

Curriculum

“Global Medical Policies and Processes”

Purpose

1. Provide graduate level education in global medical policies and processes with a faculty of recognized international and national policy makers from the Pan American Health Organization/World Health Organization; U.S. Department of Health and Human Services (NIH, OASPE, HRSA); U.S. Department of Defense (USUHS); GMU; NASA; and others:
 - (1) primarily for students enrolled in the Master of Public Policy (MPP) and International Commerce Policy (ICP) programs
 - (2) also accommodating for medical professionals
2. Address global medical/public health policies, needs, practices, and interdependencies in the 21st Century
3. Acquire knowledge in developing, planning and managing public health organizations in the aftermath of **9/11**
4. Develop skills in designing evaluation processes to assess costs and performance of medical and public health activities and in formulating associated policies
5. Internationally “train the trainer” and support the trainer through distance learning capacity
6. Relate formulation of policies and analyze practices which could violate human rights, undermine ethics, and/or create disparities in health services
7. Complement the Core Graduate Curriculum of the GMU/School of Public Policy.

Background

The aftermath of September 11, 2001 and the anthrax mail attacks brought into international and national focus the notion of globalization of terrorism. Terror and terrorist acts are as old as human history, and many civilizations have used or experienced it throughout their existence. The new paradigm is the sudden widespread awareness of the nature and extent of the threat and the realization that the war against terrorism will be protracted and universal. In this setting, public health will play a more preeminent role than ever, and policies necessary to protect the health of people around the world have to be developed and promulgated. A new understanding of the economic, social, political and environmental implications of such public health policies needs to be developed through academic research and training. Recent gains achieved by new and reemerging infections, fueled by continued regional conflicts and failures of the public health system, warrants such reexamination, even in the absence of the terrorist threats.

Core Curriculum

The global medical policies and processes curriculum shall consist of 2.5 to 3 hours per week didactics and discussion sessions. The course will be offered in two parts. Part I will consist of principles of medical/public health administration, policy formulation and budgeting; and Part II will address epidemiology of diseases and its impact on public health policy formulation and practices. Part III will deal with Advanced Statistics which will also address biometrics applicable to epidemiological study design and evaluation and is under development. A research paper on a topic selected from one of the class subject areas is required at the end of the semester. The classes will be in the form of lectures, topical seminars, group discussions, case studies, or practicum. This course will be offered as a concentration and GMU diploma course.

General Learning Objectives

At the conclusion of the Part I and II of the course, the student will:

1. Understand the principles and concepts of public policies and laws, and their relevance to medical and public health practices in different cultures and countries
2. Develop familiarity with cultural diversity and historical impacts on formulation and execution of public policy
3. Understand the social, economic and political burden of diseases on a global scale.
4. Understand and compare the ethical impacts of medical/public health policies in different cultures and countries
5. Understand the implications of natural and human-made disasters on medical/public health policy formulation, budget allocations, humanitarian aid and core values of public health practices
3. Understand the ethical aspects of technological breakthroughs for and application to monitoring medical and public health globally and the need for developing proper safeguards through carefully formulated policies
4. Understand the impact of the transportation and communications systems (and associated policies and practices) on health – a new dimension of public health: technology as a vector and a target for diseases
5. Be able to identify and prioritize health risks and formulate corrective plans through the development and “roll-out” of well thought out policies and practices
6. Be able to develop and examine strategic and tactical processes leading to policy formulation

7. Be able to conduct independent research in medical/public health policy formulation, organizational planning to meet regional and global needs, program/project and/or organizational assessments
8. Understand the relative benefits and trade-off cost/ policies of prevention versus medical care.

Pass/Fail Criteria

The students are required to

1. Attend lectures and participate in the discussions held during the sessions (30%)
2. Select a topic for research and prepare a discussion paper to be delivered at the end of the semester (70%)
3. An elective practicum can be arranged for a 2 weeks period for some students to supplement the above criterion.

Curriculum Outline

Part I – Administering Medical/Public Health: Policies and Cost

· **History of International Public Health**

1. Learning objectives:
 - (1) Understand the evolution of international public health practices in different civilizations from ancient to modern times
 - (2) Understand the importance of preventive health policies in civilian and military settings and interdependencies
 - (3) Understand the mutual relationship of culture, behavior, social, political, technological and economic factors and health and diseases
 - (4) Be aware of the emergence of Western Medicine thinking, the continuation of Eastern Public Health practices and subsequent outcomes
 - (5) Be able to apply the lessons learned from history, to decision- making process in international health care planning/delivery, and policy making (case studies from historical epidemics/pandemics, public health practices and policy formulation will be used for training and as problem solving tools.)
2. Time - 6 hours
3. Potential lecturer(s) – GMU
4. Textbooks – 1, 3
5. Journals/Periodicals - J-1, J-2
6. References – TBA.

