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Regional variation in social isolation amongst older Australians

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Regional studies globally has a strong focus on understanding the causes of variation in the economic performance and well-being of regions and this emphasis acknowledges that the strength of the local or regional economy plays a determinant role in shaping quality of life. Regional research has been less active in considering spatial variation in other factors that are critical to individual and societal well-being. For example, the regional studies community has been absent from the debate on the social determinants of health and how these influences vary spatially. This paper considers the results of a cross-sectional survey of Australians aged 65 years and over that focused on social connections and well-being. It examines regional variations in the incidence of social isolation within the older population. It finds that while the incidence of self-reported social isolation amongst older persons is broadly consistent with earlier studies, it demonstrates a spatial patterning that is unexpected. The paper considers community-building activities in addressing the impacts of social isolation, including the role of urban design, and suggests that there is a need to supplement the national overview presented there through more detailed studies focused on individual localities.

Keywords: social isolation; regions; ageing; Australia; social capital

Regional studies globally has a strong focus on understanding the pattern and causes of variation in the economic performance and well-being of regions and in part this priority acknowledges the strength of the local or regional economy in shaping quality of life. While three are notable exceptions (Hamnett, 2009), regional research has been less active in examining the considerable spatial variation in other factors that are critical to individual and societal well-being. For example, the regional studies community has been relatively absent from the debate on the social determinants of health (Kavanagh, Krnjacki, Beer, Lamontagne, & Bentley, 2013) and how these influences vary by location. Instead, regional research is largely focused on a range of issues that directly address questions of economic output and productivity, including innovation (Brenner, Cantner, & Graf, 2013), regional competitiveness (Camagni & Capello, 2013), regional governance (Charron, Dijkstra, & Lapuente, 2015; Ayres & Stafford, 2014), and the

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drivers of creativity and entrepreneurship (Mariotti, Mutinelli, Nicolini, & Piscitello, 2015). This paper considers one of the major determinants of health and well-being for older persons: social isolation. Social isolation is often overlooked as an influence on well-being despite the fact its impact can be as significant as other well-known risk factors to health and well-being. For example, one systematic review concluded the absence of supportive social relationships for older people had an impact on the health of older people that was equivalent to smoking heavily, and that being without social connections in older age was worse than drinking alcohol at unsafe levels. Moreover, social isolation was found to be more harmful than not exercising, and twice as harmful as obesity (Holt-Lundstad, Smith, & Layton, 2010).

This paper considers the results of a cross-sectional survey of Australians aged 65 years and over focused on social connections and well-being. It questions our a priori assumptions of where social isolation is likely to be most acute in a nation as large and sparsely settled as Australia, before moving on to examine regional variations in the incidence of social isolation within the older population. It finds that while the incidence of self-reported social isolation amongst older persons is broadly consistent with earlier studies, it demonstrates a spatial patterning that is unexpected. This outcome has implications for both the nature of policy interventions and their distribution across Australia.

Social isolation, health and well-being

Australia, as with many developed nations, has an ageing population that raises fundamental questions about national economic and social well-being (Commonwealth of Australia, 2010). To date, economic well-being and burgeoning health care needs have been considered the most important questions associated with the structural ageing of the population, while many of the social dimensions of ageing have been ignored. There is increasing recognition, however, of the critical importance of social networks and integration for ensuring the health and well-being of older Australians (Commonwealth of Australia, 2008). Cross-national research has highlighted the prevalence and depth of impact of social isolation amongst older persons (de Jong Gierveld & Havens, 2004). Studies of its incidence in Australia suggest that fully 20% of older Australians are affected by social isolation and that it is a major cause of social exclusion amongst this age cohort (Findlay & Cartwright, 2002). In addition, the incidence and impact of social isolation is likely to increase as the Australian population ages and as the baby boom generation retires. Notably, baby boomers are more likely to be affected by social isolation in older age than previous generations because of their lower marriage rates, higher divorce levels, reduced fertility, more mobile employment and housing careers, and tendency for self-reliance. There has been growing recognition of the detrimental effects of social isolation on the health and life chances of many older Australians, as well as the savings potentially available to the community from successful preventative programmes that reduce social isolation and build a stronger sense of connectedness (Cacioppo, Fowler, & Christakis, 2009). The social isolation of many older Australians has cascading impacts throughout society in the form of an increased burden of care on their children and other relatives, greater demands on health services, a reduced sense of community and a greater need for acute interventions by local governments, housing providers and other welfare services.

