Towards a comprehensive public health response to population ageing

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Worldwide, populations are rapidly ageing. This demographic shift presents both opportunities and challenges. Most people aspire to live a long and healthy life, and older people (defined as older than 60 years in some studies and older than 65 years in others; appendix) can be valuable economic, social, cultural, and familial resources. However, ageing populations are also associated with a shrinking workforce and higher demand for health care, social care, and social pensions.

Evidence suggests that many of the challenges associated with population ageing can be addressed by changes in behaviour and policy, especially those that promote good health in older age. However, so far, the debate on how best to achieve these changes has been narrow in scope. A comprehensive public health approach to population ageing that responds to the needs, capacities, and aspirations of older people and the changing contexts in which they function is needed.

Several factors make development of a policy on ageing difficult. First, the changes that constitute and affect ageing are complex. These alterations only loosely correspond to chronological age, which changes at a steady rate, whereas the variations in functioning linked with ageing are neither smooth nor well defined. As a consequence, great inter-individual functional variability is a hallmark of older populations; thus, policies to meet the needs of older people should consider many different subpopulations. For example, although some older people might wish to continue to participate in social and occupational activities to a similar extent to younger people, less healthy individuals in the same age group might need substantial health and social care and have little capacity for social engagement. Encompassing such diversity in a simple policy framework is difficult.

Second, this diversity is not random. Roughly 25% of the heterogeneity in health and function in older age is genetically determined, with the remainder dominated by the cumulative effect of health behaviours and inequities across the life course. Thus, someone born into a poor family with limited access to education, or in a marginalised cultural group, is likely to have poor health in older age and earlier mortality. Recent findings suggest that there might even be an association between the ability to build financial security in older age and decision making that maintains healthy behaviours.

Policymakers need to ensure that their interventions do not reinforce these inequities. For example, a common policy response to increasing life expectancy has been to raise the age at which pensions can be accessed. This response is consistent with findings from a US survey suggesting that a substantial proportion of people want some form of work beyond traditional retirement ages, with a preference for workplace flexibility. However, there are widespread barriers to employment at older ages, including negative attitudes of some employers and restricted access to training in new technologies. If these barriers are not addressed, increasing the pension eligibility age might remove a crucial financial safety net. Delayed access to a pension might be particularly challenging for older individuals of low socioeconomic status who, in addition to being more likely to have substantial health problems, often work in the most physically demanding jobs and have the fewest alternative job opportunities. Ensuring both economic sustainability and health equity will be a formidable challenge in the development of a public health response to population ageing.

Major knowledge gaps make overcoming these complex challenges difficult. For example, although life expectancy in older age is increasing in almost all countries, this Series emphasises that the quality of these additional years remains unclear. Incredibly, we cannot yet tell decision makers whether people are living longer and healthier lives or are simply experiencing extended periods of morbidity.

Several major longitudinal studies now underway will help to fill these knowledge gaps. However, the methods of obtaining and interpreting information about ageing and health also need to be reconsidered if we are to make meaningful progress.

For example, this Series reinforces that, regardless of a country’s income level, the major causes of death and disability in older age are non-communicable diseases. Much of this burden can be prevented or delayed, and increasing emphasis is being given to early life strategies of enabling healthy behaviours and controlling metabolic risk factors. However, the risks associated with these characteristics continue into older ages, although this relation might attenuate, and strategies to reduce their effect continue to be effective. Yet, despite clear evidence of the importance of continued risk factor modification into older age, surveillance of health behaviours in older people is imperfect, and data that are available suggest that behaviours that put older people at risk remain widespread. A greater emphasis on the neglected areas of health promotion and disease prevention in older age may yield substantial benefits.

Furthermore, regardless of how effectively non-communicable diseases can be prevented or delayed, many older people will inevitably be affected. Improved systems are needed to provide chronic management for, and adequately address the consequences of, these...
disorders. One barrier to building these systems is the lingering perception that this chronic disease burden is made up of individual diseases that are best managed independently. In reality, older people are more likely to have multiple, coexistent, and inter-related problems, and this multimorbidity is commonly manifested through a loss of function and the broad geriatric syndromes of frailty and impaired cognition, continence, gait, and balance. Functional assessments of these syndromes are better predictors of survival than the presence or number of specific diseases, so the fact that comprehensive assessment and coordinated care provide the best outcomes in older adults should not be surprising. Yet, informed geriatric assessment and coordinated care remain the exception rather than the norm, and much research fails to consider these more holistic perspectives.

