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Policy Implications for Managing Older People in Disaster

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Introduction

Between 2005 and 2014, disasters have caused total damage of US\$1.4 trillion worldwide, with 1.7 billion people affected and 0.7 million killed (1). With climate change, urbanization, environmental degradation and poverty, the world has been experiencing disasters at a higher frequency and intensity. At the same time, global population is ageing at an unprecedented speed: between 2015 and 2030, the number of persons aged 60 years or over in the world is projected to grow by 56%, from 901 million to more than 1.4 billion (2). Older people therefore is going to be an increasingly important group, in terms of both their contribution and vulnerabilities, in the face of disasters. This paper discusses the disaster-related health risks of the older people in Hong Kong, and presents key policy recommendations for better protection of this vulnerable group.

Ageing Population and Healthy Ageing

The United Nations (UN) defines an older person as someone over 60 years of age, with those over 80 years old termed as 'oldest-olds'. With declining fertility rate and longer life expectancy worldwide, ageing population is a global phenomenon. Between 2015 and 2050, the percentage of the world's population aged 60 and above will double from 12% to 22%; or from 900 million to 2 billion in absolute terms. As for the oldest-olds, the number will increase from 125 million in 2015 to 434 million in 2050, with 120 million living in China alone (3). Asia-Pacific region is at the forefront of the global population ageing, with north-east Asia being the fastest ageing sub-region in the world (4).

The definition of older persons however varies between regions, affected by factors like culture, life expectancy. In Hong Kong, older persons refer to population aged 65 and above in government statistics and service planning. By mid-2016, there are about 1,172,300 persons aged 65 and above, making up 16% of the total population (5). Hong Kong population had been ageing for the past years: in 1978, the proportion of persons aged 65 and above was 6%, i.e. a jump of 167% in less than 30 years. If we adopt the UN's definition of older people (60 years old), the numbers will become 1,670,000 and 22.7%, i.e. the proportion of older people in Hong Kong today is already higher than the world's average as projected by the UN for 2050. According to the latest population projections, population ageing is expected to continue in Hong Kong. The proportion of elderly persons aged 65 and above (excluding foreign domestic workers) is projected to rise markedly to 30% in 2034 and 36% in 2064. As for the dependency ratio, it is projected to rise from 371 in 2014 to 831 in 2064 (6).

Key Messages

- Global population is ageing at an unprecedented speed: between 2015 and 2030, the number of persons aged 60 and above in the world is projected to grow by 56%, from 901 million to more than 1.4 billion.
- Urban population in Hong Kong is at risk of climate change and extreme weather events in the coming decades.
- Ageing population is an important factor affecting effectiveness of disaster management, and healthy ageing is a crucial disaster risk reduction strategy.
- Older people face specific vulnerability in physical, mental and social well-being in disasters. They are likely to experience socio-economic marginalization, isolation, inaccessible information and lack of relevant post emergency support services during disasters.
- Older people may significantly contribute to disaster preparedness, response and recovery; but their capacities are often under-utilized.
- There is no specific recognition of the roles and the needs of older people in disaster planning and response in Hong Kong. Policy actions to mainstream the disaster-related health needs of the older people and to enable them to contribute are recommended.

An aging population presents both opportunities and challenges. Longer life means older people are able to pursue new interests and activities, enjoy time with their families and contribute to society through prolonged working life or philanthropy – these are however possible only if they are reasonably healthy. If old age is dominated by poor health, ageing population could bring negative impact on the individuals, families and societies, especially on the sustainability of the systems and institutions that aim to protect and preserve people's well-being, e.g. pension systems, social securities, healthcare systems (2). Healthy ageing is therefore the key to tackle the issue of ageing population. While a person's health is affected by genetic make-up, whether people can experience healthy ageing also depends on a range of environmental (physical and social) and behavioral factors, e.g. family support, neighborhood and community network, socioeconomic status and public policies (3). In order to promote and realize the concept of healthy ageing, the World Health Organization (WHO) in 2016 issued the Global Strategy and Action Plan on Ageing and Health to guide global and national public health policies, highlighting five priority areas: (a) formulate evidence-based policies that strengthen the abilities of older persons; (b) align health systems with the needs of older populations; (c) develop sustainable and equitable systems for providing long-term care; (d) create age-friendly environments through policies at all levels of government; and (e) improve measurement, monitoring and understanding of healthy ageing issues (7).

