(P1-78) Utilizing New York City Pediatric Disaster Coalition Site Visits to Create Hospital Pediatric Critical Care Surge Plans

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Purpose: The New York City (NYC) Department of Health and Mental Hygiene (DOHMH) has supported a federal grant establishing a Pediatric Disaster Coalition (PDC) comprised of pediatric critical care (PCC) and emergency preparedness consultants from major city hospitals and health agencies. One of the PDC's goals was to develop recommendation for hospital-based PCC surge plans.
Methods: Members of the PDC convened bi-weekly and among other projects, developed guidelines for creating PCC surge capacity plans. The PDC members, acting as consultants, conducted scheduled visits to hospitals in NYC and actively assisted in drafting PCC surge plans as annexes to existing hospital disaster plans. The support ranged from facilitating meetings to providing draft language and content, based on each institutions request.
Results: New York City has 25 hospitals with PCC services with a total of 244 beds. Five major hospitals have completed plans, thereby adding 92 PCC beds to surge capacity. Thirteen additional hospitals are in the process of developing a plan. The PDC consultants participated in meetings at 11 of the planning hospitals, and drafted language for 10 institutions. The PDC continues to reach out to all hospitals with the goal of initiating plans at all 25 PCC hospitals.
Conclusions: Providing surge guidelines and the utilization of on-site PDC consultants was a successful model for the development and implementation of citywide PCC surge capacity planning. Visiting hospitals and actively assisting them in creating their plans was an effective, efficient and well received, method to create increased PCC surge capacity. By first planning with major hospitals, a significant increase of surge beds (92 or 38%) was created, from a minimal number of hospitals. Once hospitals complete plans, it is anticipated that there will be the addition of at least 200 PCC surge beds that can be incorporated in to regional city-wide response to pediatric mass-casualty incident.
Prehosp Disaster Med 2011;26(Suppl. 1):s124
doi:10.1017/S1049023X11004109

(P1-79) Regional Medical Command and Control Management of Influenza A (H1N1) Mass-Vaccination in the County of Östergötland, Sweden

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Introduction: On 11 June 2009, an Influenza A (H1N1) pandemic was declared by the World Health Organization (WHO). The Major Medical Incident Regional Command and Control Protocol in the County Council of Östergötland, Sweden was activated. After vaccinations were competed, it was decided that the operation should be evaluated in a retrospective study. This study aims to increase knowledge regarding regional management of a pandemic flu.
Methods: All protocols from regional command meetings were studied together with central data regarding, logistics, vaccination site reports, incident reports, and all written correspondence between involved departments. Information from results of a questionnaire that was distributed to all vaccination site managers were summarized and studied. In addition, an interview was performed with the chief of medical operations.
Results: Out of the approximately 426,000 inhabitants of the county, a total of 224,780 (53%) were vaccinated during a five and a half month period. The mean pace was 1,246 vaccinated per day (range 0–9643). Regional command had 41 recorded meetings resulting in a collected number of about 740 working hours. Three hundred sixty-six employees were involved in the vaccination, working 38,741 hours. Twenty-eight safety and 52 security incidents were reported. Uncertainty about vaccine delivery and keeping the public's interest were reported to be of concern for the management.
Discussion: Even with the large scale of the operation, there were only a few security and safety issues. Although the goal of vaccinating 75–80% of the inhabitants was not reached, it could be assumed that the pandemic was dampened. Given the public's high initial interest, it could be considered that vaccination should not start until a large number of doses have been delivered.
Conclusion: The medical incident command structure and protocol successfully can be adapted to a mass vaccination event. Information from the Östergötland County Council operation yielded significant experience for future mass vaccinations.
Prehosp Disaster Med 2011;26(Suppl. 1):s124
doi:10.1017/S1049023X11004110

(P1-80) Issues and Challenges in Preparedness and Response to Infectious Public Health Emergencies in Hospitals of Developing Countries

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India has witnessed many major infectious public health emergencies (PHE) during 21st century. They include outbreaks of Severe Acute Respiratory Syndrome (SARS) 2002–03, avian flu in 2006, chikungunya in 2006–07, and the H1N1 pandemic in 2009. Periodic dengue and Japanese Encephalitis epidemics also are common. The premier institute of the country, PGIMER Chandigarh, always has received a huge inflow of patients from North India during such emergencies. These patients pose special challenges to hospital administration in terms of effective and efficient management of crisis situation, and require special measures. The authors' experience has shown that the major challenges faced are allocation of scares resources, capacity building, motivation of employees, infection control, and inter-sectoral coordination. The response during the initial phase is erratic due

to a lack of clear guidelines and prior preparedness. Learning from these experiences, a contingency plan was prepared after consultation with all stakeholders. It was implemented during 2009 influenza pandemic. The contingency plan identifies: (1) area responsibilities; (2) disaster and screening areas for the handling of patients; (3) isolation and critical care facilities; (4) deployment of manpower; (5) allocation of drugs, consumables, equipment, and sterile supplies; (6) communication and reporting system; (7) awareness, education, and training; and (8) decision-making hierarchy and effective inter-sectoral collaboration. Also, a disaster plan has been prepared that includes standard operating procedures (SOPs) to be followed during infectious PHEs. A hospital infection control manual also has been prepared to address the issue of hospital acquired infections. The contingency plan and SOPs were effective during recent 2009 influenza pandemic in streamlining the response.

