and response material into the curricula for every health professional school in the nation.
Discussion: To date, the focus has been on the education of the existing healthcare workforce. Students' needs differ from those of practitioners in that there is a fundamental difference between educational competencies and occupational competencies. It is also important to recognize that to assure proper preparedness there must be a clear connection between departments of public health and all other healthcare entities. To this end we included public health students in the creation of competencies and have shown that non-clinical practitioners can, and indeed must, be included in this process.
Observations: We describe a process and present a list of emergency preparedness core competencies for health care professions and their applicability to Medical, Dental, Nursing and Public Health students. While we have designed this set of competencies using these disciplines, they may be easily adapted to other healthcare disciplines. The only variations would be in the assignment of proficiency levels and the decision of whether or not clinical competencies are appropriate. The core competencies have been divided into the following four categories which represent broad subject areas and the separation of the competencies related to direct patient care:
– Emergency Management Principles
– Terrorism and Public Health Emergency Preparedness
– Public Health Surveillance and Response
– Patient Care for Disasters, Terrorism and Public Heath Emergencies.

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(A162) Preparing Plans! Helping First Responders Prepare the Population

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It is common knowledge that having an individual or family disaster plan is vital for saving lives and property before, during and after a disaster. First responders have the daunting task of helping many people during a disaster. It would make their jobs easier if people had disaster plans before a disaster. However, for a variety of reasons, few people have a disaster plan. People often do not develop disaster plans due to the time required to devise a plan, a lack of knowledge of the benefits of having a plan, or the effort required for the primarily manual process of developing a disaster plan. Wilberforce University has designed a solution called Wilberforce's Information Library Boosting Emergency Recovery (WILBER) which is a customized, online tool to quickly and automatically generate disaster plans to help save lives and property as well as mitigate the impacts of a potential disaster. WILBER utilizes an interdisciplinary approach to automatically generate a basic disaster preparedness plan. The system addresses a wide range of disasters but focuses on floods, earthquakes and technological disasters such as terrorism and nuclear disasters. WILBER automatically processes locally relevant data intelligently and combines mathematical analysis; distributed computing; individual and business risk management; current and historical information from a comprehensive Geographical Information Systems (GIS) that includes imagery, infrastructure, demographic, and environmental data; and wireless sensors for real time condition assessment. Not planning for a disaster only increases the potential magnitude of a disaster. WILBER allows citizens to quickly establish immediate procedures in the event of an emergency which in turn can lessen the burden on first responders and reduces the likelihood of loss of life. This research is funded by the Department of Energy's National Nuclear Security Administration and conducted by the Wilberforce University Disaster Recovery Center in Wilberforce, Ohio, USA.

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(A163) Hospital Evacuation Plan

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Introduction: Hospitals, as one major cornerstone of contingency planning, are often expected to be fully functional during a major incident. However, the continuous streamlining of todays healthcare system with a constrained economy, lean production principles and increasing complexity together with changing levels of the threats may result in an evacuation, should hospitals themselves be the targets for a disastrous action.
Objective: The aims of this study were 1) to evaluate an appropriate risk and vulnerability analysis model as a basis for hospital evacuation plan, 2) to identify hazards triggering an evacuation 3) to evaluate the response needed in an evacuation situation and 4) to clarify the impact of such an evacuation plan on the ordinary emergency medical plan.
Material and Methods: A systematic online literature search based on the following keywords; evacuation/closure, hospitals/medical facilities, and disaster/hazards; alone or with planning, and also a risk and vulnerability analysis as a case study at the hospital in Lidkoping, Sweden, were conducted.
Results: Our findings indicate that hospitals are vulnerable to different risks such as technological dysfunctions, climate changes and terror actions, which can result in an evacuation of patients. In such a situation, well functional transport organization and availability of temporary facilities along with good communication are necessities to assure patient safety. Such functional abilities may be assessed by planning, education and continuous training.
Discussion and Conclusion: There is a need for an elaborated evacuation planning for hospitals. Such plan should continuously be drilled based on a risk and vulnerability analysis and be integrated in the ordinary medical emergency plan. Simulations of different scenarios are one way to determine risks and identify proper actions before a major incident or disaster strikes.