Older People and Disasters

With the aging of population and the increase of disaster risk in the 21st century, effective management of ageing population will have implication towards disaster risk reduction strategy and community preparedness. Older people are particularly vulnerable to disasters but their needs are often overlooked due to their invisibility. The lack of support for older people in emergencies was one of the concerns raised in a large scale consultation with older people conducted by the WHO around the world (8). Older people's health and chance of survival could be negatively affected by disasters due to injuries, access to medical care, mental and psychological issues, lack of management plan for chronic conditions, inaccessibility to social support; and they are more susceptible to communicable diseases and worsening of existing medical conditions (9). The disproportionate impact of disasters on older people is apparent: more than half of the deaths consistently occurred among people over 60 years of age in five major natural disasters (9). It should be noted that older people are at risk even in countries with developed disaster response and health systems, e.g. of the 14,800 deaths during the 2003 heat wave in France, 70% were people over 75 years old (10); over 70% who died in the wake of Hurricane Katrina in 2005 were 60 years old and above (11), over 60% of those killed in 2011 Japan earthquake aged over 60 (4). At the same time, the potential contributions of older people during disaster management should be recognized.

Health Risks and Vulnerabilities

With older people making up a larger proportion of the world population, coupled with the disproportionate impact of disaster on the older people, health needs for elderly should be addressed to ensure their survival. An understanding of older people's health risks and vulnerabilities in emergencies and crisis would be important.

Poorer Health Conditions

Physical and mental changes associated with ageing will render older people vulnerable to poor health. Older people often suffer hip, knee and back pain which reduces their mobility and energy. They might also experience sensory deterioration in eye-sight, hearing and dental health, mental deficiencies like loss of memories and dementia. Disabilities are often associated with old age and affect access to health services and emergency aid. In Hong Kong, 70% of the people with disabilities aged 60 and above; among

which 53.3% aged over 70 (12). With a vulnerable state of health, older people are more likely to develop additional health problems, and minor conditions can easily become significant handicaps for older persons during a disaster: hypothermia caused by lack of blanket, immobility due to loss of eyeglasses and walking canes. The lack of assistive devices (wheel chair) in relief settings will also affect self-care possibilities of older people.

The weak immune systems of older persons means they are more susceptible to diseases, including dehydration, hypothermia and hyperthermia (9) and with poorer wound healing. In a local study, hospital admissions were found to increase during extreme temperature: hospital admission rate rose by 4.5% for every increase of 1°C above 29°C, and 1.4% for every decrease of 1°C within the 8.2-26.9°C range, with elderly being especially vulnerable to infectious disease under extreme heat and respiratory disease, infectious disease and cardiovascular disease under extreme cold (13). Another study in Hong Kong revealed that 1°C decrease in mean temperature was associated with 3.8% rise in mortality rate, with elderly being the most sensitive (14). During the SARS epidemic in Hong Kong, elderly men over 75 years old were found to be over-represented among SARS patients, and to a lesser extent, elderly women (15).

Chronic diseases such as hypertension, diabetes mellitus, and respiratory diseases are common among the elderly. In Hong Kong, 63.5% of the people with chronic diseases aged 60 and above; among which 39.8% aged over 70 (12). The impact of chronic diseases may worsen if they lose their routine medications and are not able to seek medical help. Unfortunately, a study on the Kashmir earthquake in 2005 found that 'the greatest gap in health services at all sites was that non-communicable disease management was inadequate' (16).

Economic Marginalization

Poverty among elderly is very common in developing countries, leaving them particularly vulnerable to the health impact of disasters. The lack of economic and social alternatives, lack of property rights and personal documentations will further marginalize older people post disasters. Poverty is also closely associated with many health outcomes in older people who suffer from chronic long-term illnesses such as heart disease, hypertension, and diabetes. With poorer health conditions, older people will be less able to cope with the impact of disasters. Hong Kong, while being a well-developed city, continue to report a persistently high poverty rate of older people aged 65 and above: 30.1% in 2015 (17). Groups of population lacking recurrent employment earnings include elderly persons aged 65 and above, elderly households, households with elderly head. For the working older persons, their median monthly income from main employment was \$8500, about 77% of the that of the whole working population (18).

Social Marginalization: Isolation

Intergenerational dependencies are increasingly eroded in many parts of the world due to urbanization, migration, and economic instability (10). Older persons are often left behind without traditional family support when the young generation migrates, and older people are often the victims of neglect, violence and abuse (4). During a disaster, older persons may suffer from a breakdown of their social support networks when they are separated from their families, peers, or caregivers; causing social isolation and exclusion. In Hong Kong, the lack of family support for some elderly is apparent: In 2011, over 30% of older people were living in exclusively older person households, among which 12.7% lived alone (18). Dependency, discrimination and isolation increased vulnerability and decrease access to services.

