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# UNISDR Scientific and Technical Advisory Group Case Studies – 2015

## Evidence-Based Integration of Disaster Risk Management to Primary Health Care, the Case of I.R.Iran

**The problem**

Disaster is a public health concern in I.R.Iran affecting both the health system and health of populations. Iran has a well-established network of primary health care (PHC) including over 24,000 centers that span both urban and rural areas. While this network has always been the key mode for delivery of public health services in disasters, it has not had an integrated program for disaster risk management (DRM). In addition, it has lacked the component of community engagement in DRM.

**The science**

As emphasized by the World Health Organization[1], a comprehensive PHC system improves health outcomes in populations[2]. The Iranian PHC system has also been proven to be effective in contributing to reductions in child and maternal mortality, the prevention of communicable diseases, and increased public health awareness. The scholarly literature also highlights the importance of a proactive approach to DRM within the health system[3], and the necessity that PHC systems should contribute to the management of health emergencies [2,4].

From 2010 to 2012, the Disaster Risk Management Office of Iran's Ministry of Health and Medical Education (MoHME) in collaboration with Disaster & Emergency Health Academy of Tehran University of Medical Sciences (TUMS) –based in TUMS School of Public Health and National Institute of Health Research- conducted a series of studies to provide supporting evidence on the status and capacities of the PHC system for DRM.

Figure 1. Panel of health information system posted in office of Deputy Minister of Health including disaster risk management indicators.

A *baseline assessment* revealed that while the PHC system has a track record of being at the frontline of responses to disasters, it lacks: 1) integrated programmes for DRM, 2) metrics to monitor and evaluate DRM activities, and 3) community engagement for DRM[5]. Accordingly, a *retrospective survey* showed a growing impact of natural hazards on physical components and functions of PHC, especially due to climatic hazards[6]. The *third* study on 2,715 facilities, estimated the overall resilience of PHC at 22%, based on average weighted scores of functional capacity, structural and non-structural safety[7], that were measured using Primary Health Safety Index (PHSI). The *fourth* study demonstrated that disaster preparedness among Iranian households is estimated at only 8.5%[8]. The *fifth* intervention study showed that the PHC system could enhance the disaster preparedness of households to seven times the baseline status in one year[9].

**The application to policy and practice**

In late 2012, MoHME started to pilot the integration of DRM into PHC in 10 provinces including vulnerability and capacity assessments of PHC centers using PHSI; establishment of a disaster surveillance system to monitor occurrence of disasters and their impacts on PHC facilities and services; development and testing of emergency operations plans (EOP); and training of households for disaster preparedness.

To monitor and evaluate the aforementioned programs, a DRM metric system was also produced and integrated into the national Health Information System including indicators related to PHC disaster functional preparedness, structural and non-structural safety; disaster damage to PHC systems; and household preparedness.

**Did it make a difference?**

The impact of the initial research and results from the pilot program have been significant. They have not only raised awareness of DRM among policy makers but also enhanced the capacity of the Iranian PHC system for a consolidated and proactive approach to DRM in relation to PHC facilities and services as well as better awareness and preparedness among the population. Today, DRR is an accepted concept in the Iranian PHC system lexicon and policy documents.

Figure 2. A community disaster drill for flash floods organized by primary health care system, Golestan, Iran. *Source: Disaster & Emergency Health Academy, Tehran University of Medical Sciences*

As of September 2014, over 50% of health facilities have measured their resilience using PHSI; the disaster surveillance system has been expanded from national to district level; and national and provincial EOPs have been developed and tested. In addition, coverage of disaster insurance in PHC facilities has been increased from 3 to 17%. EOP has helped the health system with a consolidated response to recent disasters; and over 100,000 households are being trained for disaster preparedness in 10 selected districts of 10 provinces. Finally, leveraging PHC capacities, MoHME is working with other partners to promote the concept and practice of community-based disaster management.

Because of DRM indicators, the Iranian health policy makers are now able to measure effectiveness of DRM interventions over time at the national, provincial, district, and local levels. Our evidence-based integration process also provided a training model for the next generation of health and DRM scientists and administrators.

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