Social isolation is a risk across all age groups but the older population is especially vulnerable as a consequence of the social, economic and health changes that accompany later life. These transitions often result in a decline in the quality and quantity of social relationships with age. The promotion of ageing in place and dependence in older age has

been a strong and welcomed policy focus of governments. However, ageing in place can result in social isolation if relationships are not maintained or strengthened. The importance of social integration to a functioning society (Zavaleta, Samuel, & Mills, 2014) and the issue of loneliness has been a focus for social researchers for well over a century (de Jong Gierveld & Havens, 2004; Pillemer, Moen, Wethington, & Glasgow, 2000). Importantly, governments have acknowledged social isolation as a problem since the 1960s.

Research on social isolation has focused on its definition (e.g., Cornell Institute for Translational Research on Aging, 2007; Fine & Spencer, 2009; Nicholson, 2009; Weiss, 1973), and identifying its causes and consequences for various groups within the population (Findlay & Cartwright, 2002). The conceptualization of social isolation has evolved, increasing in breadth and scope since the first academic discussions (Nicholson, 2009). Today any examination of social isolation is generally connected to discussions of loneliness. Some researchers argue loneliness and social isolation are identical while others contend the terms share features but are conceptually distinct (Grenade & Boldly, 2008; de Jong Gierveld, 1998). Current academic debates posit that social isolation is an objective measure of the contacts a person has with others, while loneliness is the subjective expression of dissatisfaction with levels of interpersonal contact (Havens, Hall, Sylvestre, & Jivan, 2004). Encompassing both these ideas, Hawthorne (2006, p. 526) defines social isolation 'as living without companionship, having low levels of social contact, little social support, feeling separated from others, being an outsider, isolated and suffering loneliness'.

Social isolation is complex and multidimensional and results 'when the conditions necessary for maintaining a functional social network break down' (Walker & Herbitter, 2005, p. iv). The causes of social isolation are varied, incorporating individual and societal factors. Some of the personal factors that increase the likelihood of being socially isolated include:

- Socio-demographic factors (age, gender, income, education, ethnicity, household characteristics.
- Place of residence (Ip, Wai Lui, & Hong Chui, 2007; Hawthorne, 2008).
- Significant life events (death of partner, loss of relationships, divorce, disability, retirement/unemployment, being a carer) (Dykstra, van Tilberg, & de Jong Gierveld, 2005).
- Physical and mental health issues (Grant, Hamer, & Steptoe, 2009).
- Mobility (changes in transport options such as loss of a driver's licence, poor access to public transport) (Findlay & Cartwright, 2002).
- Subjective factors (individual health conditions, sense of social fulfilment, socio-economic status, attitudes and expectations (Hawthorne, 2008; van Baarsen, Snijders, Smit, & van Duijnm, 2001).
- Degree of support received, participation in social activities and access to information (Greaves & Farbus, 2006).

Productive social interventions are therefore a necessity in modern society for those whose social networks are insufficient to maintain an acceptable quality of life (Age UK Oxfordshire, 2011; Social Care Institute for Excellence, 2012).

Intuitively, the degree to which an individual is socially connected is an important determinant of their social, economic and medical well-being. In the 1990s and 2000s there was a considerable focus on social connectivity as part of the debate on social

capital and its impacts (Beugelsijk & Van Schaik, 2005; Malecki, 2012). Less attention has been paid to spatial variation in the distribution of personal social networks and their importance across population groups. Social isolation is a consequence of poor social networks, and it moves beyond the subjective experience of loneliness to acknowledge the importance of the strength and number of social connections. To express this another way, loneliness is a condition individuals feel, while social isolation is a phenomenon a person experiences. Importantly, health researchers distinguish between social isolation – taken as a relatively objective measure of the adequacy of social networks and support – and loneliness, a subjective state that may not overlap with social isolation.

