

provide continuous medical services to its members in routine and crises. Ongoing operation is dependent on the availability of manpower, infrastructure, medical equipment, information technology, and computerized systems. Advanced planning is required to ensure sustainability of services, even during significant disasters.

**Methods:** An operational continuity plan was established, basing the sustainability efforts on international standards. Through adaptation of a process of Business Impact Analysis on the health care system, core vulnerabilities within the HMO were identified, priorities, and criticality of each service were defined as follows: HIGH: Recovery Time Objective (RTO) immediately or up to 24 hours; MEDIUM: RTO within a week; LOW: RTO within four weeks. The plan encompasses all critical elements and services, including computerized system, manpower, infrastructure, and vital equipment.

**Results:** The operational continuity plan was evaluated and approved by the senior Executive Board of the HMO and has been adopted as a perennial work plan. A designated organizational structure was developed as responsible for the implementation and management of the recovery plan during a crisis. Once a year, training and exercise of the recovery plan is conducted, cross-cutting all critical services including: primary care, nursing, pharmacy, laboratory, radiology, home care for vulnerable populations, mental, and emergency dental health services. The aim is to achieve participation of at least 25% of the pre-defined population in the annual training program.

**Conclusion:** Implementing preparedness for various disasters ensures recovery within the designated objectives, which were defined in the operational continuity plan. A significant budget needs to be allocated in order to facilitate an effective preparedness.

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### What are the Most Effective Methods of Disaster Preparation for Health Professionals and Support Staff? Perspectives from Staff at St Vincent's Private Hospital, Sydney - Phase 1 of a Multi-site Study

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**Study/Objective:** A multi-site study aiming to identify preferred methods and content of disaster preparation for medical, nursing, allied health, and hospital support staff. This research can guide preparation at the site hospitals and beyond.

**Background:** St Vincent's Private Hospital Sydney (SVPHS) conducts a range of disaster preparedness programs which have not been comprehensively evaluated. An integrative literature

review identified little high-quality research evaluating best practice preparedness. The most effective methods of preparedness could not be established. The review also identified that health professionals may not be fully prepared, and may elect to not work during disasters. Research to date mostly focused on doctors and nurses (Gowing, Walker, Elmer & Cummings, in press). Quality research is required, which engages all disciplines of health professionals and support staff, as hospitals require this range of staff to function effectively.

**Methods:** Qualitative multiple case study design. Phase 1 conducted during 2016. Semi-structured interviews with health professionals. Focus groups with hospital support staff. Purposive sampling. Interview and focus group guide – developed using hospital experience and the literature review. Validated with PhD supervisors and disaster managers. Ethics approval obtained from the University and Hospital.

**Results:** The results will be analyzed to understand the what, how, and why. Case comparisons between occupational groups. The results can be discussed at the WADEM Congress 2017. The SVPHS “case” will later be compared to “cases” at two other Australian teaching hospitals.

**Conclusion:** Given resources available for health services and increasing prevalence of disasters worldwide, it is important that data are available to guide health services and professionals in the most effective methods of disaster preparedness. To promote an effective response, all disciplines in the health team should be included to inform such data.

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### Disaster Management and Emergency Preparedness within Turkish Healthcare System

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**Study/Objective:** This paper aims to describe disaster management and emergency preparedness within health care system of Turkey and review related publications.

**Background:** Turkey is facing regular natural and manmade disasters. Earthquakes, landslides and floods are the most frequent natural disasters. Turkey has terrorism problems too, and has lost more than 35,000 people to terrorist events since the 1980s. Since the beginning of the Syrian civil war in 2011, Turkey experienced an increased number of bombings, including the deadliest attack in its history at the capital on October 2015, with more than 100 casualties.

**Methods:** Policy guidelines and previously published government reports were reviewed for policy recommendations, and a summary of literature is presented.

