

in Puskesmas did not recognize that. Only one village leader remembered that JDR actually served there, so village leaders may be efficient information sources for such interviews. When a mobile-clinic is planned, it is necessary to visit the village repeatedly, and review records of another team's past visits. The exact position of the location must be recorded using GPS. It is almost impossible to perform an appropriate evaluation unless objectives and targets are identified before the mobile-clinic activity begins. Furthermore, if post-activity evaluation is required, it is essential to promote the exact methods and procedures in order to identify the place where services were provided.

**Keywords:** evaluations; Indonesia; medical relief; mobile clinics; research

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### (R99) Development and Implementation of a Participatory Evaluation Method for Assessing Disaster Drill Performance

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**Background:** Disaster response evaluation is novel in many developing countries. If thoughtfully evaluated, disaster drills are a means of identifying gaps in planning. Existing methodologies are difficult to use where the availability and training of evaluators is limited. Previously, a United States-based evaluation tool was found to be difficult to use in such a setting. A participatory drill evaluation tool was developed and tested in Mumbai.

**Methods:** A categorical and open-ended questionnaire was constructed based on five areas of disaster response: (1) command; (2) communication; (3) security; (4) resources; and (5) overall flow. Local input and previous evaluation tools also were used when constructing the questionnaire. All participants in a collaborative citywide disaster drill were asked to complete the tool, immediately after the drill.

**Results:** A total of 165 individuals (participants and dedicated evaluators) were asked about major systems areas such as security, communications, and command, and provided details in an open-ended follow-up. Evaluators and participants identified many of the same problem areas. The tool is flexible, can be adapted to local contexts and limited literacy, is thorough yet concise, amenable to descriptive or statistical key component analysis, and allows triangulation between groups and serial tracking.

**Conclusions:** Despite limited evaluator availability and training, this participatory, focused evaluation methodology was efficient and practical for identifying key areas of improvement. Multi-sectoral input, rapid response turnaround, and adaptability to diverse contexts make it a practical evaluation tool. Some differences in evaluators' and participants' responses may be due to experience, expertise, and participation rather than passive observation. Further use of this participatory evaluation may positively impact disaster response planning.

**Keywords:** disaster; disaster planning; evaluation; participatory; resource-constrained settings

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### (R100) European Union Project: Identifying the Needs of Medical First Responders in Disasters

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The objective of the NMFRRDisaster project was to identify the areas in need for future research activities, prioritize them, determine a roadmap for future research activities targeted by the European Union. The project is under EU Framework program No. 7, security, coordination, and support action. The concept of this project was to join medical first responders with experts in order to identify the needs and available knowledge in five key areas of activity:

1. Methodology and technology used to train medical first responders for disasters;
2. Understanding the human impact of disasters on first responders;
3. Ethical and legal issues influencing the medical response to disasters;
4. Personal protective equipment used in chemical and biological incidents; and
5. Use of blood and blood products in disasters.

Members of the project consortium include:

Magen David Adom (Israel)—Coordinator  
 Al-Quds Nutrition and Health Research Institute (Palestinian Administered Areas)  
 AmbulanceZorg (the Netherlands)  
 Charles University (Czech Republic)  
 Center for Science, Society and Citizenship (Italy)  
 Danish Red Cross (Denmark)  
 Fundacion Rioja Salud (Spain)  
 SAMUR Protection Civil, Madrid (Spain)  
 Shield Group Inc. (Netherlands)  
 SINGERIE S.r.l (Italy)

Grant Agreement No: 218057

Starting day: 01/05/2008

Project duration: 12 months

Detailed info: <http://www.mdais.com/316/4089.htm>

**Keywords:** blood; blood product; disasters; ethical and legal issues; European Union project; first responders; human impact; needs; personal protective equipment; security research; training

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### (R101) Comparison of Three Methods to Decrease Cardiovascular Responses to Pin Application

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**Introduction:** The Mayfield skull pin head holder application is a cause of increased hemodynamic response in a craniotomy patient. We conducted a randomized prospective study to compare the efficacy of clonidine, pin site infiltration of local anesthetic (LA) and skull block in attenuating this hemodynamic response.

**Methods:** Thirty ASA grade patients requiring elective craniotomy (age 18–65) years were allocated randomly into a clonidine group, a LA pin site infiltration group, and a skull block group. Clonidine group patients were premedicated with Tab. Clonidine 2–3 µg/kg, 90 minutes prior to