· **Public Health Policy Development and Administration (part 1)**

1. Learning objectives
 - (1) Understand current public health policy development, laws and administration in the U.S.
 - (2) Interpret the implications of public health policies, laws and administration using the knowledge gained in the SPP core courses (MPP 700, PUBP 713, PUBP 720, PUBP 730)
 - (3) Planning, managing and budgeting for public health policy formulation and developing tools for establishing funding priorities.

2. Time - 6 hours
3. Potential lecturer(s) – U.S. Department of Health and Human Services (HHS), Public Health Service (PHS), Congressional Staff
4. Textbooks – 2, 3, 4
5. Journals/Periodicals – J-4, J-5
6. References – R-1, R-2, R-3.

· **Public Health Policy Development and Administration (part 2)**

1. Learning objectives:
 - (1) Examine and compare international public health laws, policies, ethics, and administration in select countries with either established or developing economy as a reflective practitioner, using the concepts learned in the SPP core courses (MPP 702, PUBP 720)
 - (2) Understand the importance of cultural, social, ethical, political, economic and philosophical differences in international health policy development and impact on organizational and management structures
 - (3) Planning, managing and budgeting for global public health policy formulation and developing tools for establishing funding priorities.
2. Time – 6 hours
3. Potential lecturer(s) – International Health, HHS, Pan American Health Organization (PAHO,) United Nations (UN,) World Bank
4. Textbooks – 1, 6
5. Journals/Periodicals – J-6, J-7
6. References – R-4, R-5.

· **Public Health Policy in Biomedical Research, Medical Practices and Technology Research and Development**

1. Learning objectives:
 - (1) Understand strategic planning, priority setting, peer review, ethics, role of the government, resource allocations and dissemination of results in the United States with comparison to other countries
 - (2) Interpret U.S. policies in the light of ethical issues involving cloning, stem cell research, human and animal experimentation and data usage including reliance on alternative medicine

- (3) Understand the applicability of the U.S. policies to other countries and vice versa
- (4) Recognize potential surprises of political impact on policy Development.
2. Time - 6 hours
3. Potential lecturer(s) – GMU, World Health Organization (WHO), PAHO
4. Textbooks – 4, 9, 10
5. Journals/Periodicals – J-1, J-3, J-4
6. References – R-6.

- **Expanding U.S. and Global Public Health Infrastructure**

1. Learning objectives:
 - (1) Understand the U.S. public health infrastructure and approach to public health and medical care in the 21st century, and for preparedness and response to biological, chemical, and nuclear terrorism, using the information on U.S. policy systems learned in SPP core courses (MPP 703, PUBP 730)
 - (2) Be able to understand the implications of agro-terrorism and potential impacts on ecosystems
 - (3) Be able to provide assessments and formulate recommendations during strategic organizational planning process
 - (4) Understand the impact of politics on global public health policy Setting.
2. Time – 9 hours
3. Potential lecturer(s) – Centers for Disease Control & Prevention (CDC,) Office of Homeland Security
4. Textbooks – 5
5. Journals/Periodicals – J-3, J-5, J-8
6. References – R-7.

- **International E-Health, Distance Learning and Emerging Technologies**

1. Learning objectives:
 - (1) Understand the application of emerging telecommunication technologies and “smart” sensors to global public health practices and distance learning. Understand the scientific, cultural and economic impact of technology infusion into the Public Health System

- (2) Understand how remote sensing (RS) and geographical system (GIS) technology can be applied to identify or predict the epidemiology of vector borne diseases on a global scale
 - (3) Enhance the learning process using the lessons learned in SPP core course (MPP 703)
 - (4) Be able to design evaluation processes leading to the formulation of national and international policies to reduce the health disparities and “digital divides.”
2. Time – 6 hours
 3. Potential lecturer(s) – NASA, CDC, Virginia Commonwealth U. School of Medicine (VCU,) Uniformed Services U. of the Health Sciences (USUHS)
 4. Textbooks – 9, 10
 5. Journals/Periodicals – J-9, J-10
 6. References – R-8, R-9.

