

**Results:** A total of 50 patients (mean age of  $32.98 \pm 12.61$  years) were included in the study. Majority (86%) had blunt abdominal trauma, (14%) had penetrating injuries and associated polytrauma was seen in 34%. Majority of patients were brought by personal vehicles (42%) followed by ambulance only 34%. The mean duration of injury till hospitalization was  $17.68 \pm 21.78$  hrs, with 50% patients getting hospitalized within 6 hrs. Prehospital Care, by ambulance, police or referring hospitals could only be offered in 68%. The most common cause was road traffic accidents (42%). Mean GCS and Revised Trauma Score were found to be  $13.76 \pm 2.33$  and  $7.28 \pm 0.92$ . Mean hospital stay was  $11.5 \pm 3.64$  days while mortality was 2%.

**Conclusion:** A young productive age group is more vulnerable to abdominal trauma. Considering the fact that road-related accidents are quite predictable and controllable; therefore, the quality promotion of traumatic patients care, and road safety should be strengthened, as the majority still come in late beyond golden hours.

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### Budgeting of a Local Government for Disaster and Health Crisis in Indonesia

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**Study/Objective:** To describe a disaster and health crisis budget by local government in Indonesia; to see if districts with a higher disaster risk had been developing adequate budgets for preparedness and disaster management.

**Background:** Adequate financing is one of the main facets of implementing disaster and health crisis management. It is not just a national responsibility, it must be a local responsibility also. In the past 5 years (2009–2013) the 'prone' districts have experienced many disasters and health crisis, and must have a good plan, including a budget for preparedness and disaster management.

**Methods:** This study used descriptive, with cross sectional design. The subject study was in 6 districts in North Sumatra, South Sulawesi, and Papua Province. Three provinces were representative of Regional Health Crisis of Indonesia for east, central, and west part. Unit analysis of this study was budget allocation from a program planning and budgeting document of the health district office 2012–2013.

**Results:** There was no budget for disaster in the Health District Office (HDO), because it was allocated in Local Emergency and Management Authority (LEMA). Whereas, many health issues are impacted due to a disaster event. Commonly, they just budgeted for preparing and managing out-break diseases (0.26% of local expenditure and 7.37% from eliminating communicable diseases program in HDO) and some districts have a budget for emergency incidents (0.32% of local expenditure and 7.71%

from eliminating communicable diseases program in HDO). In fact, just some districts had allocated a budget for outbreak diseases due to disaster, particularly in 2012.

**Conclusion:** An inadequate budgets for disaster and health crisis by District Health Offices (DHO). Budgeting for disaster and health crisis still depends on the government's will to do so. It must be considered by local disaster and health crisis analysis; by local governments. Disaster experiences have not been a basis for planning and budgeting disaster programs yet.

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### Overview of the Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management (ARCH Project)

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**Study/Objective:** Through the three-year period (July 2016 – August 2019), the Project aims to strengthen regional coordination capacity on disaster health management in the Association of Southeast Asian Nations (ASEAN).

**Background:** In the ASEAN region, a total of 425,000 people were dead due to natural disasters from 1975 to 2015 [1], which disturbed economic growth and human security. The ASEAN has continued to attach the importance of cooperation related to the prevention of, and response to disasters. In addition, disaster health management was defined as one of the priority issues in the ASEAN Post-2015 Health Agenda. Through the preliminary survey and discussions, all ASEAN Member States (AMS) reached a common understanding on the importance of a regional collaboration mechanism in disaster health management. Based on that, the Project of Strengthening the ASEAN Regional Capacity on Disaster Health Management (the Project) was formulated. The Project was officially endorsed by Senior Officials Meeting on Health Development (SOMHD) of ASEAN in September 2015, and the Committee of Permanent Representatives (CPR) in January 2016.

**Methods:** To achieve the above objective, the following four activities will be conducted in cooperation between National Institute of Emergency Medicine (NIEM) of Thailand and Japan International Cooperation Agency (JICA) with involving all AMS: (1) Discussions on strengthening coordination capacity on disaster health management at the regional coordination meetings; (2) Cooperation and experience sharing through conducting regional collaboration drills; (3) Development of tools on effective regional collaboration on disaster health management; (4) Designing and conducting trainings on disaster health management.

