



Higher Education Initiatives for Disaster and Emergency Health in Iran

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Abstract

Iran's health system is expanding the disaster and emergency higher education programs over the country to enhance the capacity of human resources for effective and efficient disaster mitigation, preparedness, response and recovery. In this article we present an overview about the initiatives and progress of disaster and emergency health higher education in Iran. Following the Bam earthquake, in collaboration with the Ministry of Health & Medical Education and National Institute of Health Research, School of Public Health at the Tehran University of Medical Sciences, Iran took the initiative to develop a Master of Public Health (MPH) with disaster concentration in 2006, a PhD in disaster and emergency health in 2011, and a well constructed certificate course in 2008 entitled Disaster Health Management and Risk Reduction (DHMR). Iran, Kerman and Shahid Beheshti Universities of Medical Sciences and University of Social Welfare and Rehabilitation are other academia that joined this initiative. Regarding the importance of programs evaluation, we have planned for a comprehensive evaluation of MPH and DHMR programs in 2013-4 and the Accreditation and Evaluation Board of Disaster & Emergency Health, based in MOH&ME, is responsible for evaluation of the PhD program in 3-5 years from initiation.

Keyword: Disaster, Emergency, Health, Higher education, Iran

Background

Following the Bam devastating earthquake in 2003, the Iran's health system learned that an effective disaster response and risk management requires a critical mass of quality human resources and research-based information. In response to these needs, development of higher education programs was chosen as a main strategy. In this article we provide an overview about the progress of disaster and emergency health related post

graduate programs that have been developed in Iran.

Disaster profile of Iran

Islamic Republic (I.R) of Iran, a Middle East country with a population of 75 million, is a highly disaster prone country. From 1900 to 2012, 193 natural disasters and 141 technological disasters

are recorded in the country that led to 155,878 and 4,955 deaths, respectively (1). The Rudbar-Manjil earthquake (1990), Bam earthquake (2003), Zarand earthquake (2005), Golestan flash floods (2000-2005), Lorestan earthquake (2006) and Gonu cyclone (2007) were the most deadly or destructive natural disasters during recent decades (2). In addition, Iran has been the largest refugee host country for more than a decade; as of January 2011, it hosted the 2nd largest number of long-standing refugees in the world, with a total of 1,073,366 refugees (3).

Public health and medical higher education in Iran

Iran has an expanded network of state affiliated and private medical universities. In 1985, a new Ministry of Health & Medical Education (MOH&ME) was established in order to integrate public health and medical education and the health system. The integration process was expanded to provincial level accordingly and provincial Universities of Medical Sciences & Health Services (UMS&HS) under MOH&ME were shaped (4). Among the other state run institutions, there are universities of Army, Shahed, Baghiatallah and Social Welfare and Rehabilitation that offer graduate medical and health training programs. Furthermore, Islamic Azad University, a nation-wide private university, is responsible for medical education too.

Disaster and emergency health education

To train a critical mass of quality human resources that are able to help the health system with policy making, planning, management and research on disaster and emergency health, Iran's MOH&ME and Tehran University of Medical Sciences (TUMS) built a platform of collaboration for establishing academic departments and developing post graduate and professional training programs. To achieve these goals, as the first step, TUMS

started to create a multi-disciplinary network of faculties and experts from the arenas of public health, epidemiology, health care management, emergency medicine, environmental health, nutrition, mental health, reproductive health, communicable and non-communicable diseases, earthquake engineering and seismology, hydro-meteorology and climatology. This network of experts worked together to develop two interrelated academic departments; Department of Disaster Public Health (DDPH) at the School of Public Health and Department of Disaster & Emergency Health (DDEH) at National Institute of Health Research (the former Institute of Public Health Research) of TUMS (<http://nihr.tums.ac.ir/disaster>). Accordingly, they developed postgraduate and professional training programs as described below:

1) PhD program in disaster & emergency health

The curriculum of PhD in disaster and emergency health was developed by DDPH and was reviewed and approved by the Education Higher Council of the MOH&ME in 2011. The curriculum comprises 22 credits core courses, 6 credits elective courses, 2 credits field training course and 20 credits research-based thesis (Table 1). Program admission requires a national written exam following by an interview to assess the research background and personal motives and talents. The national Accreditation and Evaluation Board of Disaster & Emergency Health, established by MOH&ME in 2012, is in charge of the program evaluation in 3-5 years of the program initiation.

The DDPH at the SPH accepted national students in the PhD program in 2011 and international students in 2012. Based on same curriculum, Iran University of Medical Sciences accepted students since 2011 and Yazd and Shahid Beheshti Universities of Medical Sciences and University of Social Welfare and Rehabilitation also has planned to offer the program in collaboration of TUMS in 2013.

