

(1) no need for assistance; (2) need assistance but will not register; and (3) need assistance and wish to register or already registered. Their concerns about privacy protection as well as socio-demographic and health status were also asked.

Results: Of 1,477, 664 (45%) responded validly, and 596 (40%) answered on their attitudes toward the PRAD list. Of these, 365 (61%) reported they need assistance, though 30% of them (108) did not wish to register. A majority of the subjects concerned about privacy protection among those did not wish to register (65%) as well as among those wished to register (55%). Patients who lived alone, and those with low income were more likely to wish to register.

Conclusions: There are substantial needs for public assistance during a disaster among RA patients although the privacy protection issue would be a barrier to be overcome for successful utilization of the list.

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(A198) Bringing H1N1 Vaccinations to Vulnerable Populations

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Background: Populations that participated in this project represented > 46% of the total H1N1 patients hospitalized and 34% of deaths in the state of Oregon.

Methods: A committee was convened by the Oregon Health Authority to increase access to vulnerable populations. The committee determined the project must be supported by: (1) a local advocacy group; (2) a local Health Department; and (3) an emergency medical services (EMS) provider agency to provide immunization. This project involved outreach to a vulnerable population that may not be able to utilize mass vaccination clinics and may have limited access to medical services. Outreach was accomplished using three models: (1) volunteers delivering meals; (2) mailings to those receiving in-home meals; and (3) a community organization that conducted a flu clinic frequented by people with disabilities. Three models were developed for receiving calls and scheduling appointments. All projects followed the same procedure for vaccine administration.

Results: Seventy home-bound individuals met the criteria for vaccination. Post-survey results indicated: 55.2% lived alone and were homebound. Over 70% had previously received their vaccinations from their healthcare provider and 38.9% were not previously vaccinated due to vaccine availability. Fifty-eight individuals were vaccinated. Partner organizations were surveyed after their efforts were completed. Findings indicated that relationships between the EMS agencies and providers were greatly enhanced.

Conclusions: Outreach using nontraditional partners was an effective method to reach a vulnerable population. The project demonstrated that qualified vaccinators can be mobilized quickly. However, because this resource-intensive effort is more costly than providing mass vaccination, similar projects should only be utilized when less costly means are not effective, or when the risk level of the vulnerable population being served warrants it.

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(A204) Importance of Emergency Response Program Organizations in Coping with the Increasing Risk of CBRN Events

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Introduction: One of the most prevalent issues identified by Emergency Response Program Organizations (ERPOs), is the inability to care for an overwhelming number of contaminated patients within a civilian community. Even when emergency responders successfully decontaminate and triage large numbers of patients at the scene, it is unlikely that neighboring hospitals are prepared and equipped to receive such a large amount of patients and treat them within the boundaries of the existing healthcare system. Thus, planners must avoid any collapse of the healthcare system and may need to redistribute existing resources to enhance and facilitate patient outcome. As a response to this issue, ERPOs should develop an alternative healthcare facility: the Off-Site Triage, Treatment and Transportation Center (Off-Site Center). This Center is a temporary patient clearinghouse to be disassembled once the flow of new patients has diminished to the point that they can be handled by the existing healthcare systems.

Methods: The Off-Site Center is intended to care for patients who have been triaged as “Minimal” at the scene, those patients who are worried that they might have been exposed to contamination, and those who self-refer to the Center.

Results: Planners, administrators, first responders, medical professionals, and public health and emergency management personnel must evaluate the Concept of Operation for the Off-Site Center in order to increase their level of preparedness and provide effective mass-casualty care.

Conclusions: In this report, some general guidelines will be provided for the efficient planning and management of an Off-Site Center. A practical example will be also illustrated: a case study in Bergamo during a May 2010 National Meeting of the Italian Association of Alps Infantry Troops.