At a society-wide level, social isolation amongst older persons has profound consequences, including the absence of community cohesion; neighbourhood deterioration; increased use of health services and medications; a greater incidence of ageism which in turn results in an inadequate focus on older people in government policy/resource allocation; and limited engagement with active citizenship amongst older persons and the loss of the benefits if confers for the individual and the community (Pillemer et al., 2000). The social isolation of older persons can also impose greater demands on family members who are called upon to provide more intensive care for their parents, grandparents or other relations. This paper sets out to understand spatial variation in the incidence of social isolation amongst older persons and examines the hypothesis that the higher levels of social capital evident in non-metropolitan Australia will result in a reduced incidence of social isolation.

Social networks in metropolitan and non-metropolitan Australia

Many of the factors associated with social isolation are beyond the individual's control and reflect the processes and structure of modern society, including the functioning of communities, prejudices such as ageism, sexism, and racism, and the confluence of rising individual self-sufficiency and declining localized support within society (Peel, 2000). Modern society's collective responsibility to care for others, in particular its most vulnerable, has been reduced in our pursuit of privacy, self-sufficiency and independence (Beck, 1992). As well as having an impact on the individual, at a society-wide level, social isolation amongst older persons has profound consequences, including the absence of community cohesion; neighbourhood deterioration; increased use of health services and medications; a greater incidence of ageism which in turn results in an inadequate focus on older people in government policy/resource allocation; and limited engagement with active citizenship amongst older persons and the loss of the benefits if confers for the individual and the community (Pillemer et al., 2000). The social isolation of older persons can also impose greater demands on family members who are called upon to provide more intensive care for their parents, grandparents or other relations.

Importantly, social connectivity is likely to vary by location and this link between social connection and geography has been long acknowledged. In the 19th century the German philosopher and sociologist Ferdinand Tonnies distinguished two types of social interaction – *gemeinschaft* and *gesellschaft* – with the former commonly associated with traditional rural communities and in-depth personal interactions that often develop over a lifetime. *Gesellschaft*, by contrast, was associated with modern, urban societies, with social exchange predicated on a more instrumental set of relations (Tonnies & Harris, 2001). More recent Australian work has considered differentials in social capital between urban and rural communities (Atherley, 2006; Baum, Ziersch, Darmawan,

Kavanagh, & Bentley, 2009; Hodgkin, 2012; Onyx & Bullen, 2000; Tonts, 2005; Wood-house, 2006). Almost without exception, these studies have found greater stocks of social capital within Australia's rural communities rather than in urban settings. As might be anticipated, rural and remote regions have been found to be richer in bonding social capital – the linkages between persons with a number of similarities – when compared with the major cities, but have lower levels of bridging social capital – connections with more diverse individuals (Kim, Subramanian, & Kawachi, 2006). There are strong grounds to anticipate a priori that social isolation amongst the older population will be less evident in rural areas when compared with the major cities. However, while this assumption might hold true in most developed nations, there are grounds to question this assumption for Australia given the very substantial distances between – and within – settlements across the continent. Davis and Bartlett (2008) noted loneliness is a growing risk for many older Australians living in rural communities and that 'Older people in rural communities have become marginalised by longstanding misconceptions about rural life and urban-centric policies' (Davis & Bartlett, 2008, p. 6).

Moreover, Winterton and Warburton (2011) noted that older people living in rural communities are subject to both the disadvantages of rural living and the additional burden of often acute health and mobility issues associated with ageing. The disadvantages of living in a rural setting in Australia identified by Winterton and Warburton included a greater incidence of poverty, lower levels of population health, poorer access to health services, lower levels of education and poorer health behaviours, and discrimination. These difficulties evident in rural and remote settings across Australia suggest an erosion of the social connections for older Australians and the potential for further alienation in ageing.

Measuring and mapping social isolation amongst older Australians

Social isolation amongst older persons is a significant challenge at the level of the individual, the family, the community and the nation as a whole. Indeed, it could be argued that it is a problem that spans the boundaries of developed and developing economies as each passes through the second demographic transition and associated processes of urbanization and population ageing (Lesthaeghe, 2010). The spatial distribution of social isolation is important at both a policy and theoretical level, as regional variations in the incidence of social isolation challenge our understanding of causation and association at the community level, while also demanding a targeting of resources and responses by governments. This section considers the ways in which the incidence of social isolation is measured at the population level and its incidence at the regional scale across Australia. After considering the metric used to measure the incidence of social isolation, it examines its spatial patterning using the outcomes of a 2014–15 online survey completed by more than 1700 Australians aged over 65 years.

