

Non-Communicable Diseases Watch

August 2022



Be Falls Aware

Key Messages

- ※ Many people fall and sustain injuries every day as a result of slipping on wet floors, being tripped by clutters, falling from heights or furniture, collision with or shoving by another person. Falls do not ‘just happen’. In fact, they are often resulted from an interaction of multiple risk factors involving the faller and the environment.
- ※ The Unintentional Injury Survey 2018 conducted by the Department of Health (DH) showed that fall was the most common type of unintentional injury, accounting for 39.4% of all injury episodes that occurred over a 12-month period. Risk factors associated with falls included pre-existing functional difficulties or chronic diseases and lack of physical activity. Among households with elderly aged 65 or above, adoption rates of specific safety measures against falls were low.
- ※ On top of ensuring home safety, removing environmental hazards and using assistive devices, leading a healthy lifestyle also plays a key role in fall prevention through improved physical fitness, delaying the onset of age-related functional decline and chronic diseases.
- ※ DH will continue working in close partnership with community partners to raise public awareness of fall prevention and support effective application of proven interventions against falls.

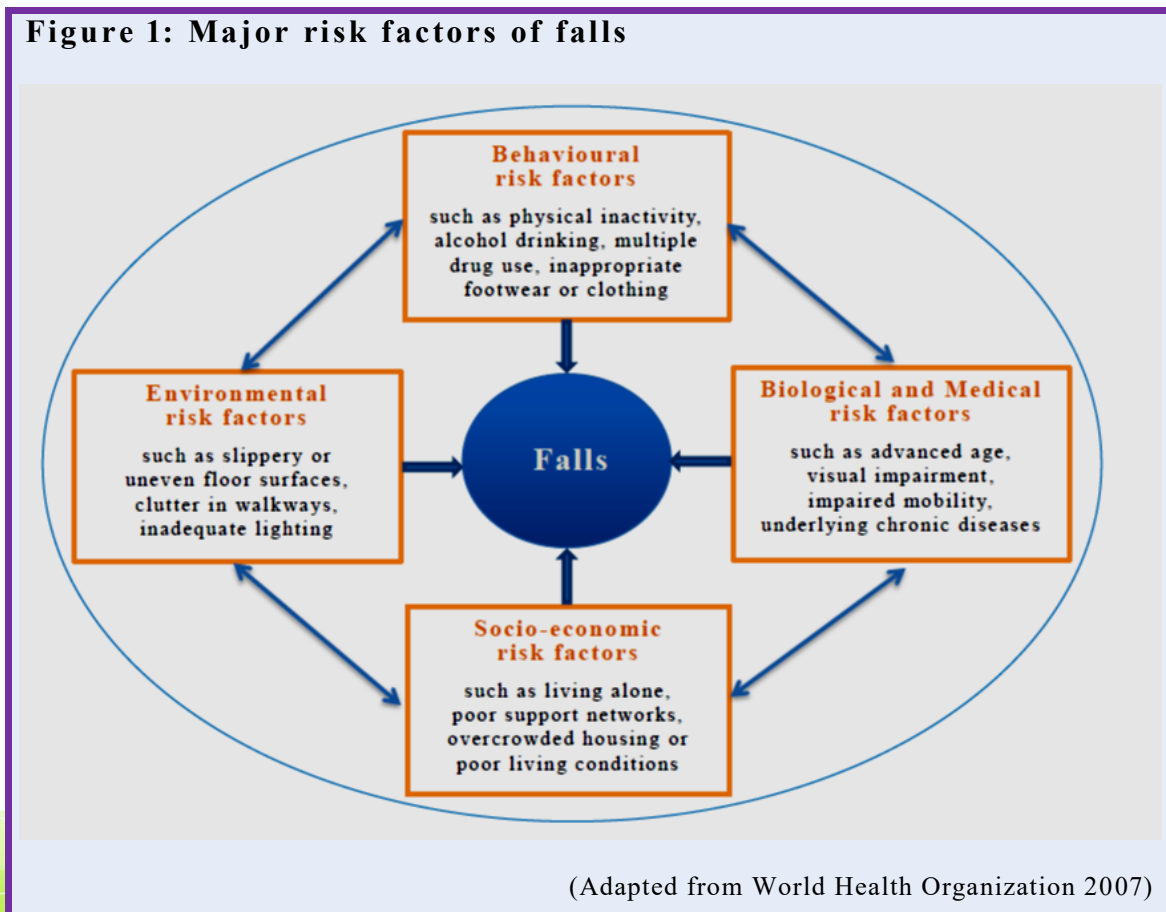
Be Falls Aware

Falls are of public health concern due to their high incidence and possibly significant injurious consequences. Globally, billions of children, adolescents, adults and elders fall and sustain injuries every day as a result of slipping on wet floors, being tripped by clutters, falling from heights (such as ladders or other climbing equipment) or furniture (such as chairs and bed), collision with or shoving by another person. In 2019, the Global Burden of Disease Study estimated that there were 217 million incident cases of falls worldwide¹. According to the World Health Organization, falls are the second leading cause of unintentional injury death (after road traffic injuries) across the globe with an estimated 684 000 deaths annually. Though not fatal, as many as 37.3 million falls are severe enough to require medical attention each year².

