Median age at death, Sydney and Adelaide, 2013 to 2017

Findings

Background

The median age at death is an indicator of premature mortality. It is the age at which exactly half the deaths registered in a given time period were deaths of people above that age and half were deaths below that age.

Overall

There are striking differences in the locations of the population in Sydney when viewed by their median age at death, with people in;

- a number of northern, eastern and southern areas generally living the longest (having the oldest median ages at death); and
- those in suburbss in three main areas (inner Sydney, outer north-east and a group of areas from Hawkesbuty in the north to Douglas Park - Appin/The Oaks - Oakdale in the south) having the shortest lives.

Geographical variations

The overall gap at the PHA level is 26 years, varying from

- 67 years in Homebush Bay - Silverwater and Sydney - Haymarket - The Rocks, to
- 88 years in Ryde - Hunters Hill - South, Gordon - Killara/ Pymble, Cromer/ Narrabeen - Collaroy and Castle Hill - East/ Cherrybrook/ Glenhaven (Map 9).

Each of these areas with a higher median age, other than Gordon - Killara/ Pymble, had a rate of residential aged care places in the top fifteen in Sydney over this period.

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Suggested citation

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Background

The median age at death is an indicator of premature mortality. It is the age at which exactly half the deaths registered in a given time period were deaths of people above that age and half were deaths below that age. See Box, *Caveats re median age at death by small geogaphic area*, overleaf, for important notes on this measure when used for small geographical areas.

Overview for Australia

In Australia, over the five years 2013 to 2017, the median age at death was 78 years for males and 84 years for females. There is little variation between the capital cities and the areas outsde of the capital cities (referred to as Rest of States/ NT), other than in the Northern Territory, with a ten-year gap between Darwin (a median age at death of 69 years) and the Rest of NT (59 years) (Table 1). Among the states, only Western Australia, with a gap of four years, and South Australia, with a gap of two years, has a gap of more than a single year.

Table 1: Median age at death, by sex and Section of state/ territory, 2013 to 2017

Section of state	Males		Females		Persons	
	Number of deaths	Median age (years)	Number of deaths	Median age (years)	Number of deaths	Median age (years)
Australia	400,178	78.0	379,545	84.0	779,723	81.0
Greater Capital Cities	232,142	79.0	229,500	85.0	461,642	82.0
Rest of States/ NT	166,250	78.0	149,117	84.0	315,367	81.0
New South Wales	134,197	79.0	128,591	85.0	262,788	82.0
Greater Sydney	70,946	79.0	70,259	85.0	141,205	82.0
Rest of New South Wales	62,780	78.0	58,087	84.0	120,867	81.0
Victoria	96,940	79.0	96,163	85.0	193,103	82.0
Greater Melbourne	64,532	80.0	65,225	85.0	129,757	82.0
Rest of Victoria	32,113	79.0	30,800	85.0	62,913	82.0
Queensland	77,902	77.0	69,730	83.0	147,632	80.0
Greater Brisbane	32,908	77.0	31,910	84.0	64,818	81.0
Rest of Queensland	44,580	77.0	37,587	83.0	82,167	80.0
South Australia	33,690	79.0	33,412	85.0	67,102	82.0
Greater Adelaide	24,361	80.0	25,299	85.0	49,660	83.0
Rest of South Australia	9,250	78.0	8,069	84.0	17,319	81.0
Western Australia	37,659	77.0	33,323	84.0	70,982	80.0
Greater Perth	28,316	78.0	26,293	84.0	54,609	81.0
Rest of Western Australia	9,048	74.0	6,904	81.0	15,952	77.0
Tasmania	11,647	77.0	11,281	83.0	22,928	80.0
Greater Hobart	4,596	78.0	4,794	84.0	9,390	81.0
Rest of Tasmania	7,017	77.0	6,458	83.0	13,475	80.0
Northern Territory	3,267	63.0	2,319	65.0	5,586	63.5
Greater Darwin	1,666	68.0	1,029	70.0	2,695	69.0
Rest of Northern Territory	1,462	58.0	1,212	60.0	2,674	59.0
ACT/ Greater Canberra	4,817	77.0	4,691	84.0	9,508	81.0

There is, however, considerable variation in the median age at death for males and females, with the ages for males between five and seven years below those for females in all but the Northern Territory. In both Darwin and the Rest of NT, the gap between the male and female median ages at death (of just two years lower for males) was relatively small, being around one third of that in the states, indicating the relatively poorer outcomes for females in the Northern Territory.

The following maps (also available for males and females and for a range of geographical areas here) illustrate differences in the median age at death by Population Health Area (PHA[1]). The maps show the broad view in Sydney and Adelaide as examples of variations found within the capital cities; separate reports provide the same information for Australia and for Western Australia, outside of Perth and for the Northern Territory, outside of Darwin. The maps can be viewed for other areas (e.g., for each capital city, regional area and state and territory) at the link above.

An additional report provides a sumary of the findings from the analysis by Indigenous status: the Indigenous status atlases can be viewed here, the data here and the summary report here.

Caveats re median age at death by small geogaphic area

People move address over time; for example, they move within a city, between cities, or from rural areas to regional and coastal towns. Aboriginal and Torres Strait Islander people also move in these ways, as well as in many instances moving from a remote community to live near larger centres providing health services that they need. As a result, calculating the median age at death for those who died in an area does not necessarily reflect the true circumstances had people born in an area stayed there over their whole life. For example, the location in an area of above-average concentrations of residential aged care places can impact on the comparisons. Similarly, mining towns with predominantly young populations will have relatively few deaths, but those that occur will be at a lower median age than in the population at large. The population pyramid generator allows you to view the age pofiles of different geographical areas; an example for a mining town, Mount Newman, compared with regional Western Australia as a whole, can be seen here.

