

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.

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(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 Atomic 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.

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(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.

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(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

outbreaks during and after disasters caused by natural hazards and describes comprehensive prevention and control measures. The natural hazard event that causes a disaster does not transmit infectious diseases in the immediate aftermath of the disaster, nor do dead bodies. During the impact phase, most of the deaths are associated to blunt trauma, crush-related injuries, burns, and drowning rather than from infectious diseases. Most pathogens cannot not continue to survive in a corpse. The remaining survivors are the ones from which infectious diseases can be transmitted under appropriate conditions created by the natural disasters. Among several diseases, diarrheal diseases, leptospirosis, viral hepatitis, typhoid fever, acute respiratory infections, measles, meningitides, tuberculosis, malaria, dengue fever, and West Nile Virus commonly were described days, weeks, or months after the disaster event in areas where they are endemic. Therefore, diseases can also be imported by healthy carriers among a susceptible population. The objective of the public health intervention is to prevent and control epidemics among the disaster-affected populations. The rapid implementation of control measures should be a public health priority especially in the absence of pre-disaster surveillance data, through the re-establishment and improvement of the delivery of primary health care and restoration of affected health services. Adequate shelter and sanitation, water and food safety, appropriate surveillance, immunization and management approaches, as well health education will be strongly required for the reduction of morbidity and mortality.

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(P1-84) Application of an Indian Public Health Standard for Evaluation of Community Health Centers of Rajasthan, India

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Background: Community Health Centers (CHCs) constitute the secondary level of health in India. However, these centers are fulfilling the tasks entrusted to them only to a limited extent. In order to provide quality care in these CHCs, Indian Public Health Standards (IPHS) are being prescribed to provide optimal expert care to the community and to maintain an acceptable standard of quality of care. These standards would help to monitor and improve the functioning of the CHCs.

Objectives: The aim of this study is to apply the IPHS for evaluation of the CHCs of Rajasthan.

Methods: A cross-sectional observational study was conducted during August to October 2010. Four CHCs of Rajasthan were visited and data were collected in a pre-designed Performa. The quality of services provided in the selected CHCs as per the IPHS norms was assessed.

Result: All the four CHCs were rendering the assured services of the outpatient department, 24-hour general emergency services, new born care, normal delivery, and referral (transport). All CHCs had full-time physicians, but only three (75%) had surgeons and obstetricians, two (50%) CHCs had pediatricians. One (25%) had anesthetists and one (25%) had a program manager. There was a blood storage facility at one (25%) CHC.

Nursing staff were adequate. Basic laboratory facilities were available in all CHCs.

Conclusions: The present study revealed important deficiencies as per IPHS norms in the studied CHCs so that adequate measures can be taken to improve the healthcare facility.

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(P1-85) Health Seeking Behavior Post-Unintentional Household Injury in Hong Kong

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Background: Unintentional household injuries are a major public health problem that affects large numbers of people. Various population-based surveys from the literature showed > 40% of households reporting an injury that required medical attention. However, there is a general lack in comprehensive population surveys to highlight the risk of post-injury, help-seeking behavior and its associated financial cost. This study is part of the urban, home-based injury epidemiological study series (2007–2010) in Hong Kong.

Methods: A population-based, cross-sectional, random telephone survey was conducted using the last birthday method in 2009. A study instrument was developed and validated based on the modified Chinese World Health Organization guidelines for injury and violence surveys.

Results: The study population comprised of non-institutionalized, Cantonese-speaking Hong Kong residents ($n = 6,570$). Among the 39.4% self-reported injuries within the past 12 months, only 8.6% of injured people had sought medical care. Respondents tended to seek medical care from the private setting in the first episode of post-injury treatment. Among health seekers, 70% of the injured participants reported having to seek a second treatment and the care-seeking pattern shifted from private to public medical service delivery setting. Predictors of service preferences were identified and discussed.

Conclusions: Medical care seeking patterns post-unintentional household injury was identified. Medical and emergency services providers may wish to consider health service implications.

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(P1-86) Socioeconomic Impact of Natural Disasters in China

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Introduction: China is one of the countries most affected by disasters caused by natural hazards. Disasters comprise an important restricting factor for economic and social development.

Methods: Retrospective analysis was performed based on the epidemiological data of disasters caused by natural hazards in recent two decades.

Results: The deadliest disaster that was reviewed was the Sichuan, Wenchuan earthquake on 12 May 2008 with a death toll of 88,928. Floods were the the primary natural hazard resulting in disaster in China. The economic loss caused by natural disasters