and supports a window of opportunity for delaying the evolution of an outbreak. In isolated cases, it might even help to contain the event. These products currently are part of the national stockpile for an unusual biological event.

Keywords: airborne infection; biological; infection; outbreak
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Identifying Needs of Medical First Responders in Disasters

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Introduction: Magen David Adom coordinated a project funded by the European Commission under Framework Program 7 (FP7)—Security, Identifying Needs of Medical Responders in Disasters (NMFRDisaster). The project involved 10 partners, emergency medical services, and research institutes.

Objective: The objective was to point out areas that require further research and development in order to meet the needs in the field.

Methods: Five issues were identified: (1) training methodology and technology; (2) human impact of disasters; (3) law and ethics; (4) personal protective equipment (PPE); and (5) use of blood and blood components. A partner was assigned to conduct a review and a workshop with the participation of end users, researchers, and the industry.

Results: Areas identified as requiring further research and development:

1. Human Factor and Training
    a. Profile (enabling and limiting factors, motivation, learning styles, needs for support);
    b. Building evidence-based recruiting, training and support programs, needed core competencies; and
    c. The role of volunteers, recruitment, training, retention, and a "volunteer contract".
2. Legal and Ethical issues
    a. Minimum training curriculum and European-recognized accreditation;
    b. Reference to disasters in current laws or a "disaster legal framework"; and
    c. A reference framework of ethical implications of emergency response for the planning phase.
3. Understanding the impact of cultural diversity on preparedness and response (responders and community).
4. The role of the media and new means of communication in preparedness and response.
5. Cooperation between response organizations, the military, NGOs, and international organizations in preparedness and response.
6. Need for a strong knowledge management structure—research, lessons learned, best practices, possibility for comparison and sharing, and a strong network of stakeholders.
7. Personal Protective Equipment
    a. Agreed upon tasks, operational procedures, standards;
    b. Communications problem using PPE; and
    c. Standard decontamination procedures for casualties, personnel, and equipment.
8. Use of Blood and Blood Components
    1. New products and procedures;
    2. New robust testing methods, for a "non-tech" environment; and
    3. Understand the public attitude regarding blood donations, especially in situations that put the person at risk (e.g., during a pandemic).

Keywords: development; emergency management; first responders; research
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Children as Targets: What We Need to Know Now

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Introduction: If the purpose of terrorism is to promulgate fear and psychological disruption in a civilian population, the targeting of children represents a particularly potent, though profoundly horrific, strategy. Children, how they are transported (e.g., school busses) and the places where they may congregate—schools, day care, special events—are the ultimate "soft targets". Ample historical evidence with respect to targeting children in settings across the globe and repeated statements from Al Qaeda with respect to American children, make these concerns legitimate.

Vulnerability: Schools and congregate facilities for children are, generally speaking, difficult to secure. The overt presence of hardened, isolated facilities—or the visibility of armed security personnel—is, in many communities, potentially distressing and disconcerting to young children. Children also are more susceptible than adults to psychological and physical consequences from disasters of any kind. Younger children are dependent on adults for safety, as they generally lack the capacity to independently move away from danger. Metabolic and physiologic realities create medical vulnerabilities as well. Relatively large skin surface-to-body mass, more permeable integument, higher respiratory rates, lower "breathing zones", and a greater propensity to develop dehydration and shock all are important factors in assessing vulnerability of children.

Response: Compounding the heightened vulnerability is the relatively diminished surge capacity of pediatric-specific countermeasures, facilities, and personnel. This certainly is true in the United States, where planning for the novel H1N1 pandemic has shed a light on substantial deficits in readiness capacity with respect to children and disasters.

Recommendations: A multi-faceted strategy to improve security and interdiction capacity in areas prone to terrorism is critical. Assessing community and regional response medical and mental health capabilities with respect to pediatric mass-casualty events and designing strategies to enhance these capacities also is essential.

Keywords: children; pediatrics; terrorism
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