89%	85%	86%	>89%	Not met
9	Use of common arrangements or procedures % of aid provided in the context of programme-based approaches	43%	47%	45%	66%	Not met
10a	Joint missions % of donor missions to the field undertaken jointly	20%	24%	19%	40%	Not met
10b	Joint country analytic work % of country analytic work undertaken jointly	41%	44%	43%	66%	Not met
11	Results oriented frameworks % of countries with transparent and monitorable performance assessment	7%	--	20%	36%	Not met

INDICATORS		PROGRESS			TARGET BY 2010	STATUS
		2005	2007	2010		
	frameworks					
12	Mutual accountability % of countries with mutual assessment reviews in place	44%	--	38%	100%	Not met

Progress has been made, but globally, donors and developing countries have fallen short of the goals that they set themselves for 2010[32]. Therefore a Global Partnership for Effective Development Co-operation has been mandated to regularly monitor progress[33], in 2014 its first report was released[34]. Tracking systems certainly have to be improved, as outlined by Vassal et al[35].

The underlying reasons:
Nevertheless, there are deeper underlying reasons for the failures in efficiently organizing international assistance as identified in the following overview:

"*One of the obvious reasons for imbalances is the extreme fragmentation and therefore ineffectiveness of international aid. Globally 280 agencies, 242 multilateral funds, 24 Development Banks, 40 UN Organisations, and thousands of NGOs can be identified. Thus, for example, in East Timor (ca. 1 million population) there are more than 1200 donor initiated studies or 1 study on average for less than 1000 inhabitants. That is a better coverage than the number of physicians in many rural regions in the world (in East Timor 1 physician statistically had to serve a population of 10,000 in 2004. In 2007, donors made more than 15,000 visits to 55 partner countries. Vietnam alone received 782 missions in 2007, more than two per working day. In the 1990s, Tanzania was grappling with over 1,500 projects in the health sector - each with its own reporting and oversight mechanisms. For under-resourced ministries in developing countries, these transaction costs can be unbearably high and reduce the value of the aid they receive to almost none. The sheer number of activities creates the need for greater harmonization between donors and alignment with partner country priorities. Especially in developing and transitional societies coordinating capacities and competences are limited when they are facing a complicated and time consuming process of implementing international and bilateral aid efficiently. In addition international and even more bilateral aid very often is disrupting coherent national development plans and priorities.*

The temptation for beneficiary countries to accept international aid without conditions often disrupts national priorities, as is the case if money comes too easily as in some EU funded programs. For example, loans from the World Bank – though at low interest rates – often create an underestimated burden in later years. Loans have two sides: Money is available now but has to be repaid later (especially if by others, i.e., taxpayers in the next generation). In addition, the money mainly returns, via expert fees and purchase of equipment, back to the crediting countries. The resulting question is rarely asked: Is the long-term outcome worth the (national) investment? The answer depends on the structural sustainability of projects, which is often impaired by the limited funding perspective of 2 or 3 years and disconnection of potential follow-up projects."

The deficits in the coordinating capacity of receiving countries became obvious at the turn of the century. A promising though rarely implemented remedy is the Sector-Wide Approach (SWAp)[36], an arrangement whereby donors and government implement an agreed health strategy and try to reduce transaction costs by channelling resources through government systems (not parallel ones of donors) i.e. a Project Implementation Unit (PIU) with the objective of overall budgetary support[37]. If all activities will be under one common sector-wide programme, fully costed, and integrated into a Medium Term Expenditure Framework (MTEF) the Ministry of Health becomes accountable to the population and not just to donors[6].

Outlook:

The root cause of the weakness of the international system is the lack of a strengthened „Good Global Governance" (Laaser[2]): *'In conclusion: What to do? An effective global government will be there – one day. Hopefully not too late! An interim step could be to further strengthen regional collaboration; examples of a successful regionalization of transnational governance including the health sector are the European Union and ASEAN. Beyond that some key areas for advancing global governance can be identified:*

1) The mandate of the World Health Organization needs to be reconsidered in terms of an umbrella to include and coordinate all actions necessary to deal with global health threats.
2) An enlarged mandate of WHO needs to be based on the inclusion of all stakeholders, private or public, beyond the present restriction to national governments.
3) A systematic follow-up on the Monterrey and the Paris/Accra/Busan criteria, making development cooperation more effective.
4) Consider proposals to improve national coordination by Sector-Wide Approaches (SWAp).
5) Transform innovative health and social care practices to education and training. Achieving a transformation of health systems that impact directly and effectively on the health and well-being globally depends on broadening opportunities for learning at all societal levels and across all nations.

Many questions wait for an answer from the global community especially on a more democratic, effective and efficient global governance for health or in other words: What global, regional, national and local structures, organisational principles and mechanisms should ideally evolve in the early decades of this century to improve and sustain global health and well-being, including universal health coverage.'

Exercises:
1) Follow up on the SDGs via the UN websites
2) Follow up on the latest evaluation of the Paris indicators
3) Discuss the underlying causes as outlined in this module by 2 student groups, one from Developing Countries, the other one from Developed Countries.

Case study:
1) Compare 2 or 3 developing countries regarding the health indicators of their population.
2) Develop a draft network of international health professionals for your future work.

