training in emergency care is an important factor. We designed AIIMS basic emergency care course (AIIMS BECC) to address the issue.

**Objective:** To improve the knowledge, skill and attitude of healthcare workers and laypersons in basic emergency care and to identify and train instructors.

Methods: Prospective study conducted over a period of one and half years. The target groups were medical, police, fire fighter, paramilitary forces, teachers, school children of India. Provider AIIMS BECC is of one day duration. The contents of the course are cardio-pulmonary resuscitation, chocking and special scenarios like trauma, electrocution, drowning, hypothermia, pregnancy, etc. Course was disseminated via lectures, audio-visual and hands on training. The participants were evaluated by pre and post test questions. Subjects had to score 80% to be successful and those who scored more than 90% were eligible for instructor course. The confidence levels at baseline and at the end of the course were evaluated in policecourses were evaluated on course clarity, course delivery and trainers quality on a likert scale (1 = worst, 5 = excellent).

Results: 1614 subjects were trained. 99.81% became providers and 2.6% were trained as instructors. 83.1% were non-medical and16.9% were medical personals. 76.14% were police, paramilitary 0.8%, teachers 1.6%, students 2.1% and mixed groups were 2.6%. The average and modal increase in confidence level among police were 66.14% and 62.49%. Likert scale of  $\geq$  4 was observed in 90.7% in course clarity, 91.28% in course delivery and 95.26% in trainer quality.

Conclusion: Knowledge, skill and attitude of healthcare care and laypersons in providing basic emergency care improved by community emergency care initiative. Instructors were identified for further dissemination of the course. The confidence levels increased among police.

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## (A27) Traumatic Wound Management by Bystanders – Myths

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Objective: To receive trauma victims from site of incidence to the emergency department without mauling with adjuvant by first aid managers.

Material: Poor dressing techniques practiced for first aid in industrial, domestic, traffic, calamity, etc. inflicted wounds. Dressing with copious amounts of cotton on traumatized parts that are open or exposed. Wrong wrapping, storage, transport of amputated parts for attempt of salvage / reimplantation.

Methods: Assessment of increased rate in sepsis and rise in rate of risk of complications or loss of traumatized body part or even life in cases of trauma in which primary / incident manager with poor awareness / skills, shortage of first aid material.

Discussion: Need of training of general public on skills of first aid. Maintaining First Aid Kits for Emergencies as per stipulation and need based.

Observation: Improved results in management of trauma that were properly attended to from time of incidence to casualty. Results: Improved ratio of post traumatic sequel like sepsis,

delayed amputations, revisions, graft rejections, co morbidities, expenditure, etc.

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## (A28) A Matter of Degree: Teaching "Disaster" and "Emergencies" to Public Safety Executives

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What is the difference between a "disaster" and an "emergency"? One can safely say that for the victim of an event, it is always a disaster. But what about the first responders who are tasked with returning conditions to normal as quickly as possible? What about the executives who must direct the first responders, as well as coordinate resources? The difference is a "matter of degree" because it depends on the amount of resources that are required to respond to the incident. For example, an overturned gasoline tanker truck may only be an emergency for a major metropolitan area, but a disaster in a more rural region. American public safety is a mirror image of the government system of federalism that developed during the founding of the United States. Public safety entities are attached to the various local, state, and federal government agencies. There are almost 18,000 local law enforcement agencies across the US. Only 47 agencies have more than 1,000 sworn officers, while almost 90 percent have less than 50. There are more than 30,000 fire departments, yet only about one-quarter of all firefighters are full-time professionals. The rest are volunteers. The author, a 30-year law enforcement veteran, has developed a college-level course for public safety executives to help them understand the "matter of degree." The intent of the course is to challenge executives to conduct a careful self-examination of their own public safety agencies to determine what they are capable of doing in an event. An executive only gets one chance to do it right, so being able to distinguish between a disaster and an emergency response will be critical to success. When the event occurs, a public safety executive will be better prepared to make key decisions.

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#### (A29) Effect of Institutional Education and Exercise Programs on Knowledge, Views, and Compliance during Unusual Biological Events

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Background: Unusual biological events (UBEs) pose a distinct challenge for emergency preparedness. Not only are these events rare and difficult to detect, but they also pose clear hazards for both medical personnel and their families. Distinct skills include identifying UBEs and activating institutional and national response. Staff attendance and confidence in the health system play a vital role in effective management of UBEs. The Israeli Ministry of health conducts yearly drills on the personal, institutional, and national response to UBEs.

Aim: The aim of this study was to evaluate the effect of various educational tools and personnel characteristics on personnel skills, views, and compliance to participate in the management of UBEs.

