Population Ageing
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Population Ageing in Northern Australia: Seniors' Voices on Ageing in Place

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Abstract Similar to most northern developed jurisdictions, Northern Australia has perennially featured a youthful population composition due to a high Indigenous composition and a young non-Indigenous population for whom migration flows are concentrated in young ages. However, demographic pre-cursors are now in place that will bring about relatively rapid and proportionally substantial population ageing in the population of the north of Australia, as has occurred elsewhere. More seniors will bring many opportunities from the social, economic and other capital they provide. Seniors will balance population compositions towards a less male dominated and less youthful structure, helping to reduce high rates of turnover. Nevertheless, there will be challenges and governments for northern Australian jurisdictions will in coming decades face structural shifts in population profiles and the economy. To date ageing in the north has received little in the way of policy attention, but planning for the needs of seniors and their communities must be forthcoming. This paper reports on the causes and consequences of these circumstances and provides research insights from soon-to-be and existing seniors on their hopes and concerns around 'ageing in place' in the north. We then ponder what governments might do to maximise potential benefits in the face of this significant demographic and social change. While delayed ageing in the north affords governments at all levels with opportunities to learn from the experiences, policies and programs of other areas, concerted consultation with seniors is necessary to deliver optimal support and community benefit for those who wish to 'age in place' in the north.

Keywords Population ageing · Ageing in place · Northern Australia · Remote areas · Indigenous population · Human geography

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Introduction

In line with global trends, the population of Australia is ageing. Population ageing first reached primacy as a national policy imperative and economic issue during the early 1990s when the Keating led Australian Government established capacity within the Treasury Department for modelling fiscal and economic futures. This facilitated tabling of the first Intergenerational Report in 2002, with updates legislated for each five years onwards (Australian National Audit Office 2014). The initial and subsequent Intergenerational reports highlight the costs of meeting health and infrastructure needs from a growing population aged over 65 years (Australian National Audit Office 2014) as well as the articulated government concerns over declining taxation revenues from workforce decline (Queensland Government 2006).

Population projections show ageing will dramatically affect Australia's population composition in coming decades. Median age, for example, is projected to rise from 37.3 years in 2012 to 44.5 years by 2061, and to reach as high as 46 years by 2101 (ABS 2013). Those 65 years and over are projected to increase from 14 % of the national population in 2012 to between 18 % and 25 % by 2061, and as high as 27 % by the year 2101. Meanwhile, the very old (those 85 years and over) could more than double by 2023 and continue to grow rapidly (ABS 2013).

The increased incidence of age-related disabilities and chronic illnesses is creating specific impacts and needs in societies. These include infrastructure such as aged care facilities, hospitals and medical clinics. In line with this, care needs are becoming increasingly complex due to end of life morbidities, requiring more specialised medical and ancillary health workforces. For example, cases of dementia in Australia (in 2016 dementia was the second most common cause of death in Australia) are expected to rise from around three hundred thousand in 2011 to around nine hundred thousand in 2050 (AIHW 2012). Meanwhile, society and seniors themselves have increasing expectations about the quality of aged care demanded, creating higher demand for specialised nurses, carers and those with skills in palliative care (Commonwealth of Australia 2010).

Population Ageing in Northern Regions: The Northern Territory Example

Despite being a global megatrend, population ageing is occurring unevenly across nations and between jurisdictions within these (Jackson and Felmingham 2002). Populations in northern regions of developed nations are fundamentally different in composition from those in urban, peri-urban or rural parts (Carson et al. 2011). Population ageing in the context of northern and sparsely populated areas thus brings different issues and challenges (Buckner et al. 2013). Notably, for northern areas of developed nations the onset of ageing has occurred at around a generation later than for southern urban and rural populations.

Two main factors have contributed to the delayed onset of ageing in northern and sparsely populated areas. First, most areas have high in-migration rates for young career aspirants, especially those aged in their 20s, and high out-migration rates for pre and post-retirees (Martel 2010; Taylor 2015). Women in particular are prone to leaving northern areas once they are approaching or are in retirement (Rasmussen 2007). Older

people in northern regions may face difficulties accessing primary healthcare and specialist health facilities, and the costs of providing support to maintain independence may be higher in those settings because of distances to treatment facilities and for carers visiting older people at home (Buckner et al. 2013).

Secondly, many northern and sparsely populated areas have significant Indigenous populations with very youthful age structures from high fertility and low life expectancies relative to others (ABS 2015). Life expectancies are in fact also lower for non-Indigenous people in northern and sparsely populated areas. The average age at death in remote Australia, for example, was 70.4 years in 2014 compared to 82.2 years in major cities (ABS 2015); a gap of almost 12 years. The combined effect has been the long-term sustainment of a young population age structure and, conversely, small numbers and proportions of seniors in the populations of northern areas.