References:

[1] Horton R, Beaglehole R, Bonita R, Raeburn J, McKee M, Wall S: From public to planetary health: a manifesto. The Lancet 2014: 383, 9920, 847.
DOI: http://dx.doi.org/10.1016/S0140-6736(14)60409-8.
[2] Laaser U. A plea for Good Global Governance. Front. Public Health; DOI: 10.3389/fpubh.2015.00046. Available at: http://journal.frontiersin.org/article/10.3389/fpubh.2015.00046/full
[3] US Census Bureau International Data Base (IDB). World population. Available at: http://www.census.gov/population/international/ (Accessed 28 March 2013)
[4] Kent MM, Haub C. Global demographic divide. Popul Bull. 2005;60:3-24. Available at: http://www.prb.org/pdf06/60.4GlobalDemographicDivide.pdf (Accessed 28 March 2013)
[5] Gwatkin DR, Shea Rutstein R, Johnson K, Suliman EA, Wagstaff A, Amouzou A. Socio-economic differences in health, nutrition, and population within developing countries. Second edition, Volumes I – III. Washington (DC): World Bank; 2007. Available at: http://siteresources.worldbank.org/INTPAH/Resources/IndicatorsOverview.pdf (accessed 27 March 2013)
[6] Laaser U, Epstein L: Threats to Global Health and Opportunities for Change: A New Global Health. Public Health Reviews 32/1 (2010): 54-89 at http://www.publichealthreviews.eu/upload/pdf_files/7/06_New_GH.pdf (accessed 15.01.2015)
[7] World Health Organization. Declaration of Alma Ata, 1978. International Conference on Primary Care, Alma Ata, Russia, 1978. Available from URL: http://www.who.int/hpr/NPH/docs/declaration_almaata.pdf (Accessed 30 March, 2010).
[8] United Nations General Assembly. Resolution A 55/2: United Nations Millennium Declaration. Available from URL:http://www.un.org/millenniumgoals/pdf/MDG%20Report%202009%20ENG.pdf (Accessed 30 March, 2010).
[9] WHO. (2011). World Conference on Social Determinants for Health: Rio Political Declaration on Social Determinants for Health. www.who.int/sdhconference/declaration/en/ (accessed April 07, 2014).
[10] WHO and Ministry of Social Affairs and Health, Finland. (2013). The 08th Global Conference on Health Promotion, Helsinki, Finland. 10-14 June 2013. The Helsinki statement on Health in All Policies.www.who.int/healthpromotion/conferences/8gchp_helsinki_statement.pdf (accessed April 07, 2014).
[11] Available at: https://sustainabledevelopment.un.org/focussdgs.html (accessed 28 August 2015)
[12] Lueddeke G: Global governance of public health and selected health organisations. http://www.seejph.com/n-3-1-luedeke-global-structures-150313/
[13] Martin-Moreno J, Ricciardi W, Bjegovic-Mikanovic V, Maguire P, McKee M on behalf of 44 signatories. Ebola: an open letter to European governments. *The Lancet* (2014) **384**(9950):1259. doi:10.1016/S0140-6736(14)61611-1.

[14] United Nations. Report of the international conference on financing for development, Monterrey, Mexico. New York (NY): United Nations; 2002. Available from: URL: http://www.un.org/ga/search/view_doc.asp?symbol=A/CONF.198/11&Lang=E (Accessed 1 April, 2010).
[15] European Commission. EU aid explorer. https://euaidexplorer.jrc.ec.europa.eu/ (accessed June 16, 2014).
[16] Institute for Health Metrics and Evaluation (IHME): http://www.healthmetricsandevaluation.org/tools/data-visualization/development-assistance-health-channel-assistance-global-1990-2011-interacti#/overview/stories (accessed October 10, 2013)
[17] Jordan L, van Tuijl P, eds. NGO Accountability: Politics, Principles & Innovations. Sterling, VA: Earthscan 2006.
[18] Laaser U, Brand H: Global Health in the 21st century. Global Health Action 7 (2014). Available at: http://www.globalhealthaction.net/index.php/gha/article/view/23694 (accessed 08.01.2015)
[19] Mathers CD, Lopez AD, Murray CJL. The burden of disease and mortality by condition: data, methods, and results for 2001, (figure 3.11).(ch 3 Relationship between Health Expectancies and Health) In: Lopez AD, Mathers CD, Ezzati M, Jamison DT editors. Global burden of disease and risk factors. Washington: IBRD; 2006. http://www.ncbi.nlm.nih.gov/books/NBK11808/#A323 (accessed June 22, 2014)
[20] Ravishankar N, Gubbins P, Cooley RJ, Leach-Kemon K, Michaud CM, Jamison DT, et al. Financing of global health: tracking development assistance for health from 1990 to 2007. Lancet 2009; 373: 2113 –24.
[21] Institute for Health Metrics and Evaluation. Financing Global Health 2012. The End of the Golden Age? Seattle, WA: IHME (Institute for Health Metrics and Evaluation), 2012. http://www.healthmetricsandevaluation.org/publications/policy-report/financing-global-health-2012-end-golden-age (accessed June 22, 2014)
[22] General Agreement on Trade in Services (GATS). Objectives, coverage and disciplines, Geneva: World Trade Organization. 2009. Available at URL: Http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm6_e.htm (Accessed 29 March, 2010).
[23] Shaffer E, World Federation Public Health Associations. Global trade and public health. World FPHA position paper J Public Health Policy. 2007;28:141-6. Available from URL: http://www.phaa.net.au/documents/submission_ph_int_world_fed_2007.pdf (Accessed 25 April, 2010).
[24] World Federation of Public Health Associations International debt relief (1999). Available from: http://www.wfpha.org/images/resolutions/globalization-and-trade/InternationalDebtRelief.pdf (Accessed 28 August 2015).
[25] Moon S, Omole O. Centre on Global Health Security (The Royal Institute of International Affairs, Chatham House), Working Group on Financing, paper 1 (April 2013) Development Assistance for Health: Critiques and Proposals for Change. http://www.chathamhouse.org/sites/files/chathamhouse/public/Research/Global%20Health/0413_devtassistancehealth.pdf (accessed 22.06.2014)
[26] Ottersen T, Kamath A, Moon S, Røttingen JA. Available: Development Assistance for Health: Quantitative Allocation Criteria and Contribution Norms. Available at: http://www.chathamhouse.org/publications/papers/view/197643#sthash.j0vFwEVa.dpuf
[27] Aid Effectiveness 2011. Progress in Implementing the Paris Declaration. Paris: OECD Publishing 2012. DOI:10.1787/9789264125780-en. http://dx.doi.org/10.1787/9789264125780-en (accessed June 22, 2014).
[28] OECD. Aid Effectiveness: A progress Report on Implementing the Paris Declaration.3rd High Level Forum on Aid Effectiveness. September 2-4, 2008, Accra Ghana siteresources.worldbank.org/ACCRAEXT/Resources/Progress_Report-Full-EN.pdf (accessed June 22, 2014).
[29] http://www.oecd.org/dac/effectiveness/2011surveyonmonitoringtheparisdeclaration.htm (accessed June 22, 2014)