Risk Factors of Falls

Falls do not ‘just happen’. In fact, they are often resulted from an interaction of multiple risk factors involving the faller and the environment (Figure 1)³. The more the number of risk factors, the higher the risk of falls. Although some risk factors of falls cannot be changed (such as advanced age, impaired mobility or history of chronic diseases), many are modifiable through change of behaviour, removal of home and other environmental hazards, adoption of safety measures, or proper management of underlying medical conditions^{2, 3}. Across the life-course, a range of effective policies and interventions exist to prevent falls².

Figure 1: Major risk factors of falls



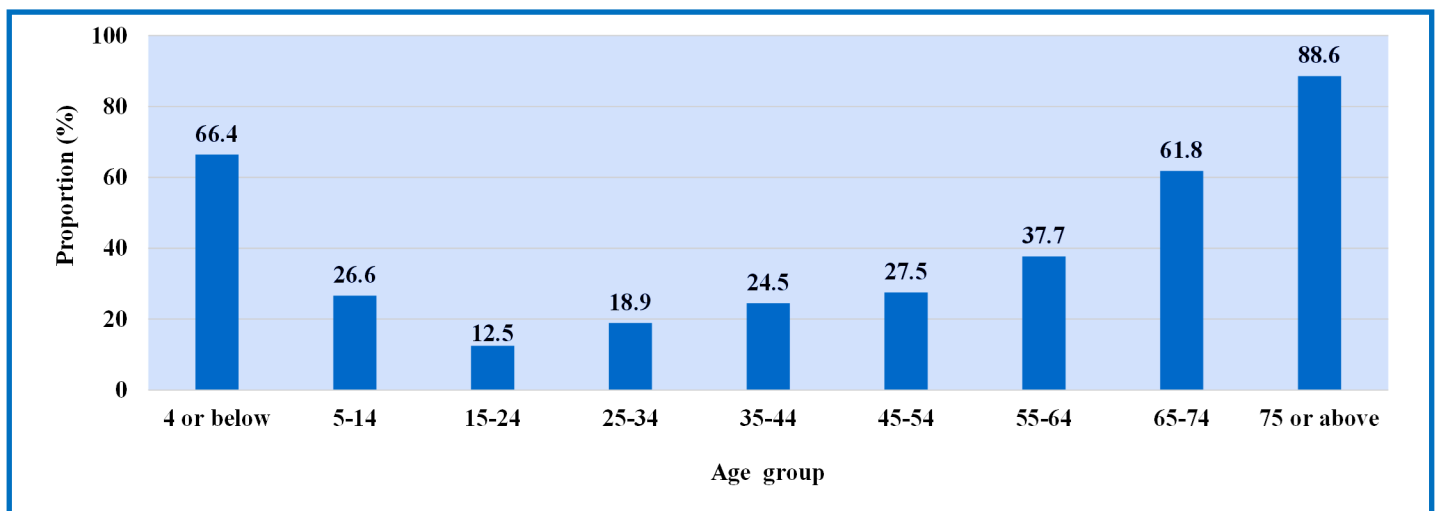
Burden of Falls in Hong Kong

The Department of Health (DH) conducted the Unintentional Injury Survey⁴ between September 2018 and July 2019 and successfully face-to-face interviewed over 14 000 persons for details of injury episodes they had encountered in the 12 months before enumeration, including falls. The survey defined an “injury episode” as an unintentional injury that was serious enough to limit the normal activities of a person.

Results showed that fall was the most common type of unintentional injury, accounting for 39.4% of all injury episodes that occurred over a 12-month period. Analysed by gender, females (47.1%) reported a higher proportion of fall-related injuries than males (31.0%). By age group, falls contributed to 66.4%, 61.8% and 88.6% of injury episodes among young children aged 4 or below, elders aged 65–74 and those aged 75 or above, respectively (Figure 2)⁴.

The survey also observed that pre-existing functional difficulties or chronic diseases and lack of physical activity were associated with the increased rate of falls. Among the population aged 65 or above, the proportion of people sustained fall-related injury episodes in the 12 months before enumeration was significantly higher among those who were suffering from long-term functional difficulties (14.5%) than those who were not (4.3%). The proportion of fall-related injury episodes was also found to increase with number of selected chronic health conditions, from 2.3% in those without, to 5.4% in those with one, 8.3% in those with two and 8.8% in those with three or more chronic health conditions. Among the population aged 18 or above, a relatively higher proportion of people with insufficient physical activity (3.3%) sustained fall-related injury episodes compared to their counterparts with sufficient physical activity (2.3%)⁴.

Figure 2: Proportion of population reported falls as the main cause of injury episode sustained in the 12 months before enumeration by age group



Source: Unintentional Injury Survey 2018.