Migration too has been amongst the factors determining that the dynamics of population ageing in northern contexts has been variable over space and time in comparison to southern and more populated developed regions. In the northern regions of Russia, for example, the onset of ageing and structural population dislocation have been dramatic and fast-paced due to the sizeable net out-migration of working age people (Emelyanova and Rautio 2013). Population ageing has therefore been 'fast-forwarded' through the migration decisions of another cohort in the population. In doing so, this highlights the fundamentally different population dynamics and degree of population volatility for northern sparsely populated areas.

As a sparsely populated northern jurisdiction (with a population density just 0.2 persons per square kilometre), the Northern Territory (NT) of Australia has a small, transient and youthful population of around 240,000 residents, a third of whom are Indigenous. These population characteristics are emblematic of those found across the north of Australia (Taylor et al. 2015). The NT is only now experiencing ageing as an emerging population trend. Since the mid-1990s, the NT saw a marked increase in the numbers of people aged 65 years and over; up, for example from 4337 in 1991 to 16,815 in the space of a generation to the year 2015 (ABS 2016). Looking forward, population projections indicate numbers of residents aged 65 years or more will grow from 13,000 in 2011 to 46,000 by 2041 (up 258 %) to comprise 12.6 % of the population, compared to 5.6 % in 2011 (Fig. 1) (Northern Territory Department of Treasury and Finance 2014). The very old population (those 85 years and over) is projected to grow from just under 2000 residents in 2011 to just under 14,000 residents in 2041 (or 700 % growth). Indicative of the scale of ageing in the contexts of a small population, net projected growth in the very old cohort is greater than the size of the NT's third largest town of Katherine.

A number of factors have brought about the onset and anticipated growth in the seniors cohort in the NT. First, fertility rates fell sharply during the 1970s and, while traditionally far higher than for Australia as a whole, are converging with the Australian (Fig. 2). Secondly, there has been continued and marked improvements to Indigenous (as well as non-Indigenous) life expectancies since the 1970s and, while a large gap remains, Indigenous life expectancies continue to increase. Consequently, growth rates for Indigenous people in the Territory aged 65 and over are anticipated to average above 5 % per annum from 2011 to 2041 as life expectancies continue to improve and more Indigenous Territorians live into their 60s and 70s. Secondly, a 'bubble' of long-term residents, who had moved to the Northern Territory in the years proceeding self-

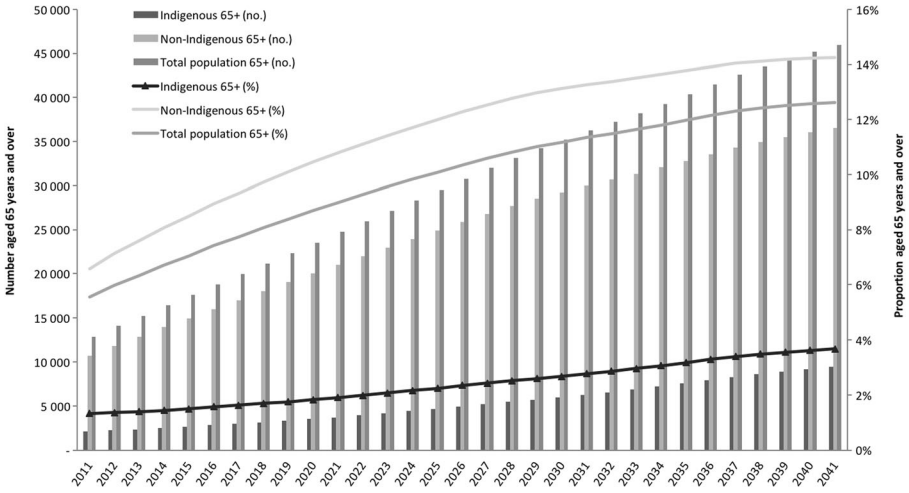

Fig. 1 Projected population aged 65 years and over, Northern Territory, 2011 to 2041. Source: Author's calculations from Northern Territory Department of Treasury and Finance 2014

government in 1978, are transitioning into retirement ages. This will leave a hole in the workforce and create significantly more seniors than has been observed in the past, even if past trends persist and many leave the Territory on retirement (Martel et al. 2013). Thirdly, improved services, facilities and inter-generational family retention are creating a critical mass of seniors that will encourage others to remain in, rather than leave the north.