Inaccessible Information

Early warning and public health information are crucial for empowering older people to protect themselves from the negative health impacts of disasters. Yet, it should be noted that over 30% of the elderly aged 65 and above in Hong Kong have no schooling or only pre-primary education (18), which could be a major barrier for them to process and act on any warning or advice. Their ability to understand and respond to

such information is affected by a range of factors, including the delivery of the messages, literacy and language, access to information, etc. A study conducted in Hong Kong among elderly residents in a nursing home found that over 80% of the interviewees (aged from 65 to 82) had no or little knowledge about SARS despite access to TV, radio and visitors (19). A recent local study on weather information acquisition behavior during cold waves revealed that smartphone was the most preferred channel, but old age was significantly associated with less smartphone apps use and preference (20).

Weather Information Acquisition Channels – Potential of Smartphone

- A population-based telephone survey was conducted in Hong Kong with 1,017 respondents at the beginning of 2016, immediately after the day recorded with the lowest minimum temperature since 1957.
- Study objectives included (1) to examine the patterns and socio-demographic predictors of weather information acquisition in Hong Kong; and (2) to understand health impact and health service implications of cold wave in subtropical city.
- Television (50.1%) and smartphone app (32%) was the most popular channels for seeking weather information in the extreme temperature event.
- However, in terms of the preferred information seeking channel, 16.5% of all respondents had indicated the intention to switch to the use of weather smartphone apps, meaning that smartphone app would be the most preferred channel (45.6%), followed by television (36.3%).
- Older age and lower education level were significantly associated with less smartphone apps use and preference.

Limited Legal Awareness

The right to health is firmly enshrined in a number of international instruments, including the Universal Declaration of Human Rights, Constitution of the World Health Organization, and the International Covenant on Economic, Social and Cultural Rights. Older people in general may not be fully aware of their right, and healthcare decision during disasters, including decision to evacuate, on what medical treatment to receive, can become complicated, especially when the older people are incapacitated or when older people live in nursing home. Of note, in Hong Kong, about 10% of the elderly aged 65 and above in Hong Kong live in non-domestic households, including homes for the aged, hospital and penal institution, etc.

Gender Perspective

In Hong Kong, the sex ratio in terms of number of males per 1,000 females aged 65 and above is 877 in 2016 (5). For older women in Hong Kong, the health risks they face are higher than men in general for all of the vulnerabilities discussed above. Women are more likely to experience dementia, cataracts, breast cancers, osteoporosis and rheumatoid arthritis (10). A local study found that the SARS epidemic was associated with increased risk of suicide in female aged 65 and over but not for elderly male (21). As for economic marginalization, labour force participation rate among older women (3%) in Hong Kong is much lower than that of men (11.5%), with lower median monthly income for those who are working (\$6,940 for women and \$9,000 for men). In terms of social and familial support, the rate of older women living alone (14.7%) is higher than that for elderly men (10.4%). A huge difference in education level put elderly women in Hong Kong in a weak position to comprehend and act on disaster-related information:

44.2% of elderly women have no schooling or pre-primary level only, while that for men is 17.4% (18).

Mainstreaming of gender perspectives in disaster management has been gaining attention, as higher death tolls are recorded among women and girls due to various reasons. For example, women are less willing to seek temporary shelters which lack privacy and protection (22) and staying with male strangers could have negative implications for women in certain cultures. Living arrangement in mixed gender environment also means women are vulnerable to different kind of abuses, such as rape, violence.

As for health impacts, women are particularly vulnerable to various health impacts of disasters and with their longevity, more older women than men are being exposed to the negative health outcomes. Gender differences between sexes remain throughout life, and special attention must be paid to the needs of older women, which is particularly important in more conservative cultures. Women are often excluded from decision-making and resource allocation, and older widows are often among the most marginalized (23).