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(A205) Management of Mass Casualties and Associated Health Effects Following Chemical or Radiological Agent Release: Results of the European Union Mash Study, 2008–2010

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Although emergencies involving mass casualties following the release of chemical or radiological agents are rare, the risks are well-recognized and many countries have prepared national response plans. The MASH (Mass Casualties and Health) study, partially funded by the European Commission, examined preparations for mass-casualty management and associated health risks within the Member States of the European Union (EU). The objective of the study was to improve the overall capacity to manage mass-casualty incidents that may equally

outstretch the resources of a single country or involve several states simultaneously. Through confidential questionnaires and other means, MASH investigated the current response capabilities and planning for chemical and radiological incidents within the EU and also explored, through a number of seminars, developments in information and communications technologies, together with relevant developments in biotechnology which could improve a unified response. Finally, a foresight study has identified a number of areas for improvement and identifies six strategic aims for EU Member States to cope with chemical and radiological mass casualties. This presentation will cover the main findings of the MASH study and consider its wider message for chemical and radiological incidents worldwide.

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(A206) Simulation of an Emergency Situation Caused by Biochemical Incident

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Emergency situations such as biological or chemical incidents require prompt decision making. The problem is that the authorized personnel responsible for conduction the response operations might lack the knowledge about the agent's biological, chemical and epidemiological characteristics that would influence the impact of the incident. Thus the effect of response operations on lives and assets could hardly be anticipated. The paper suggests simulation based approach to provide appropriate decision making support in such situations. The simulation would imitate the development of an emergency situation under various scenarios and help to determine the proper response operations by which the casualties and loss of assets would be minimized. The aim of the paper is to present the simulation of a spread of an agent in an environment and the corresponding impact on population. The simulation is based on a model with incorporated knowledge about environmental and agent characteristics such as weather conditions, transmission, fatality, incubation period combined also with demographic information. The provided simulation forms a part of the proposed non-military decision support framework for emergency response operations during biochemical incidents.

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(A207) Resuscitation of Casualties Following Exposure to Toxic Chemicals: What is New?

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Injury following exposure to toxic chemical agents has potential life-threatening effects, particularly on the respiratory system. Antidotes alone often are not sufficient to reverse this

situation, and the need to provide early and effective advanced life support for chemical casualties increasingly has been accepted by emergency services around the world. Although the principles of life support are the same for toxic as for conventional casualties, the requirement for responders to wear personal protective equipment makes airway and ventilation management more difficult. Special training and familiarity with devices and equipment used are essential to ensure effectiveness. Recent studies have indicated both the limitations and the possibilities for resuscitation of casualties in a contaminated environment before decontamination. Ventilation of patients with respiratory failure or arrest requires the use of devices which are able to operate and be used by responders wearing protective equipment. The laryngeal mask airway has been shown to be an easier and viable alternative to intubation in this situation. Portable automatic ventilators have been developed which can be used to provide controlled ventilation in a contaminated zone. The ideal mode of ventilation for potentially damaged lungs, following exposure to agents such as chlorine and phosgene has yet to be established. There may be a case for early application of the protective lung ventilation strategies that are now common in intensive care units. This presentation will review recent human and animal studies related to resuscitation in a contaminated zone and provide illustrations of the practical approaches currently used by emergency medical services.

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(A209) Developing Medical Facility Preparedness for Radiological Hazmat Emergencies: Applying Surge Science

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Introduction: Singapore is considered a prime target for transnational terrorism. Perpetrators may select an explosive radiation dispersal device or “dirty bomb” as their weapon of choice. Additional risks of a local radiological emergency may arise from mishaps involving visiting marine nuclear-powered vessels. Strategies and methods used to enhance preparedness to respond to radiological mass-casualty incidents (MCIs) will be described. **Methods:** A core group comprising hospital emergency managers and radiology and emergency department staff spearheaded preparedness efforts. The Ministry of Health Guiding Document on managing radiological MCIs provides the principles and operational concepts to anchor the development of local protocols. Discussion sessions, site visits, drills, and exercises are conducted to improve organization performance. Expert opinion and feedback from various stakeholders and partners help shaped the overall plan.

Results: Preparedness activities focused on improving surge response capability through broad categories include: 1. Staff—Radiation response teams were developed and assigned roles and responsibilities. Training and education programs were created for different staff positions, e.g., on correct usage of electronic personal dosimeters and acute radiation syndrome. 2. Staff—Material resources such as antidotes, and expendables like