Measuring social isolation amongst older persons

Sansoni, Marosszeky, Sansoni, and Fleming (2010) identified over 150 tools that have been developed to measure social isolation. These instruments vary significantly in terms of length with some being a survey in themselves. These instruments vary in terms of the constructs measured, tone and psychometric properties (Bowling, 1991; Hawthorne, 2006). Some of these measures have been specifically designed for the older population (Fine & Spencer, 2009; Victor, Scambler, Bond, & Bowlilng, 2000) while

others have been applied via general health or population surveys. The Friendship Scale (also known as the Hawthorne Scale) is one such survey, developed in Australia (Hawthorne, 2006, 2008; Hawthorne, Sansoni, & Marosszeky, 2008) through a series of surveys with samples of older Australians. It measures the incidence of self-perceived social isolation through six short multiple-choice questions that examine the previous four weeks in a person's life. The questions explore the degree to which a person has found it easy to relate to others over the past four weeks; if they have felt isolated from other people; if they had someone to share their feelings with; the ease with which the person has been able to get in touch with others if they needed to; whether the person felt separated from others in the past four weeks; and, finally if they felt alone and friendless. Compared with other measurement tools this instrument is short, as user-friendly as possible, covers the different domains of isolation, is unidimensional and measures both positive and negative items, and examines the intensity and duration of isolation (Hawthorne & Griffith, 2000). The Friendship Scale also has good psychometric properties. The Friendship Scale was one of 10 measures evaluated by Sansoni et al. (2010) for the New South Wales Department of Health, and was not recommended for adoption solely because at that date only two independent studies had published findings using this metric. The Friendship Scale has now been adopted more widely, especially in Australia. Overall, the Friendship Scale is most appropriate for surveys that explore a number of issues and need an economical way to measure social isolation.

From September 2014 to March 2015 older persons from across Australia were invited to participate in a survey focused on social isolation and social support. Older people were invited into the study through advertisements in age-focused magazines, aged care service providers, community organizations, peak organizations representing older citizens (such as the Council on the Ageing) and via local governments. The survey instrument was made available online, but the majority of responses were received in hard copy after distribution by a community service group or other agency. Fully 1682 responses were received from across Australia, although the representation from the Northern Territory – which accounts for approximately 1% of the national population – was low (Figure 1). While metropolitan Australia provided the greatest number of respondents, non-metropolitan areas in all mainland states were adequately represented. This included persons living in the more accessible rural areas, as well as those in remote and very remote parts of the nation (Figure 2).

The sampling methods used in this study are not capable of generating a representative sample but they can provide valuable insights into the incidence and distribution of social isolation amongst older people. These insights supplement the qualitative phases of this program of research and significantly advance our knowledge of this phenomenon across the broad Australian population. Importantly, while social isolation has been considered in some depth for at risk groups (Gardner, Brooke, Ozanne, & Kendig, 2000) and for the Australian population as a whole (Hawthorne, 2008), there have been few studies of its distribution amongst older Australians at the national scale.

