

## Oral Presentations—Theme 15: Research and Health Surveillance

### Session 1

*Chairs: Joost L.M. Bierens*

#### Researching Disaster Preparedness: Can it be Done?

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It has been said that is not possible to research disaster prospectively, as researchers would have to cause a disaster in order to study one.

Eleven high-fidelity, inter-professional, mass-casualty exercises were conducted by a team of subject matter experts from 2003 until 2006, ranging from terrorism to chemical spills, bus rollovers, and pandemics. They examined the following concepts and observed trends they believe will help increase the number of victims saved during events that overwhelm local hospitals:

1. At the site of the incident
  - a. Destination algorithms for casualty distribution;
  - b. Treat and release directives for paramedics and nurses;
2. At the hospital
  - c. Diversion of minor injuries to “shared care” sites e.g., hospital and non-hospital medical staff;
  - d. Diversion of significant others to a Family Information Centre;
  - e. Establishment of a discharge unit;
  - f. Sequential Organ Failure Assessment Score for Critical Care Triage;
  - g. Mutual Aid Agreements with long-term care facilities;
3. Both
  - h. Triage system even simpler than START;
  - i. Situational awareness dashboards; and
  - j. Distributed command systems.

Based on this work, an entity called the Interprofessional Disaster and Emergency Action Studies (IDEAS) Network, consisting of a consortium of Canadian universities, colleges, the government, and subject matter advisors was created. It will be their mandate to evaluate the effectiveness of simulation in concept development and preparing interprofessional teams to respond to disasters.

**Keywords:** disaster; drill; research; planning; preparedness

*Prehosp Disast Med 2007;22(2):s146*

#### Role of Meta-Narrative Mapping in Synthesis of Complex Evidence in Prehospital and Disaster Medicine

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Evidence-based methods are highly suited to the review of experimental studies but other methods must be embraced

in prehospital and disaster medicine research where complex policy interventions involving long implementation chains may be evaluated, need local adaptation, and (potentially) have impact at multiple levels (individual, group, community, organization). Complex policy and service interventions are rarely evaluated by high-quality randomised controlled trials (RCTs)—and even when they are, the position of the RCT atop the hierarchy of evidence might, legitimately, be questioned. It is important to recognise the limitations of simplistic “hierarchies of evidence” and not reject evidence as “methodologically flawed” because it does not fit into a familiar taxonomy. Acknowledging the value of diversity of approaches in research, meta-narrative mapping has been developed and used by researchers in areas of complex policy, innovations and interventions.

Using a broad-based search strategy covering electronic databases and journals reporting on disaster and pre-hospital medical studies, we attempted to undertake a meta-narrative review and map the literature into research traditions. The findings were grouped under broad themes and a rich picture was developed using contributions from different traditions. Heterogeneity of approaches and contradictions in findings could be analysed systematically, permitting the ability to draw conclusions instead of statements such as, “there is contradictory evidence” or “more research is needed”. This paper will report on meta-narrative mapping and attempt to evaluate the use of such a technique for creating a knowledge repository in disaster and prehospital medicine.

**Keywords:** disaster; evidence; meta-narrative mapping; prehospital; research

*Prehosp Disast Med 2007;22(2):s146*

#### National Academy for Medical Assistance in Accidents and Disasters

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In May 2006, the Dutch ministry of the Interior and Kingdom Relations initiated a project to establish a national Academy for the Medical Assistance in Accidents and Disasters (AMAAD). The AMAAD is hosted by the Netherlands Institute for Safety Nibra and is scheduled to become operational by 01 January 2008.

The aims of AMAAD are: (1) to create an inventory of the current questions in the field of AMAAD; (2) to build a network of expertise from which national and international experts can be selected in case of the need for information; (3) to aggregate existing knowledge of AMAAD from science and practice; (4) to identify gaps in knowledge and initiate scientific research in strategic research projects with the support of professional groups, universities, and research institutes; (5) to establish a helpdesk for advice; and (6) to allow access to current knowledge that is easily and quickly available for field workers, researchers, policy makers and crisis managers in case of a disaster or crisis.

This project is supported by a multidisciplinary scientific group and a steering group that reflects relevant stakeholders in the field of disaster medicine.