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Modelling Demand Driven Provision of Aged Care to Baby Boomers in Australia

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Abstract

Population ageing has become a critical issue in Australia. As Baby Boomers move into old age, this trend is set to gather greater momentum over the next three decades. Baby Boomers are a sizeable cohort, accounting for nearly 5.6 million Australians. Baby Boomers expect to have an extended period of healthy, active retirement and are approaching the age that requires aged care. This eventually results in a high demand for aged care.

The existing literature suggests that demand for aged care services is highly variable with diverse provision of care to aged Australians. Despite the policy focus on ageing and aged care over recent times, few studies have specifically examined the factors driving the demand for aged care. In addition, only limited modelling has been undertaken to quantify the future need for aged care of Baby Boomers. The review of the literature reveals a significant need to conduct research in Australia, in particular, on modelling demand driven provision of aged care to Baby Boomers. To date, very limited research on the potential need for aged care by the Baby Boomer generation in a global context has been conducted.

This research attempts to better understand and model the likely future demand for aged care by Baby Boomers in order to better inform decision and policy-making on the supply of aged care services in Australia in the future. The study identifies who the Baby Boomers are and projects their demographic and disability profiles over the next 40 years and examines the likely future demand for aged care by the Baby Boomer generation. The needs of Baby Boomers for aged care are explored at the level of the individual and family. The study specifically focuses on major aspects of life course disability transitions and the consequent demand for informal and formal aged care provided at home, in the community and through residential aged care facilities.

This involved extending and improving the Aged Care Module (ACM) in the dynamic microsimulation model 'Australian Population and Policy Simulation Model' (APPSIM) to make it more responsive and realistic to the changing disability profile of the Baby Boomer population. The modelling platform of APPSIM was used to provide the basefile and other general socioeconomic input parameters to the ACM. In enhancing the ACM, a Multi-State Disability Model (MSDM) was developed in this study to add a dynamic element and

longitudinal continuity to the disability state assigned to individuals over the simulation run which had been missing in the previous version of the ACM.

The development of the MSDM involved three major contributions. First, mortality was linked to disability status through the development of an age-sex-disability specific mortality transition function. There is very little data and few studies in Australia on the level of excess mortality in persons with disability. Second, a disability deterioration transition matrix was constructed to estimate the age-sex specific probabilities of a (simulated) Baby Boomer deteriorating from any disability state to any worse state over a 12 month time interval. Third, a disability improvement transition matrix was also developed to estimate the age-sex specific probabilities of a Baby Boomer recovering to a less disabled state by one level over a 12 month time interval. There is a significant lack of longitudinal studies in Australia that document changes in people's health and disability statuses over their life course. The estimation of these transition probabilities allowed the years of life that the Baby Boomer population are expected to live in different disability states as they age to be estimated. The traditional Sullivan method was also employed in this study so that the outcomes from the microsimulation modelling could be compared with more traditional methods for estimating the years lived with or without disability.

In conclusion, implementing a Multi-State Disability Model into the Aged Care Module of APPSIM has improved the modelling and projection of disability status and as a consequence the estimation of the likely aged care demands of Australia's Baby Boomers over coming decades.

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Provision of Formal Aged Care for Baby Boomers in Australia (2011); and 6) Identifying drivers of demand for aged care in Australia.

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