[30] World BankParis Declaration at a Glance. Washington: WB 2006.infoworldbank.org/etools/docs/library/238766/H&A%20Menu%20rev202%20English.pdf (accessed June 22, 2014)
[31] Cited from Laaser U, Bjegovic-Mikanovic V, Lueddeke G: 10.0 Epilogue: „global health, governance and education' in: G. Lueddecke: Global Population Health and Well-Being in the 21st Century: Towards New Paradigms, Policy and Practice. Springer, New York 2015 (in print)
[32] Progress towards more effective aid: What does the evidence show? 4th High Level Forum on Aid Effectiveness. 29 Nov – 1 Dec 2011, Bussan, Korea. http://www.oecd.org/dac/effectiveness/48966414.pdf (accessed June 22, 2014)
[33] http://www.oecd.org/dac/effectiveness/assessingprogresstowardseffectiveaid.htm (accessed June 22, 2014).
[34] OECD/UNDP. Making Development Co-operation More Effective: 2014 Progress Report. Paris: OECD Publishing; 2014. http://dx.doi.org/10.1787/9789264209305-en (accessed June, 2014).
[35] Vassall , Shotton J, Klein-Reshetnyk O, Hasanaj-Goossens L, Weil O, Vohra J, Timmermans N, Vinyals L, Andre : Tracking aid flows for development assistance for health. Global Health Action 2014; **7**: 23510 - http://dx.doi.org/10.3402/gha.v7.23510
[36] Cassels A. Health sector reform: key issues in less developed countries. J Int Dev 1995; 7: 329-347
[37] HLSP Institute: Sector wide approaches: a resource document for UNFPA staff. London: HSLP; 2005. Available from URL: http://www.unfpa.org/upload/lib_pub_file/626_filename_swap-unfpa-resource-2005%20.pdf (Accessed 25 April, 2010).

Title:	**N 3.14 GLOBAL PUBLIC HEALTH FUNCTIONS**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 10 contact hours of lecturing/supervision; in total: up to 50 contact hours and up to 100 hours assigned to voluntary work, including a field visit and report.
Authors	Ehud Miron
Address for correspondence	Ehud Miron MD MPH Ministry of Health - Northern Region District of Nazareth Israel E-mail: ehudmi1@yahoo.com
Key words	Public health functions and operations, governance, leadership, ways forward
Topics	As early as 1988 a paper published by the US Institute of Medicine lay down the basis for the functions of public health by defining three core functions which fall under the responsibility of the government. Following soon after a group of US public health agencies defined the 10 Essential Public Health Functions. Other models which define what the Public Health system should be doing at the different organisational levels – local, regional and national were developed by non-US agencies as well. A globally accepted terminology of basic public health functions is essential for global health partnerships where global governance structures are growing including the civil society.
Learning objectives	Understand the concepts and the language of the public health functions and the resulting effect at all levels upon adoption of a public health functions model. Assess the benefit of a globally accepted framework for public health functions. Acquisition of knowledge and skills needed to use a public health functions system approach to organizing and evaluating a public health system at any level.
Teaching methods	Lectures, interactive small group discussions, case studies, and international field practice
Who should apply	Those who pursue an international career in public health management, policy development, research or advocacy; entrance requirements are to be determined by the institution offering the modules
Career opportunities	Teaching and/or research careers in academic environments; leadership positions in the health care sector, policy makers, private industry and Non-Governmental Organizations; freelance consulting
Assessment of students	Report on international field visit (2nd module) and case problem presentations.
COMMENTS on the module by lecturers and students	Please comment here:

The Public Health functions concept came into being as a result of the necessity to improve the structure and sustainability of public health agencies in the US.
An examination of Shattuck's contribution to public health in the US in his 1850 report [1] which delineates a set of activities and actions organized at state and local level already demonstrates the source of potential conflict in the organization of public health systems.
In 1945 a report to the American Public Health Association defined 6 "basic" functions for local public health departments [2] and the landmark 1988 Institute Of Medicine's report "The future of Public Health" set a group of 3 core functions for public health [3].
One of the major limitations of the models devised for organizing public health was in their emphasis on governmental public health. A second limitation was in either being too vague in definitions or being too specific – as far as going into provision of specific services rather than areas of activity.

