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Editorial

Meeting the needs of an aging population in China: Public health and policy implications

Health needs of aging populations go beyond the societal consequences of increasing prevalence of chronic diseases with the emphasis on evidence-based management of individual diseases, focusing on disease parameters as an indication of outcome. Co-occurrence of many chronic diseases has become the norm with increasing age, accompanied by polypharmacy, which predisposes to adverse side effects and possible hospitalization.[1,2] Unlike younger patients with multimorbidity, older patients' needs are more complex in that attention to social, nutritional, and dependency needs are also required. One chronic disease in particular must be highlighted as a result of its impact on health and social care: the prevalence of dementia rises rapidly with aging, the likelihood of its occurrence doubling every 5 years after age 65 years. The number of people living with dementia worldwide is projected to increase from 35.6 million in 2010 to 65.7 million by 2030 and to 115.4 million by 2050, with nearly two-thirds living in low and middle income countries where the sharpest increases in numbers are expected. Worldwide costs have been estimated as US$604 billion.[3]

Of greater importance to aging populations is the concept of frailty. Although this state is well recognized by geriatricians and some primary care doctors, it remains outside mainstream public health. Frailty represents a state of multisystem impairments that increase the risk of adverse outcomes such as disability, morbidity, dependency, and institutionalization. Physiological decline with aging, dysregulation of endocrine/metabolic and immune systems, and common age-related chronic diseases predispose to this syndrome, which represents a continuum from normal aging to a final state of disability and death. Detection of the prefrail or frail state in primary care could be very important in prevention of functional decline, even in the absence of chronic diseases. There are two approaches to measuring frailty, using the multiple deficit model or a simple clinical model based on a phenotype consisting of exhaustion, low grip strength, low walking speed, low energy expenditure, and weight loss.[4] The former may be more appropriate in population monitoring or research, while the latter will be relevant in the service setting, particularly for primary care.[5]

Key features of caring for older patients with multimorbidity and/or frailty include: input from professional disciplines other than medical; the need to navigate across many organizational or interdisciplinary barriers; and the need for generic multiskilled workers who can provide overall care in the primary care setting. European Union leaders have responded by establishing the European Innovation Partnership under the European Union, identifying key areas, stakeholders, and specific action plans with timelines, based on three pillars. These are: prevention, screening, and early diagnosis (raising health literacy, patient empowerment, personal health management, early diagnosis of functional and cognitive decline); care and cure (protocols, education and training programs for health workforce in the area of comprehensive case management, multimorbidity, polypharmacy, frailty and remote monitoring, capacity building and replicability of successful integrated care systems); and active aging and independent living (assisted daily living for people with cognitive impairment, extensive active and independent living though open and personalized solutions, innovation improving social inclusion of older people).[6]

In order to assess how well a country or city is coping with these challenges, health outcomes may be assessed at the population level as well as the individual level. At the population level, other than mortality or life expectancy, disability-adjusted life years or some population indicator of frailty would be relevant. On an individual level, relevant outcomes include multimorbidity, frailty, physical dependency, mental health, and quality of life.

Current situation in China: The population of China is aging rapidly. Between 2000 and 2030, the percentage of people aged 65 years and over is projected to increase from 7.1% to 14.9% of the total population, i.e., a gain in longevity of 26 years in less than half a century.[7] The elderly dependency ratio was 122 in 2011.[8] In Hong Kong, a Special Administrative Region of China, the population is at a more advanced stage of aging. It has the longest life expectancy for men and women in the world. The percentage of people aged 65 years and over was 13% in 2007 and is projected to double to 25% by 2030, and the elderly dependency ratio was 177 in 2011.[9] Since 1978, China has experienced a remarkable economic growth, accounting for approximately one-quarter of the global growth in the past 5 years.[10] These changes together with the implementation of the one-child policy has resulted in dramatic changes in family arrangements and social life rendering older people more vulnerable in terms of financial and social support, and more importantly increasing gender and urban–rural inequality among older people. Priorities in health care and pension systems have been given to urban settings to the neglect of rural communities. Rapid economic development has not been accompanied by improving health indicators such as rate of disability or depression,[11,12] there being marked gender and urban–rural health inequalities. It has been estimated that among the population aged 60 years and over, 35% lived with a disability, the percentage being higher among women and those living in rural areas.[7]

Within China, two contrasting health and social care systems exist. In mainland China the health system is market-oriented, with rapidly increasing private health spending and declining government expenditure as a percentage of total government expenditure on hospitals and clinics, resulting in worsening inequality with

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the elderly in poor households being worse off. At the same time, pension reforms have also increased financial vulnerability of this group. Medical care is largely supported by insurance or out of pocket payment. By contrast, a good quality health care system is accessible to all in Hong Kong, and not dependent on individual affordability. There is a comprehensive range of medical and social services, based on the United Kingdom model. Social services also provide integrated post hospital discharge support by a multidisciplinary team, where medical and social services work together. While hospital services are low cost and may be provided free of charge for those receiving comprehensive social security support, primary care is predominantly provided by the private sector. A higher avoidable mortality rate with increasing age, and a higher mortality proportion compared with Paris, France and inner London, United Kingdom, suggest that there is room for improvement in primary care services, particularly for the older population.[13]

Health and social care system response to population aging in China: Much effort has been directed towards prevention of chronic diseases through health promotion campaigns and community-wide screening, improving provision of care in the community, improving financial security, and advocating family obligation in caring for their elders (in mainland China). Such initiatives have been developed and implemented through various government departments and committees in both mainland China and Hong Kong.[14] However, there has been little evaluation on how these efforts meet the needs of the elderly described above. Studies examining the needs of older people from their perspective carried out in Hong Kong have generally found substantial unmet needs, generally low levels of health literacy regarding aging issues, a poorly developed primary care sector that is not structured to provide integrated multidisciplinary medical and social care required for multimorbidity and frailty, problems in quality of care in the long term residential sector and end of life care, and regional variations in mortality, health-related quality of life, dependency, and frailty.[15–17] Although in Hong Kong various pilot projects have been designed and are being evaluated to meet these needs, this area has received scant attention to date from mainstream public health and policy makers, both in Hong Kong and in China. Government working groups have recently been formed in Hong Kong to draft guiding principles for primary care for older people, and elder care strategies in hospitals, both being at the stage of consultation. The implementation stage is yet to come.

Given the complex needs of older people that cut across many sectors, it is likely that the key to meeting these needs lies in seamless coordination of medical and social services provided by government, nongovernment, and private organizations as well as family members or other informal social support networks, funded by a mixture of government, insurance, and out-of-pocket payment. China is no different from other developed countries that are continuing to grapple with these consequences of population aging.[18] The solutions are likely to be unique to China, evolving from existing health and social infrastructures and likely to be very different between Hong Kong and other mainland cities.

The consequences of increasing life expectancy in a rapidly developing economy has changed the health care landscape, requiring redesign of health systems based on collection of relevant data on needs and disparities between groups and geographic regions. A service delivery system with an emphasis on community support and care, supported by training of generic primary care workers and research, needs to be developed. A sense of urgency in these efforts is needed to mitigate the specter of rapidly growing numbers of frail elderly being consigned to residential care homes with questionable quality of care.

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