Overall, 58% of respondents to the survey lived in metropolitan Australia and the remaining 42% were resident in rural or remote regions. To a degree, therefore, non-metropolitan respondents were over-represented within the data collection when compared with the general distribution of the Australian population (Australian Bureau of Statistics (ABS), 2011). When examined by broad metropolitan/non-metropolitan region, Adelaide was found to be substantially over-represented amongst respondents while the nation's
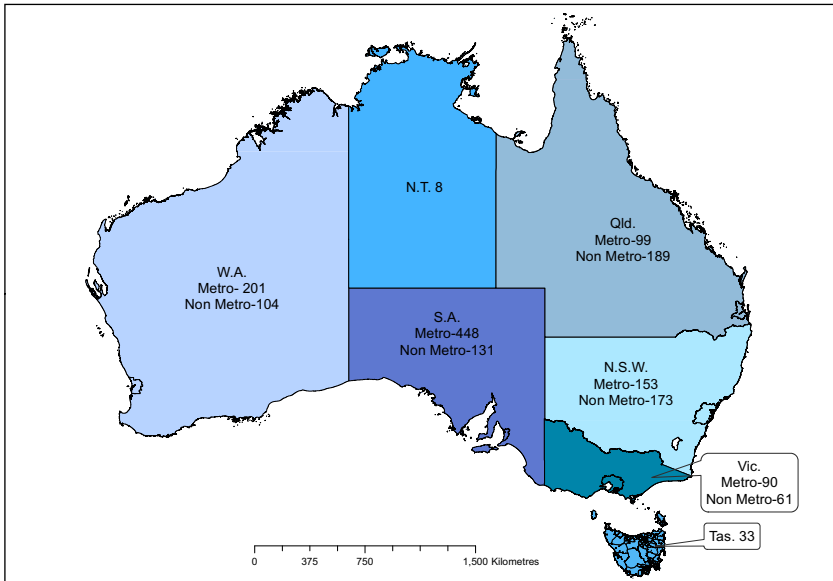
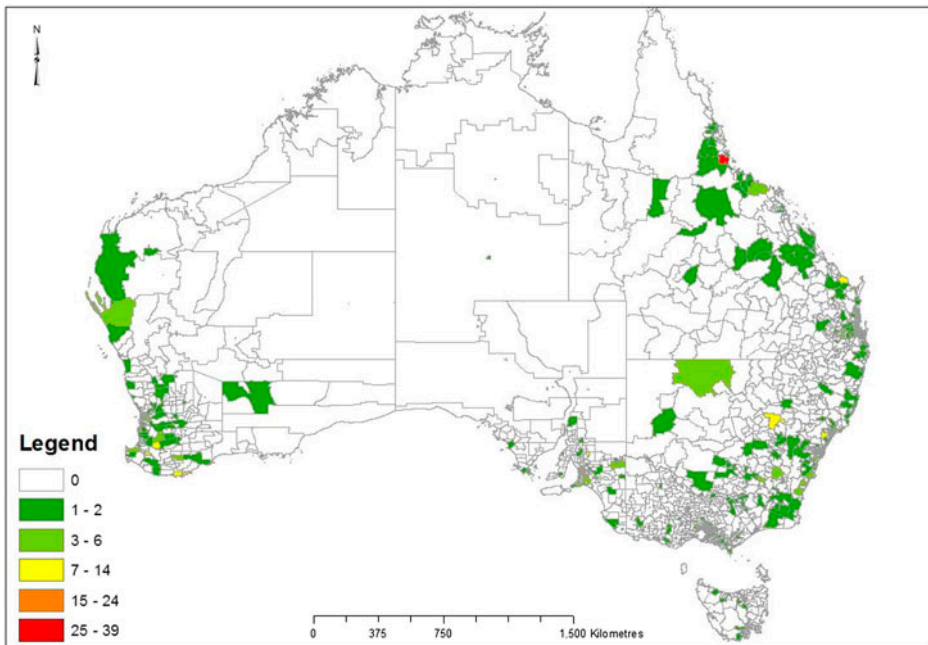Figure 1.   Distribution of survey responses by postcode, Australia.

Figure 2.   Respondents by postcode for non-metropolitan Australia.

two largest urban centres – Melbourne and Sydney – were under-represented (Figure 3). This bias reflects the location of the research team, headquartered in Adelaide and without an academic team member based in the New South Wales.
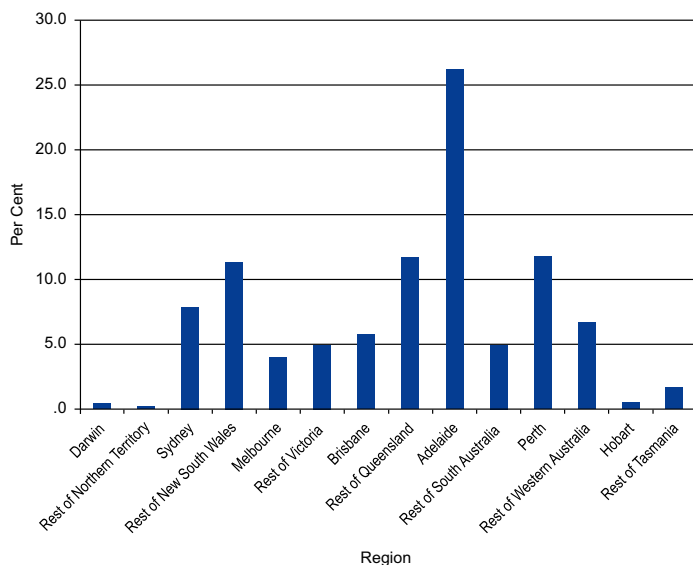
Figure 3.   Number of responses by broad region.