**Results:** The Disaster and Emergency Management Authority has been developed after the 1999 Golcuk earthquake, and currently has 81 provincial branches and coordinates all emergency response and disaster recovery efforts. The Ministry of Health (MOH) has its own disaster and emergency response directorates, and has medical management and training responsibilities (image 1). The National Emergency Response Team (NMRT) is working under MOH and is responsible for on-site medical

management and rescue efforts during disasters. Local municipalities have their own emergency response centers. Major shortages within healthcare systems for disaster preparedness were described as lack of investment on building infrastructure, and deficiency of preparedness levels of the health care workers. MOH provided hospital disaster plan templates and materials for healthcare facilities. Hospital administrations are required to follow this plan and improve facility resiliency. Investments were planned for improving healthcare facility infrastructures.

**Conclusion:** With increased terror since 2013, we have emphasized the importance of a developed all hazards approach for healthcare systems. Quality and practicality of hospital disaster plans, and readiness levels of the healthcare facilities and their workers needs further research. A national disaster plan should be revised with an all hazards approach, addressing healthcare readiness problems, including infrastructure issues and training deficiencies of healthcare workers.

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### Developing a Context Appropriate Emergency Department Disaster Preparedness Protocol in Black Lion Hospital, Addis Ababa, Ethiopia

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**Study/Objective:** The objective of this project was to create a disaster preparedness protocol for the emergency department of Black Lion Hospital.

**Background:** Emergency medicine is new to Ethiopia. Disaster preparedness is one of the integral parts of emergency medicine. The objective of this project was to create a disaster preparedness protocol for the emergency department of Black Lion Hospital.

**Methods:** A draft of a context appropriate disaster preparedness protocol was prepared by one of the investigators. This was modified and edited by the team of investigators. This was then presented to different stakeholders for discussion and modification. The final version was prepared and tested by a disaster drill.

**Results:** The hospital was recognized for its preparedness and response during the disaster drill by the Federal Ministry of Health. There were good reviews and overall good team organization. The protocol was adopted in the emergency room.

**Conclusion:** Disaster preparedness protocols should be context appropriate. It is important to mobilize and involve different professionals for a better result.

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### Facilitating Decision Making During Disasters to Ensure Continuity of Home-Care Services to Vulnerable Populations during Disasters

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**Study/Objective:** To present contribution of a comprehensive computerized system to decision making and provision of medical care during disasters.

**Background:** During disasters, the health care systems are required to ensure provision of medical services to vulnerable populations that require designated medical community services or home care. In order to facilitate provision of medical care to the vulnerable population, and ensure efficient management of all resources, information systems and defined standard operating procedures (SOPs) are needed to ensure full control and monitoring of all patients.

**Methods:** In order to ensure continuity of community and home care, “Meuhedet,” an HMO which insures 1,200,000 patients, developed a comprehensive information system which includes a database concerning patients, infrastructure, and personnel as a unique management tool. The GIS-based system enables us to identify the location and current status of patients and providers at all times. SOPs were developed to guide medical and management teams in their use of the system.

**Results:** The information system is user-friendly, accessible to all relevant providers, and enables access to data on insured population in real-time. The computerized system serves as a management and control tool, used by the national administration to control and monitor activities during crisis, as well as a vital tool for physicians deployed to provide home care. The data concerning each patient can be accessed, processed, and integrated as part of the treatment in any location in which medical care is being provided.

**Conclusion:** Provision of effective medical care to patients requiring home care requires access to information concerning medical backgrounds and needs. The creation of a comprehensive information system, in tandem with organizational SOPs, facilitates decision making and improves ability of primary care health care workers to provide efficient and continuous medical care in the community.

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### Provision of Primary Care Services to Civilian Populations following their Evacuation During Crisis

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**Study/Objective:** To ensure provision of primary care services to civilian populations following evacuation during crisis.

**Background:** At various crises, Populations under risk may need to be evacuated to alternate locations. Health Maintenance Organizations (HMOs) are responsible to ensure continuous provision of primary care services to those populations, which includes diverse groups of patients with an array of medical needs, ages, cultural, and religious backgrounds. Designated information systems and defined standard operating procedures (SOPs) are needed to ensure functional continuity and provision of services during crisis.

**Methods:** To ensure continuity of services to evacuated populations, “Meuhedet,” the 3<sup>rd</sup> largest HMO in Israel,