

Injury Survey 2008

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EXECUTIVE SUMMARY

Background

Injury is an important public health issue worldwide because it ranks high among the leading causes of global morbidity, mortality and premature death. With the growing acceptance that injury can be prevented, more and more countries have devoted to reducing the injury rate by studying its epidemiology and adopting effective strategies in their own localities. In Hong Kong, the Department of Health commissioned a private research agency to conduct a cross-sectional community survey on injury in 2008, with a view to gaining an insight into its local situation. It is hoped that the information collected will facilitate the work of policy makers and public health authorities in formulating effective measures on injury prevention.

This survey aimed to assess the characteristics and burden of unintentional injuries in the population in Hong Kong. The current preventive practices adopted by the population were also reviewed and analyzed.

Survey Method

Sampling Method

The fieldwork of the Injury Survey was conducted between 14 April 2008 and 31 July 2008. It covered the land-based non-institutionalized population of all ages in Hong Kong, including foreign domestic helpers. Sampled households were selected by systematic replicated sampling from the Frame of Quarters maintained by the Census and Statistics Department.

Definition of Injury Episode

In this survey, an injury episode was defined as “an unintentional injury that is serious enough to limit the normal activities of a person”.

Mode of Data Collection

Data were collected by face-to-face interviews. Using a structured questionnaire in Chinese or English, all face-to-face interviews were conducted in Cantonese, Putonghua or English. All households in the selected living quarters / segments and all members in the selected households were enumerated individually. As young children aged below 11 and respondents with difficulties in communication, e.g. elderly with hearing difficulties and mentally-handicapped persons, might not understand the questions or provide reliable answers, proxy reporting by parents or primary carers was allowed in the survey. This survey questionnaire adopted the International Classification of External Causes of Injuries (ICECI) to code data related to injury.

Data Analysis

Descriptive analyses were adopted to describe the pattern and burden of unintentional injuries, as well as the current preventive practices in the population. Subgroup analyses by gender, age group and other specific factors were conducted. By applying appropriate grossing-up factors to adjust for the differential response rates for 18 District Council districts and to gross up the data by type of housing as well as to control for the age and gender profile of the population, the data collected in the survey could infer the situation of the population in Hong Kong.

Key Findings

A total of 9 022 persons from 3 025 households were successfully interviewed in the survey, constituting a response rate of 74.1% at household level. The key findings were listed as follows:

Population Sustained Injury Episodes

6.2% of the population (or 415 200 persons) reported to sustain at least one injury episode, i.e. an unintentional injury that was serious enough to limit their normal activities, in the 12 months before enumeration. A total of 467 200 injury episodes were reported from these 415 200 persons who sustained injury episode(s) in the 12 months before enumeration. The proportions were similar for both genders. The proportion was found to be the lowest for children aged 0 to 4 (2.6%) and the highest for elders aged 75 and above (8.9%). However, children aged 0 to 4 had the highest proportion of sustaining three or more injury episodes (12.4%) as compared with those of other age groups during the period.

Further analysis found that people who lived alone, those with lower educational attainment, regular drinking or binge drinking habit, increased number of pre-existing selected chronic health conditions or long-term functional difficulties had higher rates of reporting an injury episode.

Pattern of Injury Episodes

Details of 460 000 injury episodes sustained in the 12 months before enumeration were reported and analyzed. The major characteristics of these injury episodes were presented below.

Associated Activity and Place of Injury Episodes

Most of the injury episodes in the population occurred when the people were engaged in paid work (28.7%), followed by sports and exercise during leisure time (18.7%) and unpaid work (13.7%). Home[†] was found to be the most commonly reported place of occurrence in injury episodes sustained by the extremes of age (children aged 0 to 4 and elders aged 65 and above).

[†] Under the definition provided by ICECI, “home” refers to a domestic setting, but not necessary the home of the injured. If the respondent was injured while cooking at a friend’s home, the place of occurrence was also classified as “home”.

Main Cause, Mechanism, Object and Outcomes of Injury Episodes

The three most common main causes of injury episodes were falls (32.2%), sprain (25.8%) and sports (14.1%). Falls were the commonest main causes of injury episodes sustained by females (40.8%) and the extremes of age (aged 0 to 4 (63.9%) and aged 75 and above (74.3%)). The major direct mechanism in nearly half (47.0%) of the injury episodes was blunt force, followed by physical over-exertion (39.4%). Person(s)[†] (41.3%) was the most commonly reported major direct object producing the injury episodes. On the other hand, around 80% of the injury episodes caused injury on the extremities of the body, including the upper and lower limbs. Sprain or strain (47.3%) was the commonest form of physical harm caused by the injury episodes.