As noted previously, the Friendship Scale is comprised of six questions, which in aggregate provide a tool for assessing isolation amongst individuals. Some of the individual questions within this metric shed a direct light on feelings of loneliness and the experience of social isolation. Survey participants were asked to respond to the statement 'During the past four weeks I felt alone and friendless'. The results, presented in Table 1, are for metropolitan and non-metropolitan Australia. Importantly, these data suggest that the number of respondents who have acute feelings of loneliness is low – 1.6% of respondents – but almost 12% of older Australians who responded to the survey felt lonely or socially isolated for half their time or more. Importantly, senior Australians living outside the capitals were less likely to feel acute loneliness or friendlessness and were more likely to not feel lonely or friendless at all.

A second question asked survey participants to respond to the statement that 'During the past four weeks I felt isolated from other people' and the results by metropolitan/ non-metropolitan region are shown in Table 2.

A slightly higher percentage of older Australians felt isolated from others than perceived themselves to be friendless or alone, and the sense of social isolation was

Table 1.   During the past four weeks I felt alone and friendless.

	Metropolitan (%)	Non-metropolitan (%)	All Australia (%)
Almost always	1.8	1.4	1.6
Most of the time	4.4	3.6	4.1
About half the time	6.0	6.4	6.1
Occasionally	26.0	22.6	24.5
Not at all	61.9	66.1	63.6
Total	100	100	100

Table 2.   During the past four weeks I felt isolated from other people.

	Metropolitan (%)	Non-metropolitan (%)	All Australia (%)
Almost always	2.4	2.0	2.2
Most of the time	4.1	5.3	4.6
About half the time	7.9	7.8	7.9
Occasionally	32.5	30.7	31.7
Not at all	53.1	54.3	53.6
Total	100	100	100

slightly less pronounced in metropolitan Australia than in non-metropolitan regions. Critically, almost half of all older Australians felt isolated from others to some degree over the four weeks prior to completing the survey. It is important to acknowledge that these results are self-reported feelings of loneliness and isolation from a group that chose to respond to this survey. Both qualifications to the interpretation of the data suggest the true level of social isolation amongst the older population is higher than indicated in these preliminary data.

The sample questions from the Friendship Scale present a picture of social isolation amongst older Australians that reinforces the awareness in the literature of the magnitude of this problem. Table 3 presents the results of the calculation of the Friendship Scale for all Australia.

The data presented in Table 3 indicate a level of social isolation amongst older Australians of just under 19%, a near match with the 20% estimate by Findlay and Cartwright (2002). Across Australia, there was no appreciable difference in the level of social isolation between metropolitan and non-metropolitan regions in aggregate, with a *t*-test not significant (.314) at the 95% confidence interval. Despite the absence of statistically significant differences between metropolitan and non-metropolitan Australia, notable variation emerges between regions when the data are mapped (Figure 4).

Overall, the patterns of social isolation amongst the older population demonstrated a bimodal distribution spatially, the highest rates occurred in non-metropolitan South Australia and non-metropolitan Western Australia (22.5% and 22.0% respectively), and metropolitan Sydney and Melbourne (22.4% and 21.0%). Social isolation amongst the older population was therefore most acute in Australia's two largest cities, and in the two mainland states that are distinguished by large, remote landmasses and relatively few major settlements outside the capitals (Beer & Clower, 2009). The island state of Tasmania, by contrast, recorded the lowest level of social isolation amongst older

Table 3.   Friendship Scale in five categories.