These data suggest that 'demographic pre-cursors' exist in the Territory which will deliver swift growth in numbers of seniors in communities. For example, although growth of between 30 % and 50 % is projected across most age groups in the NT from 2011 to 2041, growth rates within individual age groups are anticipated to vary significantly. An increase of 242 % (from 10,695 residents to 36,533) is projected for non-Indigenous residents aged 65 years and over, while a 340 % (from a small base of 2416 residents in 2011 to 9433 residents in 2041) increase is projected for Indigenous NT residents 65 years and above (Fig. 3).

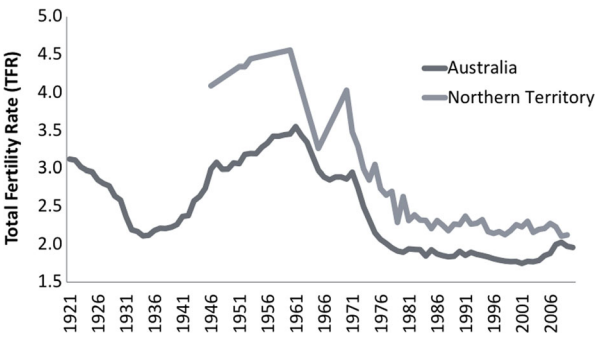

Fig. 2 Total Fertility Rate, Australia and NT, 1921 to 2011. Source: ABS (2014) 3105.0.65.001 Australian Historical Population Statistics, 2014. Note: TFR is the average number of births to women in childbearing ages (15 to 49 years)

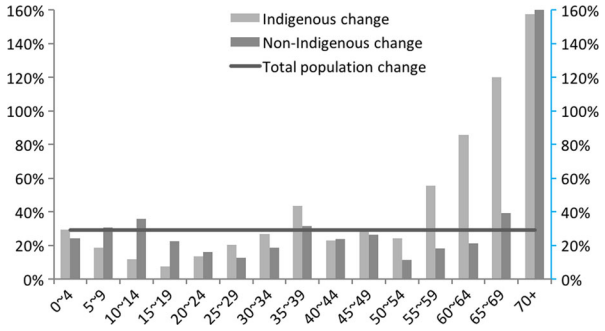

Fig. 3 Projected NT population change by age, gender and Indigenous status, 2011 to 2041. Source: Author calculations from Northern Territory Department of Treasury and Finance 2014

In line with these age, gender and Indigenous specific increases in the older population of the Territory, the median age for Indigenous residents in the NT is projected to increase from 23.7 years in 2011 to 28.4 years by 2041. This 4.7 years increase compares to 2.3 years for non-Indigenous residents (from 34.7 years to 37.0 years) (Northern Territory Department of Treasury and Finance 2014). As an indication of the shifting composition in the population, the child dependency ratio (the ratio of dependents younger than 15 to the working-age population) is projected to fall from 0.51 to 0.46 (by 9 %). Meanwhile, the age dependency ratio (the ratio of dependents 65 years and older to the working-age population) is projected to grow by 189 % (to 0.14) (Fig. 4). Dependency ratios for Indigenous residents are likely to trend towards those seen in the rest of Australia. Nevertheless, indicative of the long-term nature of the 'catch-up' in population ageing for the Northern Territory compared to other jurisdictions, the child dependency ratio for the NT will remain substantially above (0.43 compared to 0.29) while the age dependency ratio will continue to be much lower than for the rest of Australia (0.14 compared to 0.32).

Such important future changes to the demographic composition of the population and its unique composition give rise to the need for targeted policies to ensure the needs of seniors in key areas like housing, transport, safety and finances are well planned for and met. To date, ageing has received relatively little attention from policy makers. Only recently, for example, has the Northern Territory appointed a Minister for Seniors.

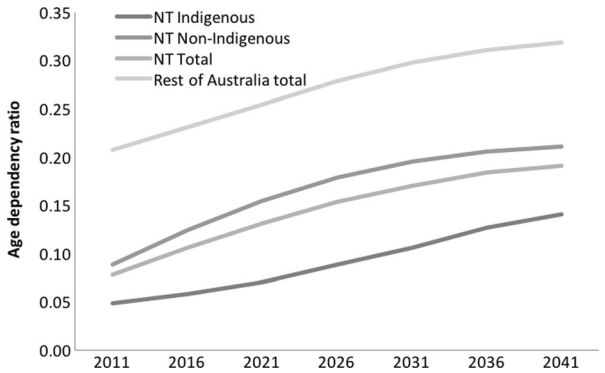

Fig. 4 Projected age dependency ratios for the NT and rest of Australia, 2011 to 2041. Source: Author calculations from Northern Territory Department of Treasury and Finance 2014

None of the States which have a geographical footprint in the north of the nation (Western Australia, Queensland and the Northern Territory), where around 1.3 million residents reside (Taylor et al. 2015), have a population policy, nor specific strategies for transition communities through population ageing, despite recognising it as a key demographic and economic issue (for example, Queensland Government 2006). Likewise, the Developing Northern Australia agenda (Australian Government 2015) makes only a passing commentary on ageing in northern Australia.