Additionally, the importance of non-communicable diseases in older age should not obscure other health issues. Although our understanding of the burden of communicable disease in older age is poor, these disorders clearly remain an important cause of morbidity and mortality in older populations, particularly in low-income and middle-income countries. However, outdated perceptions of behaviour in older age could limit both surveillance and response. For example, older people, particularly those who are unmarried, might not be regarded as sexually active, and are often excluded from HIV screening programmes or advice on safe sex practices. At the same time, individuals with HIV are living longer, increasing the likelihood that a sexually active older person will face exposure to HIV via a potential sexual partner. Older individuals with HIV infection also need specific clinical management. For services addressing the prevention and treatment of HIV and other infectious diseases to have maximum effect, they will need to adapt to changing demography.

Although vaccination can reduce the burden of infectious disease across the life course, immune function, particularly T-cell activity, declines with age. These changes mean that the capacity to respond to new infections and vaccinations decreases in later life—a tendency known as immunosenescence. Furthermore, an age-related increase in serum concentrations of inflammatory cytokines—known as inflammaging—has been linked to a broad range of outcomes including frailty, atherosclerosis, and sarcopenia. Fresh consideration of these trends might provide innovative interventions for older age groups in the future.

A more comprehensive understanding of population ageing starts with research. However, many established mechanisms for development and assessment of clinical interventions have not been adapted to population ageing. Despite being the most frequent users of many drugs, older people are generally excluded from clinical trials. Yet, their altered physiological status means that the evidence we extrapolate from younger populations is probably not directly applicable to them. Innovative approaches are needed to bridge this gap, identify the optimum treatments for individuals with several disorders, and minimise adverse drug interactions. Until these methods are developed and adopted, improvement in post-marketing research could provide some guidance.

Finally, population ageing is not taking place in isolation. Other broad social changes are transforming society and these are interacting with ageing to affect social and intergenerational dynamics. Understanding the interplay between these trends is crucial if policy makers are to make the best decisions to promote the health and wellbeing of older people.

Foremost among these factors is the changing situation of older people in society. However, in many parts of the world, policy often seems to assume a division of the life course into a series of stages that is based on chronological age and social roles—typically student, working age, and retirement—that have little physiological basis. This rigid framework prevents the flexible types of participation older people are increasingly seeking and is exacerbated by ageist stereotypes of frailty and mental diminution. Effective health, social, and economic policy needs to acknowledge the changing aspirations of older people rather than reinforce outdated stereotypes.

Additionally, typical household composition is changing, along with attitudes about the obligations and responsibilities that might be expected of different generations. Increased spatial mobility and changes in family structure mean that, in many countries, older people are increasingly living alone or as part of a couple, rather than in the larger, multigenerational households of the past. For example, in some European countries nearly 50% of women aged 65 years or older live alone. These trends present challenges, since older people living alone have less opportunity to share the resources typically available in a larger household and might also be at increased risk of isolation, depression, and suicide.

 Provision of care and support by families to older people with substantial functional decline is becoming more difficult because of changing household structures. This challenge is exacerbated by the increasing proportion of older people compared with younger family members and by internal and external migration of younger generations. This change in balance is even evident in sub-Saharan Africa, where the HIV epidemic has removed potential support for nearly 1 million older people that would have been normally forthcoming from younger generations. These changes are stimulating increasing debate on the roles of government and family in providing the social care many older people need. Changing gender norms add a further layer of complexity to this debate. In most cultures, traditional carer roles are assigned to women. This role limits their capacity to engage in the formal workforce, which places them at greater risk of poverty, abuse, and poor
health in older age, while reducing their access to quality health care, social care services, and pensions. The increasing participation of women in the workforce will help overcome this inequitable burden and will have great benefits for socioeconomic development, but it will also challenge traditional familial roles and restrict families’ capacity to provide informal care at the same time that demand for it is growing. New, sustainable models of care that balance the role of family and government, and that overcome gender inequities, are urgently needed.

Advances in information and communications technology, assistive devices, medical diagnostics, and interventions offer much promise. For example, the advent of wearable devices that can continuously monitor physical activity may rapidly transform our understanding of functional trajectories and their determinants. However, if the benefits of technological advances are to be fully realised, designers must also better understand the changing needs, capacities, and aspirations of older people. A greater focus on how these innovations might meet the specific needs of older people in low-income and middle-income countries is also needed.