Burden of Injury Episodes

Burden to the Health Care System

Among the 460 000 injury episodes reported in the 12 months before enumeration, 67.4% (or 309 800 injury episodes) were medically attended in Hong Kong, in which a higher proportion was found in injuries sustained by elders aged 65 and above (83.9%). The main sources of first local medical attention (other than first aid) were the Accident and Emergency Department of hospitals under the Hospital Authority (45.0%), Chinese medicine practitioners (including bone-setters) (30.9%) and general medical practitioners (17.5%). Among the injury episodes which received first medical attention in Hong Kong, 73.0% (or 226 300) of them received follow-up medical attention (other than hospitalization). Chinese medicine practitioners (including bone-setters) (50.0%), Western medicine practitioners (general practice) (41.3%) and Western medicine practitioners (specialist) (26.2%) were the three main types of local providers of follow-up medical care.

[†] The object code “animal, plant, or persons – person(s)” was applied when a person was the object in an injury episode. The “person(s)” could be the victim himself / herself, or other people. Examples of the victim himself / herself to be the object are: a person twisted his / her ankle when dancing (the victim’s own body weight is largely responsible for the injury); a person hit his / her own head with fist when he / she uncorked a bottle with cork screw.

Among those 309 800 injury episodes which were medically attended in Hong Kong, 16.7% (or 51 900) resulted in hospitalization (i.e. admission to a hospital overnight), and the hospitalization rates were found to increase progressively with increasing age. The median duration of hospitalization in Hong Kong due to the injury episodes was 4.0 days, and elders aged 65 and above had the highest median duration of 7.0 days across different age groups.

Burden to the Individual and Household of the Injured

About 36.2% of the injury episodes caused the victims to give up or change their normal daily activities and 1.4% rendered them to develop residual disabilities which lasted for six months or above. 17.1% of the injury episodes sustained by students caused the victims to take days off from school temporarily for a median of 3.0 days. On the other hand, slightly more than half of the injury episodes (51.3%) sustained by employed persons caused them to be absent from work temporarily for a median of 7.0 days. The median number of days of paid sick leaves taken due to the injury episodes was 5.0 days, whereas the median number of days of unpaid sick leaves taken was 7.0 days.

The median of total medical expenses incurred from the injury episodes was HK\$300. The median of total cost incurred from the injured episodes was the highest among those in elders aged 65 and above (HK\$500). About 3.0% of the injury episodes rendered other household member(s) of the victims to take leave from work temporarily in order to take care of the injured, and such proportion was higher among injury episodes involving elders aged 65 and above (7.2%). 13.0% of the injury episodes were reported to cause a decline in usual household income; whereas 5.1% and 3.6% of the injury episodes were reported to cause a decline in usual household expenses and food consumption respectively.

Among the 145 800 injury episodes sustained in Hong Kong but were not medically attended locally, the injured persons for nearly all (97.8%) of them adopted self-treatment. The use of medicated liquor (76.3%) was the most popular form of self-treatment.

Preventive Measures Adopted

Over half of the population followed the majority of the personal preventive measures all or most of the time. Nevertheless, measures specifically against sports-related and fall-related injuries were less frequently adopted by the population.

Conclusions and Recommendations

This survey found that characteristics of unintentional injuries varied across different life stages and genders. It is therefore crucial to enlist multidisciplinary support to tackle the complex nature of the injury problem. In October 2008, the Government set up a high-level Steering Committee (SC) on Prevention and Control of Non-communicable Diseases to launch the Strategic Framework for Prevention and Control of Non-communicable Diseases. As recommended by the SC, the Government would take the initiative in establishing a working group on injuries to advise policy makers on priority actions, draw up targets and action plans to reduce the occurrence of injury and alleviate its disease burden to Hong Kong.

A multi-pronged approach should be adopted to tackle the injury problem because various factors were found to contribute to the increased occurrence of injury.

Health education should be tailored to meet various needs of different population sub-groups. Medical professionals, including both Western and Chinese medicine practitioners, are suitable and effective parties to provide health education to the public which serves as a secondary preventive measure.

Health education is most effective when coupled with other measures such as environmental modification and compliance with the use of safety devices. In addition to health education, strategies to improve access to safety devices in the form of financial subsidy could be considered especially among the poor and the vulnerable.

To optimize resource allocation, injury prevention research and programme evaluation should be encouraged to guide evidence-based interventions.

This survey serves as the first comprehensive territorial-wide household study to delineate patterns of unintentional injury among the population in Hong Kong which follows international guidelines and coding system of injury. If being conducted according to an established standard methodology at a regular interval, the survey will serve as a useful tool for monitoring the trend of injury, detecting emerging problems, identifying associated risk factors and evaluating intervention strategies.