Contribution of the Older People in Disaster Management

While it is essential to recognize older people's vulnerabilities and their health risks in relation to disasters, it is equally important to understand the contribution older people can make during disasters. Older people can play a critical role from disaster preparedness, response, to recovery. With an enabling environment, some of the older people will be able to support themselves, care for the children and families, assist other older people and participate in disaster planning and relief. Older people have the knowledge, wisdom and experience of previous disasters, and their 'sense of history' is valuable to the community (23). A cross-culture study found that there is a strong sense of independence among older people having experienced disasters, and they consider it extremely important for them to be consulted on the disaster response (24). A study in Sri Lanka after the 2004 Indian Ocean Tsunami found that older people were frustrated more by the lack of work than their perceived vulnerabilities (9).

When designing the disaster response, we must bear in mind the perspectives of the older people which are affected by their cultures and understanding of life, e.g. older adults are often less willing to accept mental health services (25). The form of response sometimes means more than physical supplies but also the dignity and social well-being of the older people. This emphasis on independence is very much in line with the human security concept which encourages both the consideration of the needs of the most vulnerable groups, including the elderly, and empowerment strategies to enable the affected people to act on their own behalf, and on the behalf of others (26).

After the Haiti earthquake in 2010, some displaced older people living in camps acted as 'focal points' for the affected older population by identifying the most vulnerable population, collecting data related to older people's health needs, and delivering aid to those with minimal mobility. In Bolivia, there is a regular association of older people called the 'White Brigades' which assist in registering older people, involve in emergency planning, participate in drills, and identify the older people's needs during emergency (4).

Clearly, some older people are not only able to cope with disasters but are also able to support vulnerability mapping, participate in relief distribution, and provide post-disaster service. This can be facilitated by including older people in disaster planning and programming which is the best way to avoid misconceptions and unfounded assumptions about their needs and capacities. With effective allocation of resources, the physical and psychological health of the older people will be improved by allowing them to be self-sufficient, autonomous and independent.

Global Policy Developments

The gaps in protecting the older people and the opportunities lost in reaping their contribution represent a bigger problem with the global population ageing. This situation prompted much attention globally in the past ten years.

Madrid International Plan of Action on Ageing and Political Declaration

In April 2002, the Second World Assembly on Ageing adopted the Madrid International Plan of Action on Ageing (MIPAA) and the Political Declaration, which sets out the global agenda for handling the ageing issue in the 21st century. It focuses in the areas of (a) older persons and development; (b) advancing health and well-being into old age; and (c) ensuring enabling and supportive environments. MIPAA is a voluntary agreement with close to 160 parties. The treatment of older people in emergency situations such as natural disasters and other humanitarian emergencies are specifically mentioned under the priority area of older persons and development, with a range of recommended actions. It is provided that ‘... older persons are especially vulnerable and should be identified as such because they may be isolated from family and friends and less able to find food and shelter. They may also be called upon to assume primary caregiving roles. Governments and humanitarian relief agencies should recognize that older persons can make a positive contribution in coping with emergencies in promoting rehabilitation and reconstruction’ (27).

WHO

In its 2015 World Report on Ageing and Health, which outlines a framework for action to foster healthy ageing under the life-course approach, WHO identified emergency situations, including disasters, as one of the key environmental risks threatening healthy ageing. A series of action is recommended to reduce the vulnerabilities of older people and to better design disaster response to meet the needs of the older people (9).

The Inter-Agency Standing Committee (IASC)

IASC is the primary mechanism for inter-agency coordination of humanitarian assistance, involving the key UN and non-UN humanitarian partners to strengthen humanitarian assistance. In 2008, IASC issued a brief for humanitarian actors on ‘Humanitarian Action and Older Persons’, calling for older persons’ needs to be addressed in mainstream services and set out recommendations related to emergency preparedness, response and recovery systems to better protect the older persons (11).

United Nation Population Fund (UNPFA)

Among the ten priority actions for maximizing the opportunities of ageing population laid down by the UNPFA, one is to ‘ensure inclusion of ageing and the needs of older persons in national humanitarian response, climate change mitigation and adaptation plans, and disaster management and preparedness programmes’ (4).

Policy Recommendations

There is currently a lack of integrated, comprehensive and well-recognized approach in the caring of older people in emergency situation globally and regionally. The low level of visibility of the older people means an absence of disaggregated data for analysis, limited research, and low awareness of the relevant issues. Policies for improving the situation must be inclusive, participatory, gender-sensitive, and be able to

raise visibility and promote self-sufficiency of the older people.