The next step in the development of public health essential functions came as the US Centers for Disease Control and Prevention (CDC) Public Health Program Practice Office and the Office of Health Promotion and Disease Prevention, along with several public health organizations and agencies established a set of Ten Essential Public Health Services (10 EPHS).

The 10 EPHS defined were:

1. Monitor health status to identify and solve community health problems.
2. Diagnose and investigate health problems and health hazards in the community.
3. Inform, educate, and empower people about health issues.
4. Mobilize community partnerships and action to identify and solve health problems.
5. Develop policies and plans that support individual and community health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. Assure competent public and personal health care workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10. Research for new insights and innovative solutions to health problems.

As the 10 EPHS gained acceptance in the US public health organizational environment they have evolved as the basis for assessing the delivery of services and more important for measuring effectiveness of the public health system. The EPHS allowed a view beyond the services provided by the governmental public health entities and into the partnerships and collaborations which are required and which define the public health system.
The necessity for a wider scope of vision was enhanced as the current US public health system was required to face new challenges or prepare to face expected challenges [4].
The complexity of the US public health system is increased by the diversity in local public health departments and the existence of a three level system - local, state and federal [5].
When used locally or nationally the EPHS model has allowed analysis, benchmarking and performance measurement and improvement [6].

The US was not alone in attempting to structure its public health system in a manner that would allow measurements, benchmarking and a greater degree of professionalization.
One of the first no-US adoptions of the EPHS model was the Pan-American Health Organization's (PAHO) version of the EPHS which was adapted to suit a national one level public health system [7]. In the PAHO model the services became functions and the model was termed EPHF.
PAHO examined 41 countries and territories using the EPHF model and was able to map gaps in performance in the participating countries and make recommendations to improve the gaps discovered in the assessment process.
The World Health Organization (WHO) examined the public health systems in three countries in the western pacific potential using the EPHF-PAHO model and the report yielded both an analysis of each countries performance in public health and an international comparison between the three countries examined - Vietnam, Malaysia and Fiji [8].
Canada [9], Australia [10] and the UK [11] have all come up with their own versions of essential or core functions as part of reforms or initiatives to strengthen their public health systems.
The European experience with Essential Public Health functions has been a later one, introducing a model of public health core operations [12], which was later developed further and adopted at WHO-Europe level [13].
As several frameworks for functions have evolved [13] it has become increasingly difficult to achieve an accepted terminology that would serve as a common language for looking at the public health systems at any level – be they local, national or international [14].
The challenges facing Public Health at the start of the 21st century in different regions of the world are similar [15]. The attempts to handle these challenges at local, national or international level are greatly affected by the ability to structure the public health system in a manner which will allow each of the public heath entities on the one hand to be active and independent while on the other hand to

work in partnership or collaboration with the other entities in the system. Otherwise activities are still fragmented, poorly coordinated and of limited scope and effectiveness.
The criticism directed at the current models stems from the abundance of models and the lack of a globally accepted set of functions or services that would serve as the basis for a common vocabulary and allow the creation of standards and performance measurements.
The current major models were examined in a recent work and the differences between the models underline their limitations as being too country-specific or region specific while the similarities mark the common ground for public health [16].
It is therefore a rational assumption that a model which would be adopted widely would confer the same benefits and also create an international basis for comparison between public health systems [17]. A proposal of the World Federation of Public Health Associations is presented in module N1.2: N 1.2 Nurse: Global Public Health: Definitions and Challenges.

References:

1. Shattuck, L., *Prophet of American Public Health.* Am J Public Health Nations Health, 1959. **49**(5): p. 676-677.
2. Emerson, H., *Local health units for the nation.* Local Health Units for the Nation., 1945.
3. Health, I.o.M.C.f.t.S.o.t.F.o.P., *The future of public health*. Vol. 88. 1988: National Academy Press.
4. Baker, E.L., et al., *The public health infrastructure and our nation's health.* Annu Rev Public Health, 2005. **26**: p. 303-18.
5. Erwin, P.C., *The performance of local health departments: a review of the literature.* J Public Health Manag Pract, 2008. **14**(2): p. E9-18.
6. Brownson, R.C., et al., *Fostering more-effective public health by identifying administrative evidence-based practices: a review of the literature.* Am J Prev Med, 2012. **43**(3): p. 309-19.
7. Pan American Health Organization., *Public health in the Americas : conceptural renewal, performance assessment, and bases for action*. Scientific and technical publication. 2002, Washington, D.C.: Pan American Health Organization. xvii, 379 p.
8. Organization, W.H., *Essential public health functions: a three-country study in the Western Pacific Region.* 2003.
9. British Columbia. Ministry of Health Services., British Columbia. Population Health and Wellness., and British Columbia Government EBook Collection., *A framework for core functions in public health, resource document*, 2005, Population Health and Wellness, Ministry of Health Services,: Victoria, B.C. p. 1 online resource (iii, 103 p.).
10. National Public Health Partnership (Australia), *Public health practice in Australia today : a statement of core functions*. Public health planning and practice improvement. 2000, Melbourne: National Public Health Partnership. 7 p.
11. Great Britain. Department of Health., *Modernising the NHS : shifting the balance of power in the West Midlands ; consultation on the proposal to establish a new Health Authority for the West Midlands North*. 2001, Birmingham: Department of Health. 29p.
12. Koppel, A., A. Leventhal, and M. Sedgley, *Public health in Estonia 2008. An analysis of public health operations, services and activities.* 2009.
13. Organization, W.H., *Strengthening public health capacities and services in Europe: a framework for action. Regional Committee for Europe, Sixty-first Session. Baku, Azerbaijan, 12Á15 September 2011 (EUR/RC61/10'EUR/RC61/Conf. Doc./3), Copenhagen. Available from: ht tp*, 2012.
14. Jorm, L., S. Gruszin, and T. Churches, *A multidimensional classification of public health activity in Australia.* Aust New Zealand Health Policy, 2009. **6**: p. 9.
15. Beaglehole, R. and NetLibrary Inc., *Global public health a new era*, 2003, Oxford University Press,: Oxford ; New York. p. xx, 284 p. ill. 22 cm.
16. Laaser, U. and H. Brand, *Global health in the 21st century.* Glob Health Action, 2014. **7**: p. 23694.

17. Scutchfield, D.F., E. Miron, and R.C. Ingram, *From service provision to function based performance - perspectives on public health systems from the USA and Israel.* Isr J Health Policy Res, 2012. **1**(1): p. 46.

Title:	**N 4.0 GOING GLOBAL**
Module information	This module can be organized for up to 5 ECTS, corresponding per ECTS to 30 hours student workload, thereof around 5 contact hours of lecturing/supervision at the beginning of the module; in total: up to 25 contact hours and up to 125 hours assigned to a field visit and master thesis.
Authors	Ulrich Laaser
Address for correspondence	Ulrich Laaser MD, PhD, DTM&H, MPH Faculty of Health Sciences University of Bielefeld POB 100131 D 33501 Bielefeld E-mail: ulrich.laaser@uni-bielefeld.de; laaseru@gmail.com
Key words	Education and research for global health practice
Topics	A regionalized even fragmented world – as it was – is converging rapidly in our days at the beginning of the 21st century. Countries embark increasingly on global arrangements (like e.g. the World Trade Organisation) and a globalizing civil society – supported by mobile technologies – connects across borders. At the same time unprecedented waves of migration diversify the Northern societies and deplete the qualified workforce in the South. Social disruption, military conflict, and climate change create increasingly a 90/10 situation where 90% of the global disease burden affects the South but only 10% of the world‟s resources are available there. This module should complement the global health studies/modules offered in the student‟s teaching and training institution (School of Public Health, Faculty of Medicine, Social Sciences, Economics etc. by field/practice experience. The format is oriented towards a 2nd Bologna Cycle Master of Public Health but can in a modified version also be applied to the 1st or 3rd cycle. There are 4 elements relevant for the field study: Evaluate the impact of globalisation on health locally Explore and analyse the reactivity of local/regional governance on the impact of globalisation Analyse the status of local/regional/transnational collaboration between stakeholders Suggest operational solutions for identified deficits and evidence based interventions.
Learning objectives	• Understand the mutual impact of globalization on local/regional health settings and vice versa • Focus on interventions where the competence acquired during the studies can be used either for planning, managing, or evaluation.
Teaching methods	The lecturers should help the students to identify and successfully act in a selected field setting and provide them with supportive supervision throughout the entire process of designing their practice project, collecting and analyzing data, and thesis writing.
Who should apply	All students who are interested in global health and plan for a corresponding career.
Career opportunities	Teaching and/or research careers in academic environments; leadership positions in regional and global organisations, policy makers, private industry and Non-Governmental Organisations; free lance consulting.
Assessment of students	Assessment of project report according to thesis requirements at the hosting institution.

COMMENTS on the module by lecturers and students	Please comment here:

Going global

As the possibilities and requirements in each study programme are different, be it 1st or 2nd cycle education or Continuing Professional Development, it is recommended here to make sure that the student has the necessary knowledge to execute his field study successfully and to amend the student‟s skills where necessary. Therefore the up to 25 contact hours recommended should mainly be devoted to personal counselling and revising. Only sometimes it may be possible to group students together. Most of the student‟s time (up to 125 hours) is required to travel to the site of study and stay there, to collect data „sur place‟ and to analyse and summarise the results. In some instances field studies may be replaced by analysis of readily available databases, however, this is not recommended where other options are possible as the student is missing then the essential contact with the field, especially in third world countries. Likewise the field studies should always be arranged outside of the training institution‟s national environment. A general overview of organisations potentially being helpful in providing opportunities for international studies is given in module 3.1 on Global Structures by Dr. George Lueddeke as cited below ((see also: Lueddeke G (ed.) Global Population Health and Well-Being in the 21st Century – Towards New Paradigms, Policy, and Practice. Springer, New York: 2015; in print):

III. Leading Global, Regional and National Health Organisations

The numbers of leading health organizations worldwide are many and varied. They function at global, regional, and national levels, and differ in terms of scope as well as remits: public health, clinical care, education/research, regulatory, and so forth.