Importantly, there has been no research to date which has given voice to the self-perceived needs, aspirations and concerns in relation to seniors in the north as they contemplate ageing in place. Having demonstrated the context and significance of population ageing in northern Australia, the focus of this study is to identify and document issues, concerns and perspectives of seniors' in northern Australia where, for the first time, significant numbers will transpire during coming decades.

Researching Seniors' Perspectives on Ageing in the North

Having identified and analysed likely trajectories for population ageing in the NT, this part of the paper now reports on research conducted in collaboration with the Council on the Ageing of the Northern Territory (COTA NT) administered from late 2013 to early 2014. The aim was to garner a baseline of seniors' aspirations and concerns around ageing in the NT and to better understand their intentions regarding staying in or leaving the north. The survey was targeted towards members of the community who were aged 50 years and over (for the non-Indigenous community), and 45 years and over for Indigenous people. The age differences reflect lower life expectancies for Indigenous Territorians (Brokensha and Taylor 2015) in so far as there is an earlier onset of issues associated with ageing for Indigenous Territorians (for example, the need to access health services as a result of chronic illness). The survey aimed to capture those transitioning into senior ages and existing seniors.

The survey covered the following eight topics:

- Demographics, residency and intentions to stay in or leave the Territory
- Intergenerational connections
- Housing situation and needs
- Transport and mobility
- Employment and income
- Information and technology use
- Health and wellbeing
- Caring and being cared for

The survey was administered in paper format (and made available in shopping centres, at the COTA NT office and elsewhere) and by interview from the COTA NT offices. Participants were recruited through snowball sampling and, as such, a survey response rate cannot be determined. However, in total 1874 responses were received, of which 1865 valid responses were collated and analysed. This represents 4 % of the target population at the time of the survey and above the 95 % confidence level (481 respondents). The survey data was analysed using SPSS, Excel and NVivo. Other data

sources, including ABS Census data, were analysed to compare and contrast with the results of the survey.

Unfortunately, as the survey was not designed to be representative of population sub-groups, an insufficient number of surveys from Indigenous respondents were received to provide separate results for any of the variables in the survey. This represents an important area of future research as we discuss towards the end of the paper.

Profile of Survey Respondents

Of the 1865 respondents, there were more females (1037, or 56 %) than males (828, or 44 %). This compares to a ratio of 64 % males (36 % females) in the overall population aged 45 years and above. Over half of respondents were aged between 60 and 69 years of age, with 60–64 years representing the highest proportion (36 %), followed by 65–69 years (28 %). More than half (56 %) of respondents were married or in a marriage-like relationship, with roughly equal numbers being single (13 %), widowed (15 %) or divorced (16 %). Nearly a third of respondents were born overseas (30 %) with 44 % of these born in the United Kingdom and 12 % in New Zealand. Among those born in Australia (70 % of all respondents), only a small proportion (6 %) were born in the NT with most NT born in south-eastern states.

Indigenous people were under-represented in the survey with only 2.3 % of all respondents identifying as Indigenous, compared to 17 % of the Territory population aged 45 years and over (the population in scope for the survey) in the 2011 Census. Most respondents lived in Greater Darwin (77 %), whilst a small number (3 %) were from regional and remote areas with the remaining respondents (20 %) from other towns in the NT. Nearly all respondents (97 %) said they usually spoke English at home.

Intentions to Stay or Leave

Almost all respondents (98 %) regarded the NT as their permanent place of residence. Three quarters (75 %) had lived in the NT for more than 20 years and only a small proportion (around 13 %) said they had lived in the Territory for less than 10 years. When asked about their anticipated living intentions in 5 years' time (2018), over 70 % anticipated remaining in their current community. More than 20 % anticipated leaving the Territory (to either interstate or overseas) while 5 % said they anticipated moving to an alternative location within the NT. Intention to leave was higher for younger respondents while older seniors were less likely to anticipate leaving, most likely reflecting that older Seniors who might leave had already done so (Table 1).