Conclusion: A well-documented contingency plan prepared in consultation with concerned stakeholders and implemented by a motivated and committed administration is essential in ensuring uninterrupted services during PHEs. It emphasizes that sound PHE plan is never an accident; it is always a result of high intentions, sincere efforts, intelligent direction, and skillful execution.

Prehosp Disaster Med 2011;26(Suppl. 1):s124–s125
doi:10.1017/S1049023X11004122

(P1-81) Differences between Radiation Dosages to Which the Radiology Department Staff and the Public were Exposed

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Introduction: In this study, the mean daily and annual radiation exposure of the radiology department staff, other hospital health staff, and public volunteers was compared at Maresal Cakmak Military Hospital in Erzurum, Turkey.

Methods: The NEB.211 Dose–Rate Meter with a Gaiger–Müller counter was used to measure the amount of radiation. Six radiology department health staff carried the NEB.211 device during seven working hours. At the end of the day, total absorbed dosages were noted. The same measurements were also done for the six health staff of the other departments and six non-hospital volunteers. Seventeen additional hours were noted for the non-hospital volunteers. The mean value of 17 hours of daily measurements (3.31 mSv) was added to the both group's working hours measurements and the total daily radiation amounts were calculated.

Results: There was no statistical difference between each three groups in working hours ($p = 0.087$), daily and annual equivalent dosages (for both $p = 0.099$).

Discussion: The radiology department health staff was exposed to radiation under the border of equivalent dosage which is determined by Turkish Automic Energy Authority. Public volunteers were seen as they were exposed the radiation over the determined border of equivalent dosage. Nonetheless, with changes depending on living standards, the physical properties of living spaces and geographical circumstances per capita exposed annual dosage is about 2.4–2.8 mSv throughout the world. There was no significant statistical difference between the amounts of equivalent dosage which were exposed to the radiology department health staff, the other hospital staff and public members.

Prehosp Disaster Med 2011;26(Suppl. 1):s125
doi:10.1017/S1049023X11004134

(P1-82) Implementation of an Active Vaccination Strategy Increased the Pandemic Influenza A (H1N1) 2009 Vaccine Coverage among Swedish Children

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Introduction: The European Center for Disease Control and Prevention (ECDC) identified young children as a group at higher risk of developing severe pandemic influenza A (H1N1) 2009 infection compared with the general population. Since children have high attack rates and seem essential in augmenting local outbreaks of influenza, vaccination of children was an important objective in the Swedish pandemic influenza A (H1N1) 2009 vaccination campaign. Children < 13 years of age were recommended to take two doses of the pandemic vaccine (Pandemrix®).

Objective: The objective of this study was to compare the vaccination coverage among children 1–12 years of age in different councils in the County of Jämtland, Sweden that either implemented an active advocating or a passive vaccination strategy. The active strategy included direct information to parents promoting vaccination, individual appointments, collaboration between different care providers, and visits of vaccination teams to day care centers and schools, whereas no specific measures, except general information in press and media, were undertaken in councils using a passive approach.

Methods: All pandemic vaccinations in the County of Jämtland were registered in a Web-based registration software system. Vaccine coverage was determined by comparing the actual number of children residing in different councils with the number of vaccinated children.

Results: A total of 4,162 of 6,000 children (69.3%) residing in councils using an active vaccination strategy were vaccinated compared with 5,059 of 9,373 children (53.9%) living in councils using a passive vaccination strategy ($p < 0.0001$)

Conclusions: Implementation of an active advocating vaccination strategy during the Swedish pandemic influenza A (H1N1) 2009 vaccination campaign resulted in a significantly higher vaccination coverage rate compared with a passive vaccination strategy.

Prehosp Disaster Med 2011;26(Suppl. 1):s125
doi:10.1017/S1049023X11004146

(P1-83) Infectious Diseases Following Natural Disasters: Prevention and Control Measures

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Communicable diseases represent a public health problem in developing countries, especially in those affected by disasters, and necessitate an appropriate and coordinated response from national and international partners. The importance of rapid epidemiological assessment for public health planning and resources allocation is critical. This review assesses infectious disease