Table 1: Curriculum of MPH and PhD disaster programs

MPH with disaster concentration
<ul style="list-style-type: none">• Basic courses (14 credits in total): Epidemiology & research methods, biostatistics, health economics, environmental health, nutrition, health care management, global health and application of computer sciences.• Specialized disaster courses (12 credits in total): Basics of emergency management, disaster risk management, disaster epidemiology and metrics, public health in emergencies, man-made disasters, and pre-hospital & hospital disaster planning• Field training course (2 credits)• Thesis (4 credits)
PhD in disaster and emergency health
<ul style="list-style-type: none">• Core courses (22 credits in total): Disaster management and risk reduction, man-made disasters, natural disasters, disaster risk assessment, disaster epidemiology and metrics, pre-hospital and hospital disaster planning, public health in disasters, environmental health in emergencies, communicable disease emergency management, community-based disaster management, incident management system and seminar.• Elective courses (6 credits in total): Health economics in disasters, health geo-informatics, pre-hospital and hospital emergency management, nutrition in emergencies, reproductive health in emergencies, psycho-social support in disasters, disaster risk communication, international humanitarian assistance, information management and technology in disasters, disaster nursing, qualitative research, logistic system management in disasters, strategic planning and management• Field training course (2 credits)• Thesis (20 credits)

2) Master of Public Health (MPH) with disaster concentration

MPH program at TUMS, established in 1970s, is a two-year program based in School of Public Health (5) and is accredited by MPH Planning Committee of the MOH&ME. Starting by introducing three elective courses in 2006, the MPH with disaster concentration was developed by DDPH in 2008 that contains 14 credits basic public health courses, 12 credits disaster specialized courses, a field study course and a thesis (Table 1). During the field study course, under faculty mentorship, the students participate in a drill design or evaluation of disaster management functions. The research-based thesis addresses the priority problems of Iran's health system in arena of disaster management at the national or local levels. The concentration curriculum was developed with a focus on Iran's disaster profile and health system challenges. Basically, the MPH program accepts students from the doctoral or master holders through a university-wide written exam and interview. By 2012, a total of 37 students were

enrolled in the program that 30 of them were medical doctors, five hold a master degree and two had a PhD in health-related disciplines. Almost all students have been the staff of health system so far and sponsored by MOH&ME. Among the other Iranian academia, Shahid Beheshti University of Medical Sciences offered the MPH with disaster concentration in 2007 and 2008 and admitted 22 students in total (16 from Tehran and 6 from other provinces). Kerman University of Medical Sciences started the program in 2007 and trained 11 students by 2012 (9 from Kerman province and 2 from the neighboring province, Yazd). University of Social Welfare & Rehabilitation Sciences has planned to offer this program in collaboration with TUMS.

3) Disaster health management & risk reduction (DHMR) training course

As a sample of standardized certificate course, NIHR and SPH have developed the DHMR training course in 2008 based on a project granted from the International Association of National

Public Health Institutes and technical consultancy provided by World Health Organization (WHO). DHMR is an 11-day course including six modules: risk management & preparedness, mass casualty management, public health in emergencies, complex emergencies & internally displaced people, recovery in disasters, and challenges in emergency preparedness for Iran. DHMR I (the pilot course) was evaluated by WHO/Iran in 2009. By 2012, four DHMR courses have been held and 97 health staff participated in the programs. The course is directed by a steering committee from TUMS, MOH&ME and WHO/Iran and being evaluated by pre and post testing and participants and faculties' feedback. Because of very positive feedback from the participants in terms of their knowledge and skills improvement, MOH&ME is enthusiastic to extend the financial support from the program. By the end of 2012, 116 health professionals from the MOH&ME and 27 provinces have been participated in MOH and DHMR programs at TUMS (Fig. 1).

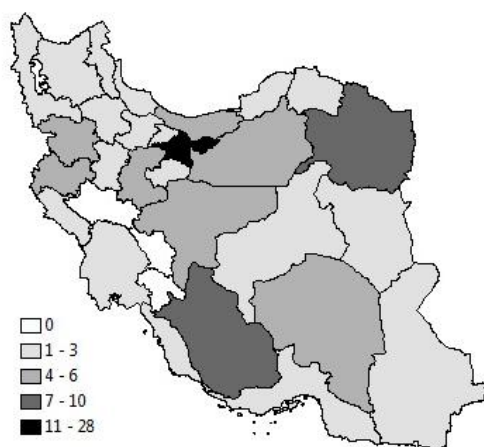


Fig. 1: Provincial distribution of participants in MPH with disaster concentration program and disaster health management & risk reduction training course at the Tehran University of Medical Sciences, 2008-2012

Conclusion

Iran's health system has initiated developing academic programs and a standardized training course on disaster and emergency health. We are

expecting that these efforts will provide the health system with qualified graduates who will help in policymaking, planning, management and evaluation. Evaluation of the training programs is an imperative issue. We have planned to conduct a comprehensive evaluation on MPH and DHMR programs in 2013 and modify the curriculums accordingly. PhD program of disaster and emergency health is a new program that needs careful monitoring. The national Accreditation and Evaluation Board of Disaster & Emergency Health, established by MOH&ME in 2012, is in charge of the program evaluation in 3-5 years from the program initiation. The curriculum of the aforementioned programs can be potentially used as samples for development of similar programs in other countries in the Middle East region.

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The authors declare that there is no conflict of interest.

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