Intention to leave was negatively correlated (R^2 = 0.8813) with length of residence in the NT. For example, almost a third (31 %) of respondents who had lived in the Territory for 10–14 years anticipated living outside of the Territory in 5 years compared to 22 % for longer term (20 years or more) residents. 'Cost of living' was reported as the most significant reason for an anticipated move out of the NT (31 %), with 'To be closer to family or friends' also important at 25 % (Fig. 5).

Table 1 Intentions around staying or leaving within the next 5 years

		Where do you think you will be living in 5 years time (2018)?				
		In my current community	Interstate	In an alternative NT location	Relocate overseas	Total
How safe do you feel in your community? (n = 1773)	Very safe	73.7	17.3	7.1	1.9	100.0
	Relatively safe	74.5	19.1	4.9	1.5	100.0
	Not very safe	66.5	24.6	6.0	3.0	100.0
	Threatened	62.5	32.5	2.5	2.5	100.0
	Unsure	68.8	12.5	18.8	0.0	100.0
	Average	**73.0**	**20.1**	**5.1**	**1.7**	**100.0**

Intergenerational Connections

Around 82 % of respondents said that they had children, with more than half of these having been born interstate. Of respondents with children, 69 % indicated they had children living within the NT, whilst 74 % said they also had children living interstate or overseas (i.e. as well as children in the NT). Eighty-one percent of seniors had grandchildren, with 63 % indicating they had grandchildren living in the NT and 80 % indicating that they also had grandchildren living interstate or overseas.

Housing Situations

Nearly three-quarters of respondents (73 %) owned their homes, with over half (54 %) owning the home outright. Among those who did not own their homes, 8 % were reliant on public housing. An additional 4 % shared with family in privately owned or rented accommodation whilst 9 % were renting privately. A small proportion of

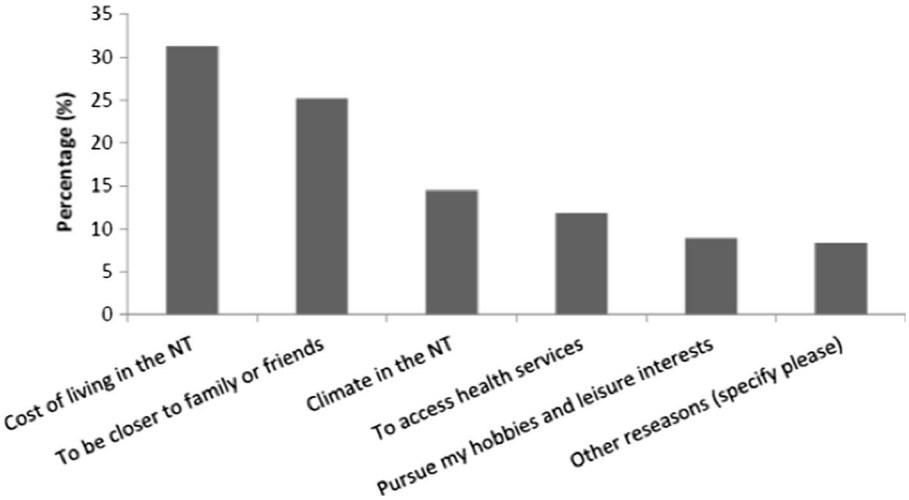

Fig. 5 Main reasons for anticipating a move away from the Northern Territory

respondents lived in other types of housing facilities including aged care (0.4 %), retirement villages (2 %), boarding in a private facility (1 %) and living in a caravan park or similar (2 %).

When asked whether they would have enough funds to sustain their existing living arrangements over the next 5 years (to 2018) a third of respondents were 'unsure' and 10 % did not think that they would be able to afford current housing. Of the latter, a quarter were home owners with a mortgage, a quarter renting privately, a fifth owned their home outright and 16 % were renting housing commission dwellings. Just under two thirds of these (59 %) of these were aged in their 60s.

The proportion of respondents anticipating living in their own home with a mortgage is expected to decrease from 19 % in 2013 to 9 % in 2018. Tenancies in public housing are anticipated to increase (from 8 % to 9 %), as is the proportion of respondents living in retirement villages (from 2 % to 5 %), aged care accommodation (0.4 % to 1.4 %) and caravan parks or similar (1.9 % to 2.2 %). Reliance on the private rental market is anticipated to decease (from 9 % to 5 %) as is sharing with family in privately owned/ rented accommodation (4.1 % to 3.8 %).