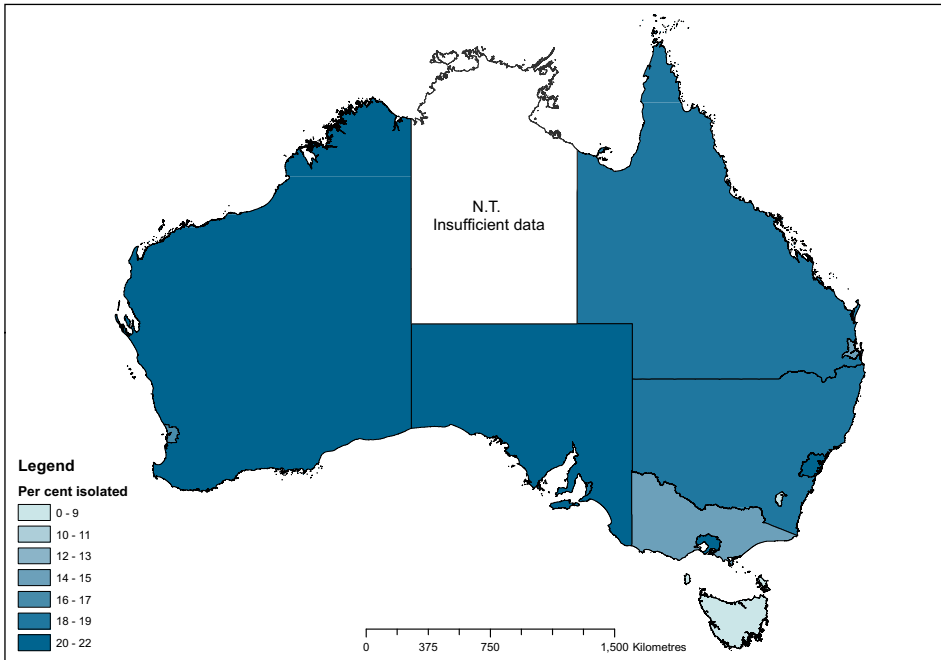|	Number	%
Very isolated	128	7.7
Isolated	185	11.2
Some isolation/connected	242	14.6
Socially connected	412	24.9
Very connected	685	41.5
Total	1652	100

Figure 4.   Percentage of the older population socially isolated by broad region.

Australians at zero for the capital city of Hobart, and 7% for the areas outside the capital. Tasmania is distinguished from many other parts of Australia, by a denser pattern of settlement, with a relatively large number of small communities. This urban development pattern appears to be 'protective' with respect to social isolation. Queensland, with its large land mass and dispersed network of large and small settlements, recorded higher rates of social isolation in its rural and regional areas than in the capital of Brisbane. Some 14% of older Brisbane residents were estimated to be socially isolated according to the Friendship Scale compared with 19% of rural and regional residents.
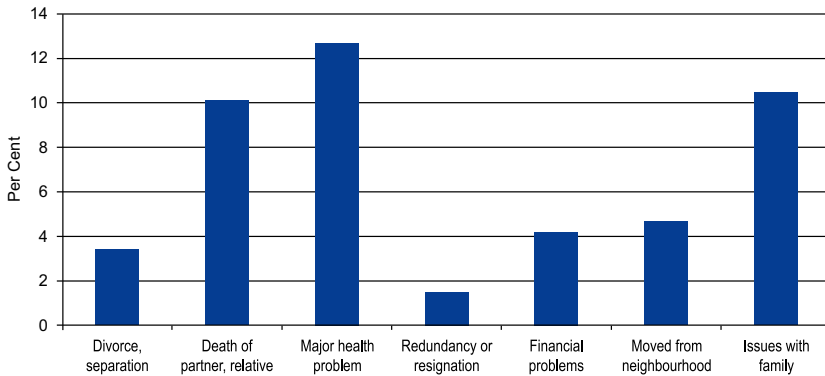

Figure 5.   Self-reported causes of social isolation.

Table 4.   Do you feel your access to transport limits your ability to get out and about?

	Metropolitan (%)	Non-metropolitan (%)
Not at all	61.1	64.8
Slightly	23	20.8
Quite a lot	8.9	8.2
A lot	7.0	5.6

Additional insights into the processes underpinning social isolation can be obtained from the data on self-reported contributory factors (Figure 5). Personal circumstances clearly exerted a significant impact on the incidence of social isolation, with major health problems, issues with family members and the death of a partner or close relative, prominent in the lives of older persons who felt disconnected from wider society. Financial problems and movement away from a familiar neighbourhood also exerted a substantial influence on the lives of the socially isolated, which suggests both a social gradient to this phenomenon and a possible explanation for the higher levels of social dislocation in metropolitan areas. Rural residents living in smaller communities are likely to have stronger relationships with their neighbours, and may be less likely to move in older age. Overall, the self-reported reasons for becoming socially isolated in later age appear to be independent of location: redundancy and other departures from the workforce are a feature of metropolitan and non-metropolitan regions alike; divorce and separation affect households in all parts of Australia; and, health challenges are prevalent in all parts of the country. This observation has an important implication: place-based approaches to addressing social isolation need to focus on reducing the severity and incidence of social isolation, rather than treat location as a root cause. Other measures – in income support, family reconciliation services or employment transition services – are likely to be more effective in addressing the triggers of social isolation.

