Submission to The Treasury on Measuring What Matters

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Introduction

We make this submission in our role as academics at the University of Sydney School of Public Health and ARC Centre of Excellence in Population Ageing Research (CEPAR). Collectively we have extensive expertise in epidemiology, health inequities, public health, climate change, and global health.

Sydney School of Public Health is Australia's first and leading school of public health. At Sydney School of Public Health, researchers and graduates tackle global health challenges and strive to improve equity in communities locally and around the world. Sydney School of Public Health's vision is for a global community in which everyone's needs for good health and wellbeing are met. Sydney School of Public Health academics maximise the school's research impact by working alongside institutions such as the World Health Organization, the Gates Foundation and Australian governments at local, state and federal levels to bring the benefits of public health policy and practice to the people who need it most (https://www.sydney.edu.au/medicine-health/schools/sydney-school-of-public-health.html).

The ARC Centre of Excellence in Population Ageing Research (CEPAR) is a collaboration between academia, government, and industry. The Centre is based at the University of New South Wales with nodes at the Australian National University, Curtin University, the University of Melbourne, and the University of Sydney. It aims to establish Australia as a world leader in the field of population ageing research through a unique combination of high level, cross-disciplinary expertise drawn from Economics, Psychology, Sociology, Epidemiology, Actuarial Science, and Demography. CEPAR is actively engaged with a range of influential government and industry partners to cooperatively deliver outcomes to meet the challenges of population ageing. It is building a new generation of researchers to global standard with an appreciation of the multidisciplinary nature of population ageing. CEPAR's mission is to produce research of the highest quality to transform thinking about population ageing, inform product and service development and provision and public policy, and improve people's wellbeing throughout their lives (https://www.cepar.edu.au/).

Key Points

- In responding to rapid population ageing in Australia, we must tackle the socioeconomic and environmental factors that drive inequities in healthy ageing, one of which is housing.

- Research has highlighted the importance of housing and housing conditions for health and well-being among people of all ages, particularly older adults, who spend more time at home than younger adults.

- We recommend adding a comprehensive set of housing indicators into the Australian National Framework Indicators covering housing tenure, dwelling structure, housing profile, as well as detailed measures of housing conditions.

The public health challenge of maximising healthspan in an ageing population

The world's population is ageing. Today, 8.5% of people worldwide are aged 65 and over. By 2050, this is projected to double to 16% of the global population.[1] Australia in particular is facing an ageing population; by 2040 the number of Australians aged 80+ will almost triple. Most people aspire to live a long life and many government interventions focus on maximising *lifespan*. However, if the extra years of life are dominated by a rapid decline in physical and mental capacity, older people's health will be limited with negative implications for their quality of life and for society more broadly in terms of financial and social costs. Thus, maximising *healthspan*, the period that an individual spends in a state of health, is a key public health goal.

Socioeconomic determinants of healthy ageing

As emphasised in the 2015 WHO report on ageing and health, health at older ages is not just about maintaining physical and mental health but is also about creating an environment that enables older adults to live their lives to the full.[2] Increasing age is associated with increasing diversity in health and physical, social, and economic circumstances, and not all older adults have the opportunity to experience healthy ageing. Ageing is shaped by social, economic, and environmental factors across the life-course. Across life stages, people experiencing socioeconomic disadvantage are at greater risk of poor physical and mental health, and these health inequities accumulate over time. Ensuring healthy ageing therefore requires measurement and intervention in social, environmental, and economic factors.

The importance and measurement of housing as a determinant of healthy ageing

A meaningful public health response to population ageing must therefore tackle the broader socioeconomic and environmental determinants of health, one of which is housing.[3] Housing is an important aspect of a person's material circumstances and has profound impacts on health through mechanisms such as psychosocial stress, transmission of infectious diseases, and direct impacts of aspects of material deprivation such as mould, temperature, pollution, and other environmental hazards.[3–5] In Australia, different housing indicators have been measured at the national level and in population-based cohort studies or surveys to support research and inform decision-making. Most commonly, these valuable resources measure 1) housing tenure or tenure type—the legal basis by which a person occupies a dwelling (e.g., owned outright, owned with debt, renting), 2) dwelling structure, which reflects the standard classification of different types of private dwelling structure (e.g., houses, flats, townhouses), 3) housing profile, which measures the number of rooms in each house that are occupied, and can also reflect household crowding, 4) household composition, which reflects living arrangements (e.g., living with spouse, other family members, alone), and 5) housing affordability—the ratio of housing cost to gross household income. All are important social determinants of health, particularly the health of older adults, as highlighted through reported associations of these housing measures with numerous health outcomes at older ages.[3,5–7] Of note, to be able to understand the effect of housing on the health of older adults and to identify priorities for intervention, we need to consider and measure other domains of housing, particularly housing conditions, which reflect material deprivation.[3,5,8] Housing conditions include different indicators such as household crowding, household amenities, housing problems, and housing satisfaction. Housing conditions are essential to maintain good physical and mental health at all ages but are particularly relevant for older adults, who spend more of their time at home than younger adults.[3] Thus, it is critical to have data sources with comprehensive housing conditions measures, including:

- Household amenities – access to clean, hot, and cold water in the house, having central heating, having sole use of bathrooms and toilets, whether the toilet is inside or outside the home, having a refrigerator, washing machine, or telephone, etc.[6]

- Housing problems – excess condensation, inadequate indoor temperature control (heating or cooling), damp, mould, indoor and outdoor pollution, inadequate lighting, water leaks, pests, noise, rot, issues with electricity or plumbing, and other problems.[5,8]

- Housing satisfaction – perceived measures of housing which are as important as objective measures when considering a person's ability to live a fulfilling life, e.g., how satisfied, or dissatisfied are you with your housing?; are you happy with the condition of your home?; how satisfied are you with the warmth of your home in winter? how connected are you to your current dwelling?; how connected are you to your neighbourhood?; how connected are you to your community?; how long have you been living in your current residence? do you plan to move house within the next year?; how many other households have you lived in over past five years?.[9] (Example questions are from the New Zealand Health, Work and Retirement Study and the Life and Living in Advanced Age Cohort Study in New Zealand-LiLACS).

- Housing stability – questions about moving residence (e.g., do you plan to move house within next year?; how many other households have you lived in over past five years?) and homelessness.[10]

Of note, more detailed indicators of housing conditions could also be considered, with a particular focus on housing conditions relevant to older adults, including housing conditions that cause problems moving around the house (e.g., steps/stairs, outside paths, toilets up or down stairs, size of rooms). Questions on changes to current residence to address the above housing conditions (e.g., improvements in heating or insulation, improved bathrooms, improved access, rails, ramps, flooring) may also be relevant.

Availability of data on housing conditions

Currently, in Australia, we have data from the Survey of Income and Housing on Australian housing mobility (e.g., length of time in dwelling, number of times moved in the last five years, reason for moving) and conditions, including questions about major structural problems (cracks in walls, sinking or moving foundations, plumbing problems) and repairs and maintenance in the last 12 months (e.g., painting, roof repair or maintenance, electrical work). These data were collected in 2007/8, 2013/14, and 2019/20 (https://www.abs.gov.au/statistics/people/housing). We also have data on housing conditions (e.g., housing problems, housing satisfaction) from the 2016 and 2020 Australian Housing Condition Datasets (https://dataverse.ada.edu.au/dataverse/ahcdi). However, there is also a need for housing conditions measures in population-based cohort studies where detailed measures of health and wellbeing are concurrently available, to enable consideration of health inequities across housing and identify priorities for promoting healthy ageing. To highlight the data collection gap, we searched for data availability on housing measures from all Australian and New Zealand ageing cohorts. We included cohort studies with participants aged 60 and over; we also considered cohorts involving with participants from younger ages if ageing was a primary focus of data collection or study objectives evolved over follow-up waves with the ageing of the cohort. Out of the 25 cohorts considered, while over two thirds collected data on housing tenure and housing type, only 6 studies collected at least one measure related to housing conditions. Of note, only one study (Life and Living in Advanced Age, a Cohort Study in New Zealand) had a comprehensive list of questions on housing conditions.

Recommendations for action to bridge knowledge gaps and inform policy interventions

To have a holistic understanding of the impact of housing on health, particularly the health of older adults, we recommend:

1) Adding a comprehensive set of housing indicators to the Australian National Framework Indicators covering housing tenure, dwelling structure, housing profile, as well as detailed measures of housing conditions, in addition to the existing indicators in the OECD framework (household composition and housing affordability). For housing conditions, we can take advantage of the

available data from the Survey of Income and Housing on Australian housing mobility and Australian Housing Condition Datasets;

and

2) Given the importance of housing conditions, advocating for further detailed data collection on the housing conditions domains in population-based cohort studies. To facilitate data collection, we can refer to the existing questionnaire for the Australian Housing Condition Datasets, which draws on global exemplars of household and panel surveys and was piloted in 2016.[11]

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