Regarding safety measures adopted against falls, the survey estimated that 91.2% of the population adopted the measure “removing objects which people might trip over (such as cord and carton)” all or most of the time in the 12 months before enumeration. At household level, the survey estimated that 95.0% households with elderly aged 65 or above

adopted the measure “keeping adequate lighting” to prevent falls all or most of the time. However, the corresponding adoption rates were low pertaining to “use of anti-slip mats”, “use handrails to assist movement”, as well as “raised toilet seat to allow getting on and off the toilet easily” (Table 1)⁴.

Table 1: Adoption rate of specific fall-related safety measures in population and in households with elderly aged 65 or above

	Adoption rate*
In Population	
Remove objects which people might trip over	91.2%
Hold handrail while standing on escalator	81.8%
Not wearing high-heel shoes	76.3%
Use step-stool to reach high	54.0%
Make daily contact with friends, relatives or neighbours due to living alone	41.8%
Carry alarm device for seeking help in case of fall and cannot get up (for elderly aged 65 or above)	17.0%
In Households with Elderly Aged 65 or Above	
Keep adequate lighting	95.0%
Use anti-slip mats	39.6%
Use handrails to assist movement	21.0%
Use raised toilet seat to allow getting on and off the toilet easily	7.9%

Note: *Referring to the proportion of respondents or households with elderly aged 65 or above adopted such particular safety measure all or most of the time in the 12 months before enumeration.

Source: Unintentional Injury Survey 2018.

Healthy Living and Fall Prevention

On top of ensuring home safety, removing environmental hazards and using assistive devices, leading a healthy lifestyle (Box 1) also plays a key role in fall prevention through improved physical fitness, delaying the onset of age-related functional decline and chronic diseases. Healthy living is also essential to keep bones strong that helps reduce the risk of osteoporosis-related fractures after falls.

While use of certain medications can lead to falls (e.g. by making the person dizzy or drowsy), members of the public should take medications as prescribed. People with chronic diseases are also urged to properly manage their underlying medical conditions, take an active part in self-care and follow the treatment plans⁵.

Box 1: Preventing falls through healthy living

Be physically active. There is good evidence that exercise prevents falls. In community-dwelling older people, studies showed that exercise could reduce the rate of falls by 21%, with greater effects seen from exercise programmes that challenged balance and involved more than 3 hours per week of exercise⁶. For substantial health benefits, adults are recommended to do at least 150–300 minutes of moderate-intensity aerobic physical activity or equivalent amount throughout the week and muscle-strengthening activities at moderate or greater intensity that involve all major muscle groups (such as lifting weights, squats, abdominal crunch sit up, etc.) on 2 or more days a week. Older adults aged 65 or above should also do varied multicomponent physical activity that emphasizes functional balance and strength training at moderate or greater intensity (such as walking, Tai Chi Chuan, dancing, etc.) on 3 or more days per week to enhance functional capacity and to prevent falls⁷. Frail elderly or people living with chronic conditions could further consult their family doctors about what exercises or activities might be right for them.

Refrain from alcohol use. Alcohol is a known neurotoxin and central nervous system depressant. Even at low to moderate levels, alcohol can affect balance and judgement, impair visual focus and eye-brain-hand-foot coordination as well as slow reaction time, thereby making a person more susceptible to falls⁸. The more the drinkers consume alcohol, the higher the risk and harder they fall. Pooled analyses of epidemiological studies indicated that each 10 grams of alcohol consumed was associated with 25% increased risk of fall-related injury⁹. To reduce the risk of injury including falls, members of the public are encouraged to refrain from drinking.

Eat a balanced diet. Healthy eating with sufficient intake of protein, calcium and vitamin D (to help body absorb calcium) is important for good health, maintaining muscle mass and bones strong, thereby reducing the risk of falls and related fractures. Studies showed that older adults who were malnourished or at risk for malnutrition would have 45% higher risk of fall compared with their well-nourished counterparts¹⁰. Members of the public are advised to follow the principles of the Healthy Eating Food Pyramid to include the five basic food groups (i.e. grains; fruit; vegetables; meat, fish, eggs and alternatives; milk and alternatives) in appropriate proportions as well as be active in decreasing fat, salt and sugar intake¹¹.

Do not smoke. Smoking causes various chronic diseases, reduces bone mass through its effect on calcium and vitamin absorption, upsets the balance of hormones needed for maintaining bone health¹². For health, smokers should give up smoking early. For information on smoking cessation, smokers and members of the public can visit www.livetobaccofree.hk or call the Quitline 1833 183.

DH will continue working in close partnership with community partners to raise public awareness of fall prevention and support effective application of proven interventions against falls.

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Non-Communicable Diseases (NCD) WATCH is dedicated to promote public's awareness of and disseminate health information about non-communicable diseases and related issues, and the importance of their prevention and control. It is also an indication of our commitments in responsive risk communication and to address the growing non-communicable disease threats to the health of our community. The Editorial Board welcomes your views and comments. Please send all comments and/or questions to so_dp3@dh.gov.hk.

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