Importantly, physical transport difficulties were less pronounced in non-metropolitan regions than in the major urban centres (Table 4). Access to transport is an appreciably greater challenge for older Australians in metropolitan areas than for their comparators outside the capitals, despite the potentially greater distances to be covered and the absence of public transport in many rural areas. This difference may well be a function of greater levels of community support for older people in rural and regional localities, as well as difficulties in gaining access to public transport in the major cities. Car ownership and driving would be less attractive to many older people in the metropolitan centres because of potentially higher costs – fuel, car parking – and greater traffic congestion.

Conclusions

This paper set out to understand the broad-scale regional distribution of social isolation amongst Australia's older cohorts. It found that just under 20% of the respondents to our survey were socially isolated and this figure was consistent with earlier estimates of the level of social isolation amongst older Australians. The paper also found that the problem of social isolation was most acute in the nation's largest cities and in the sparsely settled regions of non-metropolitan South Australia and Western Australia. The data

do not support the suggestion that social isolation is an inevitable outcome of living in either a capital city or a rural or remote region. What is clear from this analysis is that social isolation is more prevalent in both the largest urban centres and in the most substantial, and sparsely populated, territories. Regional cities and towns would appear to offer a better social environment for older residents, and while the triggers of social isolation are often personal factors – the death of a partner or close relative, the onset of a major health issue etc. – the attributes of the community in which they live appear to either protect against isolation or exacerbate the problem. The data suggest that moving away from a familiar neighbourhood – including retirement migration to the coast or other amenity destination – carries with it an elevated risk of social isolation. Perhaps unexpectedly, transport was a greater challenge for metropolitan residents than those living in non-metropolitan regions, despite the greater accessibility of more urban locations and greater access to public transport. Potentially, better transport services for older residents could reduce the incidence of social isolation amongst older Australians, as could explicit 'community building' strategies that address the needs of older residents and integrate them with all members of the local population.

Inevitably, the observed variation in the incidence of social isolation raises questions of scale. The broad literature (Hawton et al. 2011; Nicholson, 2012; Steptoe, Shankar, Panayotes, & Wardle, 2013) on social isolation, as well as publications on effective interventions (Greaves & Farbus, 2006; Social Care Institute for Excellence, 2012) emphasize the role of community engagement in reducing the incidence and impact of this phenomenon. Social isolation, therefore, is likely to be associated with process that are evident at a more local scale than the broad regions discussed here. Urban design, transport and community services are likely to be pivotal with respect to the capacity to meet with others, engage with community events and maintain established friendships. The presentation of data in this paper at the regional scale permits the development of a national overview but overlooks critical factors associated with detail of individual localities. Non-metropolitan South Australia and Western Australia score poorly because of their expansive nature and small populations, while the more dense pattern of settlement in Victoria and Tasmania generates greater potential for interaction. At the same time the capital cities are likely to have less variation amongst them, with the possible exception of the two largest cities of Melbourne and Sydney which are marked by higher levels of congestion and development at a less human scale.

Discussion of questions of scale lead to two sets of insights: first, there would be value in extending this research to consider a number of centres within the dataset of various sizes – small urban settlements, larger towns, regional cities, metropolitan areas et cetera – in the expectation of finding an inverse relationship between urban size and the incidence of social isolation amongst older residents. Second, the analysis suggests that policies to address social isolation are not simply a concern for health officials and community agencies: the World Health Organisation (WHO) has advocated for the development of age-friendly cities (WHO, 2007) with much of the focus on issues of physical health and well-being. This paper has shown that social isolation – and its consequences for emotional and physical well-being – is also affected by basic processes of urbanization, economic growth, the provision of population-wide services and city development. There are strong grounds for building consideration of social isolation into all aspects of public health planning, the development of age friendly cities and urban development.

Disclosure statement

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