**Results:** The Project has commenced in July 2016 and the first regional coordination meeting was held on September 29–30, 2016. In the meeting, all of the stakeholders shared the objective and methodology of the Project, and agreed to continue collaborating to share an idea on future regional coordination on disaster health management.

**Conclusion:** The start-up drill will be held in January 2017. Based on the lessons learned, recommendations and discussions

will be referred to development of regional collaboration tools and human resource development programs.

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### A New Framework and Guideline for Hospital Disaster and Emergency Planning in Turkey

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**Study/Objective:** A new regulation and guideline for hospital disaster and emergency plans in Turkey have been launched. This study presents the content of the guideline and shares the experiences regarding the process.

**Background:** Since the 1999 the Marmara earthquake in Turkey, health officials have taken steps towards preparing the health system for disaster situations. The new framework for hospital disaster and emergency plans (Hastane Afet ve Acil Durum Planı – HAP) is one of these steps. Until March 2015 hospitals were preparing their plans without a standardized format. Following the regulation No: 29301 dated 2015, all hospitals (public, private, university, military) have been obliged to prepare their plans according to the new framework and a corresponding guideline.

**Methods:** The guideline was prepared by a team of experts from the field and academia with different backgrounds. International guidelines such as WHO-EURO's notes for Hospital Emergency Response Plan, Hospital Incident Command System (HICS), WHO-PAHO's Hospital Safety Index were used as references, but the guideline was prepared considering the national experiences and needs.

**Results:** The framework covers all phases of the disaster cycle. HAP is an umbrella plan, which includes three sub-plans; emergency response plan, incident action plan, special sub-plans. The guideline has three main chapters and a

comprehensive annex. Parallel to the guideline is a set of training materials, such as slides and drill and exercises that have been prepared. To date nearly 200 health personnel in six sessions have been trained as HAP trainers.

**Conclusion:** With this new framework hospitals will have comprehensive plans, hence better prepare themselves for and respond more effectively to the next disaster. HAP will also enable hospitals to work in harmony during emergencies and disasters, as they have been using the same framework and format. Additionally, it will be easier for hospitals to be part of upper level planning. But there are still challenges to overcome, such as the integration of all disaster plans at all levels, low levels of motivation among health personnel for disaster preparedness, and time and source limitations considering the trainings.

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### Using Rapid Improvement Event Methodology for Disaster Planning Improvement During Information Technology Failures

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**Study/Objective:** We describe a use of process improvement methodology in disaster planning.

**Background:** Modern hospitals are very dependent on Information Technology (IT) systems to function. Over the past decade, most US hospitals have transitioned to Electronic Health Records (EHR) with integrated laboratory and radiology systems. Unplanned IT failure represents an internal disaster threatening patient care. The University of Colorado Hospital experienced a complete IT loss for 10 hours impacting care. Many planning assumptions about reverting to “paper” processes were challenged by the large number of changes needed immediately, coupled with the lack of staff familiarity. The incident management system was overloaded with the detailed tasks required for effective response. The traditional disaster response of an After Action Review (AAR), followed by an improvement plan, was felt to be insufficient to rapidly develop the needed corrective processes. Typically the AAR assigns future improvement changes to be made but doesn't make real-time decisions.

**Methods:** A Rapid Improvement Event (RIE) was performed focusing on the emergency department with results designed to be applicable throughout the hospital. The RIE was preceded by a structured preparatory phase, consisted of a two-day participatory phase with key leadership present to make immediate decisions, and followed by a dissemination phase. Very detailed hospital plans were developed for processes of downtime registration, patient flow, laboratory testing, and radiology processes. Additionally, the process for obtaining specialty consults and admitting patients to the hospital were developed. These templates are now in use in the emergency department and undergoing revision for internal hospital use for future unplanned IT downtimes.