Global Health Organisations

The World Health Organisation

Globally, the World Health Assembly is the supreme decision-making body for WHO.It generally meets in Geneva in May each year, and is attended by delegations from all 194 Member States. Its main function is to determine the policies of the Organization. The Organization is headed by the Director-General, who is appointed by the Health Assembly on the nomination of the Executive Board In addition to medical doctors, public health specialists, scientists and epidemiologists, WHO staff include people trained to manage administrative, financial, and information systems, as well as experts in the fields of health statistics, economics and emergency relief. WHO is represented in five regions of the world: Africa, Americas, South-East Asia, Europe, Eastern Mediterranean, and Western Pacific.

WHO fulfils its public health objectives through its core functions:

- providing leadership on matters critical to health and engaging in partnerships where joint action is needed;
- shaping the research agenda and stimulating the generation, translation, and dissemination of valuable knowledge;
- setting norms and standards and promoting and monitoring their implementation;
- articulating ethical and evidence-based policy options;
- providing technical support, catalysing change, and building sustainable institutional capacity; and
- monitoring the health situation and assessing health trends.”

The World Federation of Public Health Associations (WFPHA)

„Launched in 1967, WFPHA is an international, nongovernmental organization composed of multidisciplinary national public health associations. It is the only worldwide professional society

representing and serving the broad field of public health. WFPHA‟s mission is to promote and protect global public health. It does this throughout the world by supporting the establishment and organizational development of public health associations and societies of public health, through facilitating and supporting the exchange of information, knowledge and the transfer of skills and resources, and through promoting and undertaking advocacy for public policies, programmes and practices that will result in a healthy and productive world‟.

The World Health Summit
„Following the inaugural World Health Summit (WHS), organized in 2009 on the occasion of the 300th anniversary of the Charité – Universitätsmedizin Berlin, the WHS is being held annually and became the pre-eminent international forum for global health. Underpinned by the M8 Alliance of Academic Health Centres, Universities and National Academies, the World Health Summit is organized in collaboration with the National Academies of Sciences of more than 67 countries and their InterAcademy Medical Panel (IAMP). The World Health Summit‟s mission is to bring together representatives from academia, politics, the private sector, and civil society to address the most pressing issues facing medicine and healthcare over the next decade and beyond‟.

Regional Health Organisations

The Association of Schools of Public Health in the European Region (ASPHER)
„ASPHER the key independent European organization dedicated to strengthening the role of public health by improving education and training of public health professionals for both practice and research. Founded in 1966, ASPHER has over 100 institutional members located throughout the European Region of WHO. It is represented in 42 countries in Europe, with more than 5000 academics employed in its member institutions‟.

The European Public Health Association (EUPHA)
„EUPHA is an umbrella organization for public health associations and institutes in Europe. Founded in 1992 by 15 members (12 countries), EUPHA now has 68 members from 40 countries. It is an international, multidisciplinary, scientific organization, bringing together around 14,000 public health experts for professional exchange and collaboration throughout Europe‟.

The African Federation of Public Health Associations (AFPHA)
„Established in 2011, AFPHA is a nonprofit association composed of national associations of public health in Africa whose activities contribute to the strengthening of public health in the continent. The Federation will serve as a platform to collectively advocate for and voice Africa‟s health concerns and required actions needed to achieve the highest standard of health of its people. Furthermore, the AFPHA will also serve as a forum for knowledge, experiences and information exchange among public health professionals towards Africa‟s contribution to the Region‟s and to Global public health‟.

National Health Organizations

The American Public Health Association (APHA)
„APHA is a community of people and organizations interested in public health. Founded in 1872 by Dr. Stephen Smith, the Association champions the health of all people and all communities; strengthens the profession of public health; creates understanding, engagement and support for key public health issues; and is the only organization that is influencing directly federal policy to improve public health. As the nation‟s leading public health organization, APHA is evidence-based and speaks out for public health issues and policies backed by science. In addition to APHA‟s 25,000 individual members, the organization represents another 25,000 individuals and organizations who are members of affiliated state and regional public health associations‟.

The Chinese Preventive Medicine Association (CPMA)
„CPMA, established 1987, is a non-profit national academic institution, comprised of voluntary scientific and technological workers in the fields of public health and preventive medicine in its

membership. Under the direct administration of the Ministry of Health and legally registered with the Ministry of Civil Affairs, CPMA is also a member of the China Association for Science and Technology (CAST). As such, it serves as an important social agent in promoting the development of public health and preventive medicine within China".

The Public Health Foundation of India (PHFI)
„PHFI is a public- private initiative formed to redress the limited institutional capacity in India for strengthening training, research and policy development in the area of public health. Structured as an independent foundation, PHFI adopts a broad, integrative approach to public health, tailoring its endeavors to Indian conditions and bearing relevance to countries facing similar challenges and concerns. The Prime Minister of India, Dr. Manmohan Singh, launched PHFI on March 28, 2006 at New Delhi. Under the governance structure adopted by the Society, the Foundation is governed by a fully empowered, independent, General Body (comprising of all the members of the Society) that has representatives from multiple constituencies - government, Indian and international academia and scientific community, civil society and private sector".