Part II – Epidemiology of Diseases and Public Health Policies

Global Cooperation, Policies and Interdependency in Public Health

1. Learning objectives:
 - (1) Understand how disease emergence and spread is influenced by the diminishing international boundaries, and increasing international trade, technology transfer and inter-cultural practices
 - (2) Enhance the learning process with background knowledge in international commerce, policy, culture and technology (ITRN 500, ITRN 605, ITRN 604)
 - (3) Be able to understand global cooperation as a vital factor in public health policy promotion including improving human rights
 - (4) Understand disease measurements and trends, epidemiological methodology, and evaluation of efficacy of interventions
 - (5) Explore the applicability of the lessons learned from the international projects such as human space missions, Antarctica and joint military operations
 - (6) Understand the implications of “public health issues in extreme environments” and be able to establish criteria for extreme environments through discussions, including natural or human made physical and ecological disasters.
2. Time – 6 hours
3. Potential lecturer(s) – International Health Organizations, HHS, GMU

4. Textbooks - 1, 7, 8
5. Journals/Periodicals – J-11
6. References – R-10.

· **Psycho-Social Aspects of Public Health Policies**

1. Learning objectives:
 - (1) Be aware of short and long term impact of terrorism (nuclear, biological, chemical and cyber) as causative factors of psychosocial and community diseases
 - (2) Understand medical, social, political and economical responses to terrorism such as post-traumatic stress syndrome substance abuse, alcoholism, practices of health discrimination and violence
 - (3) Be able to use the lessons learned to assess proposed or existing public health and preparedness policies on civil defense and security (case studies of prior natural and human made disasters and responses can serve as tools for problem solving)
 - (4) Understand the psychosocial impacts of narcoterrorism.
2. Time – 6 hours
3. Potential lecturer(s) – National Institutes of Health (NIH,) CDC, GMU
4. Textbooks – 1
5. Journals/Periodicals – J-1
6. References - R-11.

· **International Occupational Health Policies Formulation and Application**

1. Learning objectives;
 - (1) Understand the potential relationship between types and incidence of occupational diseases leading to variations in international policies and cultural practices
 - (2) Recognize the impact of welfare policies on the international trade and commerce, using eight selected countries on the basis of developing or established economies
 - (3) Understand/appreciate the inter-linkages among international occupational health policies, work force, trade and commerce.
2. Time – 3 hours
3. Potential lecturer(s) – National Institute for Occupational Safety & Health, Occupational Safety & Health Administration

4. Textbooks – 1
5. Journals/Periodicals - J-12
6. References – R-12, R-13.

- **Nutrition, Reproductive, Child, Maternal and Mental Health**

1. Learning objectives:
 - (1) Understand the interdependency of policies in public administration, education, agriculture, transportation and medical care delivery on child and maternal health
 - (2) Be able to recognize the importance of social and cultural interdependency in the development of public health policies dealing with child, maternal, mental, physical and physiological health
2. Time – 3 hours
3. Potential lecturer(s) – Dept. of Agriculture, NIH, PHS
4. Textbooks – 1, 11
5. Journals/Periodicals – J-1, J-3
6. References – R-14.

- **Humanitarian Assistance and Medical Disaster Relief**

1. Learning objectives:
 - (1) Understand the principles, logistics, and informatics applications, technical and cultural factors as related to regulations and policy formulation
 - (2) Recognize the requirements of service staffing (medical, nursing, first aid), structure organization, coordination, communication training (foreign languages), exercise, self-evaluation and logistics for the joint operation of medical and humanitarian assistance in domestic or international disasters
 - (3) Learn from the Case studies including the NASA and DOD missions in Armenia, Moscow, Turkey, Macedonia etc.
 - (4) Understand the complexity of the joint operation in policy formulation especially in managing international disaster relief function.
2. Time – 3 hours
3. Potential lecturer(s) – USUHS
4. Textbooks – 11, 12

5. Journals/Periodicals – J-13, J-14
6. References - R-7, R-15.

· **Aging and Population Needs: International Policies and Considerations**

1. Learning objectives:
 - (1) Understand how aging and population needs and concerns lead to the global economic burden and impact public health policy formulation
 - (2) Be aware of the vulnerability, sensitivity and fear of the aging population to health threats from biological and chemical terrorism especially after September 11 and the warrant for specific short and long term health care such as: distance - home care, psychiatric/ psychological care, prescription drugs availability, and specialized care facilities
 - (3) Be able to identify the elements necessary to meet the policy formulation process.
2. Time – 6 hours
3. Potential lecturer(s) – National Institute for Aging, NIH, CNHS/GMU
4. Textbooks – 1,6, 12
5. Journals/Periodicals – J-1
6. References – R-16.