In Hong Kong, there are established social welfare and healthcare systems to address the health needs of the elderly, e.g. reasonably accessible and affordable general public health care, old age allowance, disabilities allowance, Comprehensive Social Security Allowance, etc. However, even the Government admits that cash allowance is not sufficient and in-kind support, e.g. day-to-day care, medical services and community support services are crucial to meet the needs of the older people (17). While these systems are important in ensuring the basic welfare of the older people, specific recognition of the roles and the needs of older people in disaster planning and response is absent in Hong Kong. As for the promotion of healthy ageing, there is currently no overarching policy although some piecemeal schemes do exist, e.g. life-long learning scheme, neighborhood network initiative, transportation concessions. Taking into account the situation in Hong Kong, in particular the health risks and vulnerabilities identified above, the following policy actions are recommended in order to minimize the negative health effects of disasters on the older people. The policy recommendations cover the whole disaster cycle, from disaster risk reduction and preparedness, disaster response, to recovery and rehabilitation; and inter-departmental and cross-sectoral efforts are called for.

Disaster Risk Reduction and Preparedness Phase

- Strengthen policies that promote healthy ageing, and introduce elements that target at the health needs of older people in disasters. Promoting healthy ageing and developing age-friendly community are important for building the resilience of the population, in particular for the older people, to cope with and recover from the negative health effects of disasters.
- Build up healthcare system resilience and to integrate health needs of older people into the mainstream healthcare services, e.g. ensure surge capacity to cope with a sudden rise in older patients during disasters.
- Develop community-based healthcare services for the elderly at district level so as to reduce the burden of the elderly occupying public hospital bed spaces over a long period of time during the disasters.
- Set up a Register with record on where the older people live, with details on their health conditions, e.g. chronic diseases, disabilities, nutritional needs, etc. to facilitate disaster planning and effective response. The Register should be able to generate age and sex disaggregated data to facilitate need assessment and to record mortality and morbidity information in the post-disaster stage.
- Mainstream the needs as well as the contribution of older people in disaster reduction and management plans.
- Develop older people's associations to facilitate older persons to participate and support disaster management, from vulnerability mapping to participation in drills disaster planning.
- Develop guidelines for preparing personal emergency kits for older people to ensure supplies of basic medical and health resources at times of disasters, e.g. medicines for chronic diseases and other geriatric medicine, medical records and prescriptions under use, walking sticks, eyeglasses, etc.
- Encourage economic self-sufficiency: Poverty rate among working elders is much lower than those who are economically inactive (17), and with financial resources at their disposal, older people will be in a much better position to cope with their health needs when faced with disasters.
- Issue early warning that are comprehensible and practical for the older people, taking into account their education level, mobility, mode of media used; with targeted messages as necessary.

- Sensitize people taking care of older people, policy-makers and humanitarians to issues of ageing population, relationship between healthy ageing and disasters, health impact of disasters on older people, and vulnerabilities and contribution of the older people.

Disaster Response Phase

- Conduct participatory needs assessment as well as community resources mapping that target at older people with disaggregated data and records of health conditions from the Register.
- Ensure continuous provision of healthcare services that address special needs of the older people, in particular treatment of chronic diseases, common old age health issues, disabilities; and ensure they can access the services (e.g. availability of transportation, accompany service, mobile clinics, outreach services).
- Mainstream the needs of the older people in aid programmes / assistance during disaster, e.g. health needs, nutrition needs, chronic diseases, disabilities, etc.
- Coordinate with nursing homes, from need assessment to provision of health services to the residents. Ensure staff of the nursing homes is aware of the services available.

Recovery and Rehabilitation

- Provide sufficient and appropriate follow-up healthcare services to the older people affected by disasters, in particular management of chronic diseases, decreased mobility and mental issues. Continue to evaluate the effectiveness of such services.
- Ensure provision of suitable rehabilitation services and assisted devices, e.g. wheelchairs / hearing aids.
- Provide outreach services to monitor the health conditions of the immobile elderly affected by disasters.
- Develop post-disasters income generation programme that cater for needs and capacity of older persons, or provide incentives to encourage employment of the older people.
- Launch campaigns and activities to increase visibility of the older people in relation to the disaster, including their needs and contribution during the disaster and their post-disaster life.
- Enlist the support of older people in the rebuilding and rehabilitation efforts.

Conclusion

Older people issues are of growing importance for the 21st century. Health, rights and protection are all important dimensions to be considered and included in disaster management. Major gaps are identified in preparedness, needs assessments, response and rehabilitation for older people in crisis and emergencies. In addition to addressing their health and social needs, potential contribution of older people should be included as resources in the spectrum of disaster preparedness to disaster responses.

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