Schools and Institutes of Public Health

BRAC University James P Grant School of Public Health (JPGSPH)
„JPGSPH was founded in 2004 as a collaborative effort between BRAC University, BRAC and icddr,b (the International Center for Diarrhoeal Disease Research, Bangladesh - an international health research institution located in Dhaka). The School was named after former Executive Director of UNICEF the late James P. Grant whose energy and vision was a major force behind the child survival and development revolution. In January 2005, JPGSPH initiated its flagship Masters of Public Health (MPH) program with the aim of developing public health leaders. Grant"s legacy is one that inspires the School"s mission in the 21st century - to harness knowledge and know-how in pursuit of health equity".

Maastricht University School for Public Health and Primary Care (CAPHRI)
„CAPHRI is the largest of six Maastricht Graduate Schools. Maastricht is well known for its expertise in the prevention of diseases, diagnostic and prognostic research in primary care and public health, the promotion of healthy behaviour, and the redesign of healthcare services. CAPHRI plays a pivotal role in the Maastricht, as it finds itself at the forefront of scientific, innovative, applied, ethical, and policy-related research in public health and primary care. CAPHRI coordinates research, PhD training and Master"s education".

A general overview on Global Health is provided by Laaser U, Brand H: Global Health in the 21st Century. Global Health Action 7/2014 at:
http://www.globalhealthaction.net/index.php/gha/issue/current.

For instruction of students in order to qualify them for a successful high quality field work, the most relevant chapters of the 2 handbooks published by the Forum for Public Health in Southeastern Europe (2nd edition 2013) are marked green in their tables of content (tables 1 &2):

1) A Handbook for Teachers, Researchers and Health Professionals: Health: Systems – Lifestyle – Policies. Editors: Burazeri G, Zaletel Kragelj L; Assistant editor: Petrela K. Volume I, 2nd edition; Jacobs Publisher, Lage 2013, 455 p., ISBN: 978-3-89918-806-6; free of charge. Available at: http://www.seejph.com/wp-content/uploads/2013/10/Volume-I-Health-Systems-Lifestyle-Policies.pdf

Table 1: Table of contents: Health: Systems – Lifestyle – Policies

MODULE	AUTHOR/S
A. THE HEALTH CARE SYSTEM	
1. The role and organization of health systems	D. Donev, L. Kovacic, U. Laaser
2. The management cycle: from planning to evaluation	L. Kovacic, Z. Jaksic
3. Hospitals as part of cultural and social development	Z. Jaksic
4. Integration of hospitals with other health services	Z. Jaksic
5. Hospital management coping with crisis	Z. Jaksic
6. Primary health care	Z. Jaksic, L. Kovacic
7. Mental health care	V. Svab, L. Zaletel-Kragelj
8. Education and training as part of health practice	Z. Jaksic, H.R. Folmer, L. Kovacic
9. E-health	I. Erzen
10. Health care: levels and limits	L. Kovacic, Z. Jaksic
11. Reorientation of health services	I. Erzen, L. Zaletel Kragelj, J. Farkas
B. PUBLIC HEALTH	
12. The framework of public health	V. Bjegovic-Mikanovic, G. Burazeri, U. Laaser
13. Public health services – organization and challenges	I. Erzen, L. Zaletel Kragelj
14. Disability-adjusted life years as a key tool for the analysis of the burden of disease	A. Galan, A. Cucu
15. Advertising public health services	D. Sidjimova, M. Sidjimov, M. Dyakova
16. Introduction to occupational health	P. Bulat
17. The public health strategy of the European Union	T. Hofmann
C. LIFESTYLES AND HEALTH	
18. Food and human health	J. Hyska, G. Burazeri, E. Mersini, G. Qirjako
19. Healthy nutrition	G. Sbutega Milosevic, J. Ilic Živojinovic, M. Maksimovic
20. Unhealthy nutrition and physical inactivity	L. Georgieva, K. Lazarova, G. Burazeri
21. Harmful alcohol consumption	L. Georgieva, G. Burazeri, K. Lazarova, G. Genchev
22. The public health significance of smoking	L. Georgieva, B. Borisova, K. Lazarova
23. Stress as a determinant of health	D. Sidjimova, M. Dyakova, T. Vodenicharov
24. Unemployment as a determinant of health	T. Elkeles, W. Kirschner
D. ENVIRONMENTAL HEALTH	
25. Weather and climate: concept and assessment	V. Kendrovski
26. Air pollution and health effects	G. Qirjako, J. Hyska, G. Burazeri, E. Roshi, L. Georgieva
27. Public health aspects of non-ionizing radiation	E. Stikova
E. HEALTH PROMOTION	
28. "Health needs" concept	L. Zaletel-Kragelj, I. Erzen, M. Premik
29. Priority setting for community health	M. Santric-Milićevic
30. Health promotion and community capacity development	M. Santric-Milićevic, V. Bjegovic-Mikanovic, S. Matovic-Miljanovic
31. Oral health promotion and oral diseases prevention	B. Artnik

