Injury prevention – from research to effective intervention

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Abstract

Globally more than 875,000 children die from preventable injuries annually. However, injury is one of the most underrecognized public health problem in the world. To prevent injuries, CDC and WHO advocate using the step-wise Public Health Model – firstly define the problem, secondly identify causes, thirdly develop and test intervention, finally adoption and widespread use. A recent review on the world literature published in 12 leading public health and health promotion journals have found that 63% of publications were descriptive (ie stage 1 – defining problem), 11% were concerned on method development and 16% were intervention based (stage 3 – develop and test interventions) while only 5% were concerned with institutionalization or policy implementation research and fewer than 1% contained diffusion research (stage 4 – adoption and wide spread use). A recent review has found 12 effective intervention strategies for prevention of childhood injuries and should these be implemented globally we could prevent between 8,000 to 80,000 child deaths for each type of injury. The concluded that while there were urgent need to research and identify new intervention strategies, but if we could enhance coverage of existing interventions tremendous benefits – up to 1,000 child lives a day would be saved. [2]

In Hong Kong, it is the major cause of mortality and morbidity beyond 1 years of age for the past three decades. While there is a very slow decrease in mortality, morbidity rates are on increase with increasing variations among the 18 districts related to socio-economic factors. Assuming that all districts could achieve the lowest rate in Hong Kong around 30-50% of injuries are potentially preventable resulting in 33 fewer deaths, 1,946 less years of life lost, 3953 less hospitalizations, 19488 less AED attendances and a saving of HK$50 million per year in Hospital Authority. Effective interventions have already been established through international and local studies, including our own, but the major challenge is how to raise awareness and empower communities to implement evidence-based interventions in a systemic and sustainable way. Utilization of new social media or technology will another way forward. However, establishment of a good injury surveillance system that can inform local decision makers in prioritizing resources and empower communities to implement evidence-based intervention programmes are keys to success. However, most injury surveillance systems suffer from a lack of timeliness, relevancy, and sustainability. Hong Kong is fortunate to have an excellent public hospital system that electronically captures patient information. Using new geo-spatial and internet technology, an electronic geo-information injury surveillance system has been developed that satisfies most of the criteria for an injury surveillance system according to the World Health Organization and the Center of Disease Control and Prevention. The information can be translated into useful information for the development of injury intervention programmes through the Safe Community platform. PRECEDE-PROCEED and collaborative multiplier were found to be useful tools for implementing interventions. A three-pronged approach at the policy, district, and local levels is proposed for the coordination and implementation of child safety strategies using information collected from the geo-spatial injury surveillance system with Safe Community as the coordinating platform.

References

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