Thus, an effective public health response to population ageing must take into account the diversity in the health, social, and economic circumstances of older people, the disparities in the resources that are available to them, concurrent social trends, changing aspirations, and knowledge gaps. How can such a response be achieved? First, health needs to be viewed in a way that is relevant to all older people. In view of the likelihood of comorbidity and the centrality of geriatric syndromes in older age, a conceptual framework that focuses on functioning rather than disease would probably be most relevant. Public health policy for ageing could then be designed to maximise levels and trajectories of functioning in older age and the ability of older people to do the things that are important to them regardless of their functional capacity.

This approach has several strengths. Fostering functional capacity can take place at all stages of older age, and before, and is a worthwhile goal even for the frailest or most cognitively impaired people. This process would also lead to a thorough consideration of the contextual factors—including issues of equity—that are so fundamental to wellbeing in older age, and will probably encourage the development of the more coordinated systems of health and social care that best address the needs of older people.

Such coherence is absent from most policy approaches, which insufficiently address key aspects of heterogeneity among older populations. Instead, policies often emphasise either the need to minimise the economic costs of population ageing—more recently by maximising the labour participation and net contribution of older people—or the goal of meeting the needs of the most vulnerable.

To optimise trajectories of functioning, health systems could be redesigned to better provide coordinated and informed geriatric services that enable older people, as much as possible, to age in place (eg, at home or in the community). Ideally, these services would be seamlessly linked with social and long-term care to provide a continuum of care that extends from the community to, where indicated, institutionalised care. Core services would include prevention and early detection of disease, acute and chronic rehabilitation, provision of assistive devices, and palliative care. The importance of each of these services would differ between settings, dependent on demographics and level of socioeconomic development.

Although few low-income and middle-income countries have established such a continuum of care, there is an opportunity for existing health services to be adapted to better meet the unique needs of older people. These adaptations might include basic geriatric training for all health staff, or practical steps such as reducing queuing time for frail older people. Diagonal approaches—an integration of vertical models that focus on a disease and horizontal models that focus on health-care delivery systems—might also be considered to meet emerging needs (eg, control of hypertension) by building on existing services (eg, chronic HIV care).

In all settings, greater attention will need to be given to building and supporting an appropriately trained workforce, including both formal and informal carers. Relying on international health worker migration is problematic since it can simply shift shortages from more to less developed countries. Strategies to retain older health workers, and perhaps to recruit and train older people as new health workers, will therefore be important. For those entering the workforce, a greater emphasis on geriatrics in core medical training curriculums, along with a rethinking of the culture of many clinical services that treat older people as generic vessels of single-organ disease, is essential.

Finally, since functioning is inextricably linked to context, a comprehensive public health strategy would need to take into consideration the physical and social environment. In recent years, several interventions have been developed to create environments that foster active and healthy ageing. These include the WHO Global Network of Age-Friendly Cities and Communities, which now has over 200 members responsible for almost 100 million people. Not all the resulting strategies will need complex policy measures. For example, older people repeatedly identify simple aspects of the urban environment, such as access to public toilets and seating in public spaces, as crucial to their social engagement.

For development of this comprehensive public health response a rigorous evidence base that can serve to counter entrenched stereotypes and identify the most cost-effective strategies for the future is needed, followed by mechanisms to ensure this evidence is translated into
policy and practice. Some obvious knowledge gaps that urgently need to be filled include our understanding of the actual and potential contributions and costs of older populations; changing patterns of morbidity in older populations; optimum clinical interventions in older age, especially pharmacological interventions; optimum ways to manage comorbidities and complex issues such as frailty; quality of the additional years engendered by increased life expectancy; and effect of strategies to create more age-friendly environments. A good start would be to extend the collection and analysis of routine data to older ages and both institutional and home settings. Identification of the best way to obtain relevant data on functioning will also help.

This Series is a useful step towards filling many of these gaps. Recent work started by WHO will also help; the World Health Assembly has agreed to prioritise work on ageing and to develop a World Report on Ageing and Health, followed by a Global Strategy and Action Plan. Such progress will build on existing initiatives, such as projects on knowledge translation in Ghana and China, to help establish evidence-based policy on ageing and health. World demographics are changing: our thinking needs to change with it.

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We declare no competing interests.

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[A: Please provide date accessed. Reference correct? I wasn’t sure what other reference 71 in “Central statistics office government of Ireland 2007”. Section 3.2 in this pdf shows a table of people aged 65 years or older who live alone]