32. Functional assessment of elderly people	B. Matejic, Z. Terzic
33. Health literacy	A. Jovic-Vranes, V. Bjegovic-Mikanovic
34. Inequalities in health	B. Artnik
F. HEALTH POLICY	
35. Health services management	Z. Terzic, V. Bjegovic-Mikanovic, Z. Nikolic
36. Economic appraisal as a basis for decision making in health systems	H. Wenzel, B. Hysa
37. Payment methods and regulation of providers	D. Donev, L. Kovacic
38. Components of a public health strategy	A. Galan, O. Lozan, N. Jelamschi
39. Health legislation: procedures towards adoption	L. Zaletel-Kragelj, M. Kragelj
40. Socio-economic factors – key determinants of health	G. Burazeri, I. Mone, L. Georgieva, U. Laaser
41. Health policy analysis and development	N. Milevska-Kostova, E. Stikova, D. Donev
42. Politics, policies and health	C. Bambra, D. Fox, Scott-Samuel
G. GLOBAL HEALTH	
43. Violence - a global public health problem and universal challenge	F. Tozija, A. Butchart
44. Global public health treats and disaster management	E. Stikova, P. Lazarevski, I. Gligorov

2) A Handbook for Teachers, Researchers and Health Professionals: Health Investigation: Analysis – Planning – Evaluation. Editors: Burazeri G and Zaletel Kragelj L; Assistant editors: Petrela K and Muja H. Volume II, 2nd edition; Jacobs Publisher: Lage 2013, 579 p., ISBN 978- 3-89918-807-3, free of charge. Available at: http://www.seejph.com/wp-content/uploads/2013/12/Volume-II-Health-Investigation.pdf

Table 2: Health Investigation: Analysis – Planning – Evaluation

MODULE	AUTHOR/S
A. STUDYING POPULATION HEALTH	
1. Introduction to the measurement of health and disease	T. Pekemezovic, T. Gazibara
2. Organizing and describing data	L. Zaletel-Kragelj
3. Frequency measures: prevalence and incidence	L. Zaletel-Kragelj
4. Age standardization: the direct method	J.Bozikov, L. Zaletel-Kragelj, D.Bardehle
5. Measures of central tendency and dispersion	G. Grancharova, S. Aleksandrova
6. Measures of location: quantiles	G. Grancharova, S. Aleksandrova
7. Frequency measures: estimating risk	L. Zaletel-Kragelj, J. Bozikov
8. Measures of association and potential impact	L. Zaletel-Kragelj
9. Absolute risk assessment: from theory to practice	M. Dyakova E.Karaslavova E. Shipkovenska
10. Introduction to epidemiological studies	E. Roshi, G. Burazeri, E. Toci
11. Features of epidemiological studies	L. Zaletel-Kragelj, I. Erzen, D. Donev
12. Ecological studies	L. Zaletel-Kragelj, I. Erzen
13. Cross-sectional studies	L. Zaletel-Kragelj, I. Erzen
14. Health surveys as a powerful tool in planning public health interventions	L. Zaletel-Kragelj, I. Erzen
15. Cluster analysis	A.Vitcu
16. Introduction to intervention studies	T. Pekemezovic, L. Zaletel-Kragelj, T. Gazibara
17. Public health intervention programmes and their evaluation	L. Zaletel-Kragelj, J. Maucec Zakotnik, Z. Fras
B. SPECIAL METHODS AND APPLICATIONS	
18. Surveillance	I. Klavs
19. Delphi analysis	N. Milevska-Kostova, W.N. Dunn
20. The Geographic Information System (GIS): the example of traffic air pollution	A. Kukec, R. Fink, S. Erlih, I. Erzen
21. Basic occupational health indicators of sick leave	M. Bilban, L. Zaletel-Kragelj
22. Oral health indicators in Europe	B. Artnik
23. Outbreak investigation	M. Socan
24. Evaluation in health promotion	A. Cucu,
25. Violence against women: measurement and indicators	B. Djikanovic
26. Quality of life: measurement and cultural adaption	Z. Terzic, B. Matejic
27. Distance learning in health education	I. Masic
28. Human resource management	S.G. Scintee
C. PLANNING AND EVALUATION	
29. Health databases, health indicators and health	D. Bardehle

reporting	
30. **Measuring burden of disease: Disability-adjusted life years (DALY)**	D. Donev, L. Zaletel-Kragelj, V. Bjegovic, G. Burazeri
31. **Tests validity measures and analysis of the Receiver Operating Characteristic (ROC)**	J. Bozikov, L. Zaletel-Kragelj
32. **Screening**	M. Krajc
33. **Rapid assessment and response**	E. Imamovic, D. Niksic
34. **Introduction to health technology assessment**	J. Marinkovic
35. **SWOT analysis**	A. Plesnicar, L. Zaletel-Kragelj
36. **Community health – Public health research methods and practice**	S. Sogoric, A. Dzakula
37. **Economic evaluation in healthcare: practical approach**	Pia Vracko, Liiana Zaletel-Kragelj
38. **Strengthening public health services: evaluation pof essential public health operations**	F. Tozija, D. Gjorgjev, D. Gudeva Nikovska
39. **Public health capacity building: adult education**	G. Pavlekovic, L. Zaletel-Kragelj, A. Kragelj
40. **Designing and planning educational programmes in public health**	G. Pavlekovic L. Zaletel-Kragelj, A. Kragelj N. Skerget
41. **Public health planning: from recommendation to implementation**	V. Sava, H. Wenzel
42. **Team building**	A. Galan, S.G. Scintee
43. **Project management**	S.G. Scintee, A. Galan

Jacobs Verlag