Methods: As part of the preparations for an institutional drill in the Tel Aviv Medical Center, several educational methods were employed. These included e-mail notifications, computer-based self learning, publication of an institutional protocol, tabletop drills, personal briefings, and finally, a large scale exercise. Questionnaires regarding personnel characteristics, participation in pre-drill education, personal views, compliance, and familiarity of institutional protocols and selected diseases were distributed.

Results: Age, family status, and years of experience had no significant influence on personal views. Confidence in the health system increased with experience. Intensity of training had significant positive effect on personal confidence and compliance to attend work during a UBE, however it did not appear to significantly influence personal views or medical knowledge. Conclusions: Comprehensive education and exercise of personnel is beneficial effect in terms of personal confidence and work attendance during UBEs. Specific educational tools, such as self-learning software, increase proficiency.

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# (A30) Risking It All on Risk Assessment – Why Risk Assessment is broken in Disaster Medicine and How We Can Fix it

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Why did we predict Y2K, but not 911? Why did we predict dirty bombs for much of the past decade, but failed to predict the Asian Tsunami, Hurricane Katrina, and the Haiti Earthquake? Rational disaster preparedness depends on rational risk assessment - but does this really occur? This presentation will explore why risk assessment in disaster medicine is broken, including (1) type I and type II errors in risk assessment; (2) limitations of human neurophysiology; (3) cognitive biases in risk assessment; (4) impact of the media; (5) lack of harmonization of the language of risk; (6) deference to socalled risk experts; (7) risk innumeracy; (8) flaws in risk assessment matrices; (9) black swan events; and (10) managing risk based on extreme events. Concomitantly, this presentation will explore how we can fix risk assessment in disaster medicine, proffering practical solutions to each of these common yet surmountable barriers.

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#### (A31) Integrating Health Volunteers into Community-Based Disaster Risk Reduction

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**Background:** Disaster risk reduction (DRR) has emerged as a core element of sustainable development. (UN/ISDR 2002). Reducing risk requires long-term engagement (O'Brien 2006),

and the actual work of DRR is largely a task for local communities. (Schipper 2006). DRR shares some tenets with preventive medicine (Sidel 1992). As in preventive medicine, risk reduction calls for a basic attitude shift in the minds of many who traditionally get sick first and seek treatment later. The challenge for DRR, as applied to health, is to broaden the focus of disaster management from that of tertiary prevention, (response and recovery) to also emphasize primary and secondary prevention, (prevention, preparedness and mitigation).

Discussion: The role of the health sector spans across the spectrum of DRR to include prevention, mitigation and preparedness activities. DRR, as applied to health, is intended to prevent and/or reduce the negative health consequences of disaster hazards. This is accomplished by two means: hazard avoidance and vulnerability reduction. Health and medical volunteers at the community level can play an important role in reducing human vulnerability to disasters by: (1) reducing susceptibility – "healthy people" (2) reducing exposure to disaster hazards -"healthy homes; (Srinivasan et al. 2003); and (3) increasing resilience - "healthy communities". Volunteers help to reduce exposures to disaster hazards through participation in population protection measures such as shelter-in-place, evacuation and mass care. They work to reduce susceptibility by participating in health care, health promotion, and immunization programs. Finally, volunteers may build resilience by way of their participation in community-level preparedness, response and recovery efforts. (Keim 2008)

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# (A32) Emergency Preparedness in Louisiana Nursing Programs – Response Roles, Impacts, and Competencies K. Andress

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Introduction: Nurses are leaders and primary health responder/ providers in natural, anthropic and technological disasters. Preparation and education for nursing emergency and disaster response should begin before nursing program graduation and before disaster events occur. In Louisiana, 17 federally-declared disaster declarations were experienced from 2000 - 2009, ranging from the Space Shuttle "Columbia" to Hurricane "Katrina". This presentation overviews Louisiana nursing programs' disaster preparedness and operational planning as demonstrated to Louisiana's Schools of Nursing Aligned for Emergency Responsiveness (SAFER) Conference, New Orleans, 2010. Co-sponsored by Dillard University, Division of Nursing, New Orleans, and Northwestern State University, College of Nursing, Shreveport, the invitational conference brought expert nurse and physician preparedness speakers from federal, state and local venues to review disaster planning, experiences, needs, and nurse preparedness competencies with nurse faculty leadership.

Methods: A multiple choice survey was developed, trialed and emailed to 42 Louisiana Nursing Programs. Programs surveyed included Associate degree, Bachelors and Graduate-level providers for Registered Nurses as well as Vocational Technical programs for the Licensed Practical Nurse. National Planning Scenario threat priorities; impacts of federally declared disasters