Transport and Mobility

Four out of five (80 %) respondents indicated they used a motor vehicle as the driver for their main form of transport. This form was more common for younger respondents, peaking at 84 % for those less than 60 years and lower at 67 % for those aged 75 years and over. Only 6 % used public transport as their main form, which is much lower than findings for a Seniors Transport study conducted in Adelaide (Somenahalli 2015) where between 25 % and 30 % (varying by age group) reported using public transport as their main mode, while far fewer than in our results were drivers of motor vehicles (42 %). This highlights the importance of driving for seniors in rural and remote areas where distances may be vast and transport networks minimal. Darwin, for example, does not have the rail or tram network that exists in Adelaide and the community is far more reliant on driving and the relatively meagre bus network.

Of those who used public transport in our survey, about 18 % were satisfied with its availability and quality. However, one-third (34 %) were not and had concerns about the infrequency of services, costs, distances between stops, and passengers' bad behaviours.

Employment & Volunteering

Well over a third (43 %) of respondents were employed on a full time (28 %) or part time basis (15 %). An additional 6 % who were not working at the time of the survey said they were seeking paid employment. Amongst those employed the main sectors were government (40 %), not for profit organisations or charity organisations (10 %) and Aboriginal/Torres Strait Islander organisations (3 %). Just under a third worked in the private sector (29 %) and a small portion were self-employed (14 %). In terms of hours of work, around a third expressed a desire to work fewer hours than they were. For example, two in five worked more than 40 h a week but a third of these would prefer to work less hours.

Around 40 % of respondents said that they had volunteered their time for community work. This compares to 17 % for the overall population of the Northern Territory and 17 % as well for seniors in Australia, based on 2011 Census data (ABS 2012). Most (60 %) volunteered for up to five hours per week, however, over a quarter volunteered between 5 and 10 h per week and 14 % volunteered for more than 10 h per week. However, these relatively high rates of volunteering in our survey may be a factor of sampling since those who participated in the survey are more likely engaged with senior's issues and in the community.

Health and Safety

More than half of respondents (52 %) stated that they had health or wellbeing issues. Around 45 % had been diagnosed with a disease or chronic condition (e.g. cardiovascular disease, rheumatic heart disease, type 2 diabetes, chronic airways disease, chronic kidney disease, chronic mental illness, arthritis, and dementia). Of these, 87 % believed health services and/or providers were managing their condition effectively. A majority of respondents (86 %) said they felt safe in their community, with 26 % of these feeling 'very safe', and 60 % 'relatively safe'. Nevertheless, more than 11 % of respondents said they felt unsafe in their community, with 9 % feeling 'not very safe' and 2 % stating that they felt 'threatened'. The main reasons for feeling unsafe included crime, home break-ins, anti-social behaviour and violence.

Information and Technology Use

Nearly two-thirds of respondents said they preferred to receive their everyday news and information online via the Internet and email (59 %) while other popular mediums included television (58 %) and print media (56 %). Rates of internet and email use were higher for women (62 %) than men (52 %) and were far higher for younger participants, at 80 % for those under 60 years compared to 44 % for those aged 75 years or more (Fig. 6).

In line with this, 80 % said they owned a computer or an internet enabled device and 74 % accessed the internet regularly for emails or information. When indicating levels of competence in using computers two thirds (68 %) of respondents claimed 'good to very good' competence, whilst a third (32 %) claimed 'low to very low' competence.

A greater proportion of respondents had mobile phones (87 %) than landline phones (79 %), with a third rating their level of competence in using mobile Internet devices as

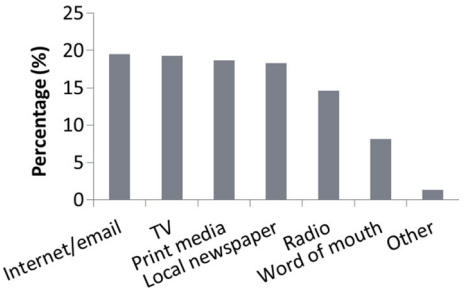

Fig. 6 Preferred to receive daily information by the Internet or email by age group

'good to very good' (34 %), whilst two thirds rated their competence as 'reasonable to low'. Meanwhile, 40 % of respondents indicated that they were interested in receiving training in computer or mobile device technologies.

Service Improvements Nominated by Seniors

Finally, survey participants were asked for recommendations on improvements to services for seniors. Nearly two thirds nominated 'NT concessions for seniors' followed by 'Improvements in aged care for those people living at home' (47 %). Improvements in seniors' health and dental services were other concerns (43 % and 39 % respectively) whilst 39 % wanted to see improvements in safety and security. Quality of housing was a high priority with improvements to aged care homes (34 %) and affordable housing for seniors (31 %) ranking high in the list.