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(A163a) Gold-Medal Performance: "Operational Readiness Assessments" for High-Risk Workplaces

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This presentation will demonstrate that the use of an "Operational Readiness Assessment" was successful in identifying high-

performance strategies for frontline-responders, namely surgeons, air traffic controllers, police, and world-class athletes. This research-based approach confirms that best performers in high-risk situations prepare similarly to elite athlete, specifically relating to their emphasis on mental readiness. A framework (Orlick's "Model of Excellence") developed by researchers who worked with Olympic athletes has a proven replication within very different high-risk disciplines. Both quantitative and qualitative analysis of mental readiness was provided based on in-depth interviews with exceptional professionals regarding their best and less-than-best performances. These findings were assessed to determine the presence of common success elements, including: (1) commitment; (2) confidence; (3) mental preparedness; (4) focus/refocus; and (5) seeking and accepting feedback. This refined assessment tool combines the methodological rigour of academic research with a highly readable and practical analysis of specific techniques that increase effectiveness. Challenges were defined from a frontline-perspective. The balance between technical, physical, and mental readiness were compared. Success skills, performance blocks and influencing factors for optimal performance were detailed. Ten practical recommendations are discussed relating how preparedness of frontline-operations strengthens performance, productivity, and morale. An "Operational Readiness Assessment" is a powerful tool with proven value in hospital, paramilitary, corporate, and industrial settings in which there is a need to be well prepared for, risks of injury or death, large equipment/financial expenditures, complacency, fatigue, and significant consequences of errors. It has been described as an indispensable addition to current work in recruitment, career development, e-learning, role-modeling and future research benchmarks. For example, new performance-indicators for mental readiness were incorporated into surgical-resident evaluations, national situational-awareness training was instituted for seasoned air-traffic controllers, and mental-survival e-modules now enhance police coach-officer programs. Ultimately, a "winning" strategy for managing risk is promoting a healthy, prepared workforce resulting in a safer community.

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(A164) Emergency Preparedness Model for a Level-One Trauma Center

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This Level-1 Trauma Center, with a service area covering a population of approximately four million people, treats approximately 80,000 patients per year. In 2010 it is anticipated that > 23,000 patients will be admitted, and > 850,000 patient encounters will occur within the network. This year was especially fruitful with the World Series, Dallas Cowboys, and other large crowd events simultaneously. The disaster plan prepares the hospital for the Super Bowl in February 2011, and its anticipated 250,000 extra people. The emergency preparedness program is a unique hybrid model integrating hospital accreditation guidelines, governmental guidelines, and regulations with the daily experiences at the trauma center. Emergency Preparedness is a program of the Trauma Department; this relationship provides a direct connection between the emergency preparedness program and direct execution of the plan. The emergency preparedness coordinator is responsible for directing the hospital command center at the time of a disaster requiring activation of the plan. The four phases of emergency planning: (1) Mitigation; (2) Preparedness; (3) Response; and (4) Recovery comprise the core of the plan. However, memoranda of understanding with local, regional, and state emergency operation professionals and organizations are enacted so depleted resources can be replenished. This integration provides for a flexible web that allows sharing of expertise and resources. Trauma Research is available for conducting measurable assessments of emergency preparedness drills and exercises, as well as actual disasters and emergencies where a paucity of research exists. Compliance with all relative agencies is important. A successful emergency preparedness plan directly incorporates daily experiences. This model allows for the continued provision of standards of care and continuity of service during disasters and emergency situations on a daily basis.

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(A165) Red Cross Health Erus, a Modular Approach to the Challenge of Evolving Emergencies

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Emergency Response Units (ERUs) were pioneered over a decade ago by the International Federation of Red Cross and Red Crescent Societies (IFRC), with the intention of providing a standardized, rapid global tool for response in disasters. Health ERUs are one example of several types of ERUs on stand-by in various countries around the world. Their tented infrastructure, basic medical equipment, and pre-trained personnel allow for the provision of surge medical capacity where it is needed. Commonly used set-ups include a Basic Health Care Unit and a Referral Hospital. The recently-introduced Rapid Deployment Emergency Hospital allows for a lighter, highly mobile infrastructure, with surgical and emergency medical capacity. The modular design of these ERUs allows for deployment with materials "tailored" to the disaster. Their flexibility has been demonstrated in public health emergencies such as the nation-wide cholera epidemic that occurred in Zimbabwe (2008) and more recently in earthquake-damaged Haiti (2010) and flood-affected Pakistan (2010). Health ERUs already on the ground in post-earthquake Haiti were able to re-organize equipment for use in cholera treatment units and centers, and additional ERUs were deployed specifically to set-up treatment centers. In Pakistan, a mobile clinic set-up was used to deliver primary health services to displaced populations, including psychosocial support initiatives and community health messages to minimize the emergence of communicable diseases. The Community Health module (CHM) is a new module in development since 2009. Experience has shown that disrupted health systems, combined with displaced populations can create a fertile environment for communicable disease outbreaks. The CHM addresses primary, secondary and tertiary prevention early in emergencies by engaging communities and more specifically National Society volunteers in epidemic control. The modular design of Health