Textbooks

1. M.H. Merson, R. E. Black, and A. J. Mills: *International Public Health. (Aspen Publ. 2001)
2. V.R. Fuchs: The Future of Health Policy. (Harvard University Press 1993)
3. D. Porter: Health, Civilization and the State. (Rutledge Press 1999)
4. L.O. Gostin: Public Health Law. (University of California Press 2000)
5. D.A. Henderson, et al: Bioterrorism – Guidelines for Medical and Public Health Management, (American Medical Association, First Edition, July 15, 2002)
6. J.M. Mann, S.Gruskin, M. A. Grodin, and G.J. Annas: Health and Human Rights. (Rutledge Press 1999)
7. A. Nicogossian, C.L. Huntoon and S. Pool: Space Physiology and Medicine. (3rd Edition Lea and Febiger. 1994)
8. S.I. Hay, S.E. Randolph, and D.J. Røge (Ed.): Remote Sensing and Geographical Information Systems in Epidemiology. (Advances in Parasit. 47. Aspen Publ. 2000)
9. H.F.Novick and J.S.Marr: Public Health Issues in Disaster Preparedness and Bioterrorism, (Aspen Publ. 2001)

10. B.A. Brody: The Ethics of Biomedical Research. (Oxford 1998)
11. L. C. Chen, S.M. Briggs and J. Leaning: Humanitarian Crisis: The Medical and Public Health Response, (Harvard University Press, 1999)
12. H. Wallace et al: Health and Welfare for Families in the 21st Century, (Jones and Bartlett Publishing, 2001)

* Required for the course

Additional Resources

Journals/Periodicals

- J-1 American J. of Public Health
- J-2 World Health Organization Publications (international public health)
- J-3 Public Health Reports (J. of U.S. Public Health Service)
- J-4 Aspen's J. of Public Health Management and Practice
- J-5 J. of Urban Health (NY Academy of Medicine-clinical and policy perspectives)
- J-6 World Health News (weekly news from Harvard School of Public Health)
- J-7 Pan American J. of Public Health
- J-8 J. of Epidemiology and Community Health
- J-9 Amer. J. of Telemedicine
- J-10 Environmental Medicine
- J-11 International J. of Epidemiology
- J-12 Int Arch Occup Environ Hlth
- J-13 PAHO Quarterly Periodicals: Disasters – Preparedness and Mitigation in the Americas
- J-14 The Journal of Disasters Studies, Policy and Management (Blackwell Publishers)

References

- R-1 APHA Advocates Handbook: A Guide for Effective Public Health Advocacy (Amer Pub Hlth Assoc, 2000)
- R-2 Community-Based Public Health: A Partnership Model (policy issues in community based approach, Kellogg Foundation /Amer Pub Hlth Assoc, 2000)
- R-3 Planning for Community-Oriented Health Systems (Rohrer, 1999)
- R-4 Critical Issues in Global Health (Koop et al, a foreword by Jimmy Carter; Jossey-

- Bass Publishers, 2001)
- R-5 Cultural Competency in Health Care (National Multicultural Institute, 1999)
- R-6 Case Studies in Public Health Ethics including an Instructor's Guide (Coughlin et al, 1997)
- R-7 Public Health Management of Disasters: The practice Guide (Landesman, 2001, endorsed by CDC)
- R-8 Guide to Medical Informatics, the Internet and Telemedicine (Enrico Coiera, 1997-2002)
- R-9: Evolution of Telemedicine in the Space Program and Earth Applications. (A. Nicogossian, D. Prober, & S.Roy; Telemedicine Journal and e-Health Vol.7, No 1, pp1-15, 2001)
- R-10 The Future of Space Medicine, (A. Nicogossian & D. Prober; Acta Astronautica Vol.49, No 3-10, pp. 529 – 535)
- R-11 Integrating Behavioral and Social Sciences with Public Health (Amer. Psychological Association, 2002)
- R-12 Global Strategy on Occupational Health for All: The way to health at work (WHO 1994)
- R-13 Workplace Health and Safety Information (International Labour Office, 1994)
- R-14 Topics in Maternal and Infant Health: Selections from American J. of Public Health (G. Pappas, APHA 2002)
- R-15 War and Public Health (Levy & Sidel, 2000)
- R-16 Chronic Disease Epidemiology and Control (Brownson et al, 1998.)