Discussion and Conclusions

Pre-existing research has identified the 'regionality of population ageing in Australia such that the "…force (or speed) with which the major effect of structural ageing will be felt will differ markedly among regions" (Jackson and Felmingham, p.113, 2002). The research reported here extends this theme by focusing on population ageing for the pre-existing young population of the Northern Territory of Australia. Like many other northern parts of developed nations, population ageing has not been a significant demographic issue for the NT, while it has already affected other areas of the Australia. Presently, however, a set of demographic pre-cursors flag the onset of population ageing and proportionally rapid growth in the seniors group in communities across the Territory. While numbers and proportions of seniors in the community will not approach those for the rest of Australia in coming decades (currently 15% in Australia are aged 65 years or more, compared to 7% in the Northern Territory), there will be a noticeable increase in the numbers of seniors residing in communities across the NT. With the NT's proportion forecast to rise to 13 % by 2041, policy makers must consider how to meet the service and infrastructure needs of a rapidly growing cohort in the population.

One of the interesting areas for consideration in discussion of growing numbers of seniors in the north is that of retention and out-migration. On this, data analysis and survey results documented here present an interesting paradox. On the one hand, a familiar long-term northern deficit in the seniors cohort has been evident in the population data to date. Pre-existing out migration flows are evident in Census data for the ages leading up to 60 years and those immediately beyond (Martel et al. 2013). On the other hand, one-fifth of our respondents said they might leave Territory within five years. These 'departers' from the north will help to reduce the pressures on aged care, health and other services, potentially mitigating the overall economic cost; often cited in government discourse as a reason for concern about financial capacity to meet these growing needs.

While it may be argued that continued high rates of out-migration may mitigate the economic and other impacts from growing seniors' numbers, even with a continuation of present age-specific out-migration rates, the increased numbers of seniors reported

here will still come about because population projections include in their assumptions a continuation high rates of out migration. In relation to those intending to leave, the survey highlighted cost of living as a major reason and, without appropriate government support, those without finances to leave may become economically marginalised and 'stuck'.

This study has re-emphasised that seniors contribute many things to their communities, including in the north. Volunteering is an example, along with wealth transfers (continuing to spend money in the north), caring for and providing financial assistance to family and friends, supporting the arts and cultural sectors and a desire to travel. Seniors also exert a law-abiding influence, which is welcome in a region where rates of crime and incarcerations are far higher compared to the rest of Australia (Payer et al. 2015). Seniors may generate new consumer markets and encourage tourists to the north (who are visiting relatives or friends) (Australian Association of Social Workers 2013).

Our results show a good proportion are still working and have more technical shrewdness than (perhaps) the general community realise. Most intend to stay in the north in the long term, contributing social and financial capital to communities. In that respect, the north has been 'missing out' on the many benefits that seniors in larger numbers provide to communities and families.

Vocalising the positives and understanding and fostering the assets seniors provide is an important task for governments and communities because seniors in Australia and elsewhere have long been subject to negative stereotyping and marginalisation (Tinker 2002; Healy 2004). Much of this has been around the economic 'drag' seniors are perceived to place on the economy. As well as the positives mentioned above, what is also lost in the negative rhetoric is that, through lifestyle choices and medical improvements, onset of chronic illnesses is being compressed to later in life, such that more post-retirees are enjoying longer periods in a state of 'healthy old-age' (Bloom et al. 2010). In fact, average growth healthy years (without a chronic illness) in Australia has outstripped life expectancy improvements in recent decades to provide society with a net gain in terms of a healthy and contributing older population (AIHW 2014).

The challenge, therefore, for policy makers in the north is to understand and act on the issues which may negatively affect the wellbeing of individuals ageing in place. Exploring the aspirations, concerns and perspectives of seniors and impending seniors through the surveys has also provided key areas for policy attention. Costs of living, and especially housing affordability, was prominent. As well as being an issue for many seniors at the time of the research, some foresaw financial hardship into the future from costs of living and expressed it as a motivation to leave the north in the near future. Emphasising this, around 10 % felt they would not have enough funds to sustain their existing living arrangements over the next few years, while a third were unsure.

Given this, it is likely that, with continued financial pressures accompanying increasing numbers of seniors, the demand for public housing and affordable aged care facilities may increase. This was indicated in the surveys with proportionally more anticipating moving from private housing (owned and rented) to public housing, aged care facilities and caravan parks. Accordingly, research is needed to assess how well the current and anticipated future stock of these types of housing (especially aged care) across the north of Australia will meet demand. One approach may be to match current and future stock against population projections under a range of scenarios. Although difficult, governments must ensure there is no major shortfall, particularly given that

seniors are a vulnerable group financially and socially. Easing pressure through a system of pensioner concessions, particularly for those with low net savings and assets, may also provide an important safety net for what is a vulnerable group in the community. Transport, household power and health subsidies are prime areas for new or expanded concessions. Nevertheless, the proportion of NT seniors driving is reportedly higher than the national average, as might be expected for a sparsely populated area, such that transport concessions can be targeted towards those unable to do so.

A second theme worth of policy attention is the expressed concerns around crime and safety in the community. Although most felt safe, a small proportion felt threatened or unsafe from break-ins and crime. Recently the Northern Territory government repealed the granting of bail for secondary break-in offenders. The extent of impact from this initiative will be interesting to follow, although it may simply exacerbate currently nation-high rates of incarceration in the NT and deliver engrained offending. Governments would benefit from working with seniors advocacy groups, like the Council of the Ageing, to develop policies and initiatives to reduce the numbers who do not feel safe in their communities, as such matters may reduce the resilience of individuals and communities, resulting in diminished health outcomes.

While the study contributed much, unfortunately it was not designed to be representative of population sub-groups, and accordingly there was no target for numbers of surveys from Indigenous seniors. Growth in Indigenous seniors is clearly an important nuance in the context of population ageing in northern contexts. Addressing this gap in research is imperative and emphasised by settlement distributions with around 80 % living in remote areas. It demands policy attention to address the dual issues of the geographic dispersion of the population into small, remote and isolated communities as well as ensuring culturally appropriate services and service delivery are in place. Culturally appropriate services are only likely to emerge from government and others working with Indigenous people and communities in their design and ethos. For example, aged care facilities in larger towns should anticipate that family members visiting seniors in aged care would be larger in numbers when compared to those visiting a non-Indigenous aged care resident. While cultural competency in the delivery of health services in particular will be important for Indigenous seniors, embedding and maintaining such competence will be a difficult (and costly) task, and there is mixed evidence on the best approaches (Bainbridge et al. 2015).

It is fortuitous, in light of the complexity and difficult nature of themes raised in this study, that the Northern Territory Government and local councils across Northern Australia have the opportunity to learn from approaches and policies which have been applied in Australian jurisdictions where natural decline (where deaths outnumber births) has already occurred. In addition, international policy approaches which have bought positive outcomes can be incorporated to an overall and cross-sectoral approach to ageing in the north. One such approach is the World Health Organisation's (WHO) age-friendly cities guide (WHO 2007) which provides a framework for 'active ageing' – optimising opportunities for health, participation and security in order to enhance the quality of life as people age. Its aim is to stimulate a 'bottom-up participatory approach' for assessing the needs and opportunities for advocacy, community development, and policy improvements in a variety of locales (Kendig et al. 2014).

Canada has led the way in adopting the age-friendly cities approach and in 2015 the WHO identified 258 age-friendly cities and communities (AFC) across 28 countries

(Plouffe et al. 2013). In Australia there are currently 10, but none of these are in the north (WHO 2014). Key to the successes seen in some Australian and overseas communities seems to be strong government leadership combined with advocacy that includes, and extends beyond, the local government level (Kendig et al. 2014; Plouffe et al. 2013). Tied to the AFC approach is recognition that older residents are an integral part of the decision, policy and planning process, ensuring that they are involved in identifying areas of need, prioritising key issues and the appropriate implementation policies and programs targeted at seniors (Menec et al. 2011). In small northern communities, where policy makers and program managers are highly transient, a planned and structured approach to ensure genuine and lasting input from seniors is all the more important.

The context around ageing in the north is therefore similar to other facets of population change there, and at the same time different to elsewhere in Australia. Small population size means the antecedent of relatively small absolute growth in one cohort in the population manifests as relatively large structural change; a consideration of considerable import for policy makers (Carson et al. 2011). The anticipated 5 % annual growth in the numbers of Indigenous seniors is indicative of this. Thus, although in absolute numbers, northern living seniors will be dwarfed by those 'down south', their increasing numbers in communities demand policy attention and action according to the areas highlighted by this study. This paper has contributed to identifying possible strategies and policy initiatives to maximise the wellbeing and the potential contribution of older people in the Northern Territory and northern Australia more broadly as numbers continue to increase. It has also provided a voice to seniors in the form of research-based information which can inform decisions on matters concerning ageing well in place in the north.

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