What this measure does show is that there is a strikingly clear gradient in age at death from urban to regional and remote areas, a gradient also evident in deaths before 75 years of age (premature mortality).

Further information as to the calculation of median age can be found here.

Overview for Sydney

There are striking differences in the locations of the population in Sydney when viewed by their median age at death, with people in;
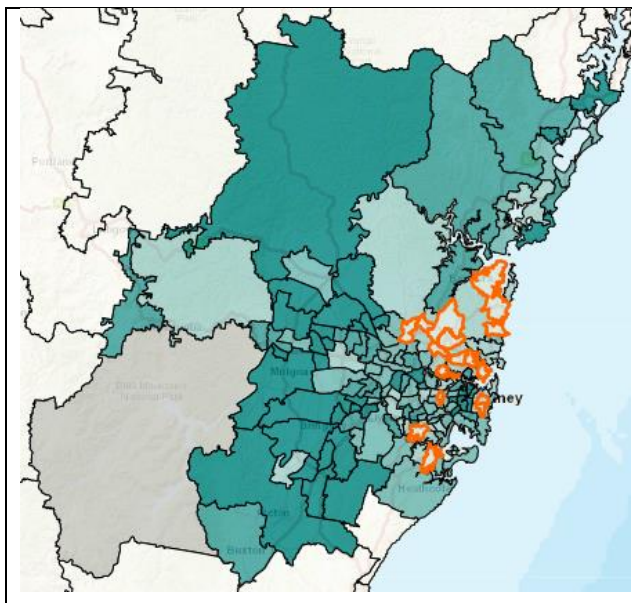
- a number of northern, eastern and southern PHAs generally living the longest (having the oldest median ages at death: Map 1, orange highlights); and in
- PHAs in three main areas (inner Sydney, outer north-east and a group of PHAs from Hawkesbuty in the north to Douglas Park - Appin/The Oaks - Oakdale in the south: Map 2) having the shortest lives.

The overall gap at the PHA level is 26 years, varying from 67 years in Homebush Bay - Silverwater and Sydney - Haymarket - The Rocks (Map 8), to 88 years in Ryde - Hunters Hill - South, Gordon - Killara/ Pymble, Cromer/ Narrabeen - Collaroy and Castle Hill - East/ Cherrybrook/ Glenhaven (Map 9).

Each of the PHAs with a higher median age, other than Gordon - Killara/ Pymble, had a rate of residential aged care places in the top fifteen in Sydney over this period.

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[1] PHAs are based on the 2016 Australian Statistical Geography Standard (ASGS) produced by the Australian Bureau of Statistics. Further details as to PHAs are available here.
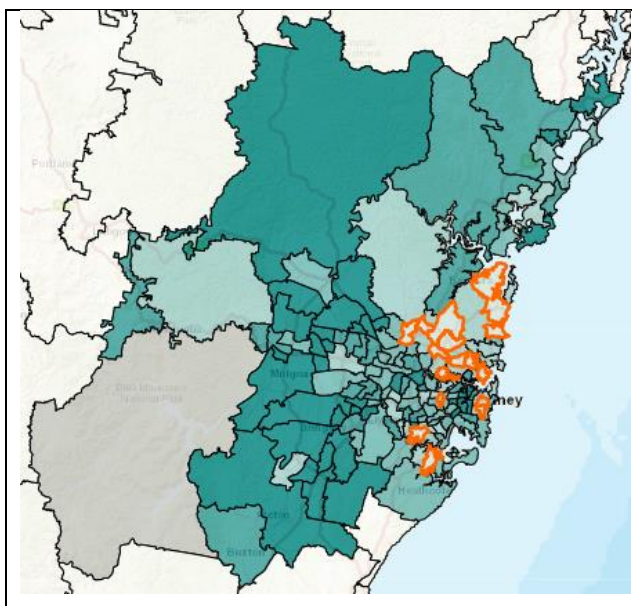
Map 1: 86 to 88 years of age at death   Map 2: 67 to 77 years of age at death
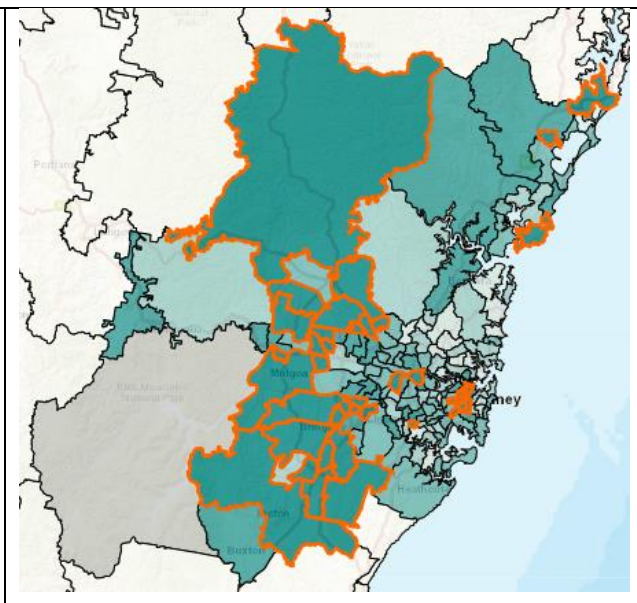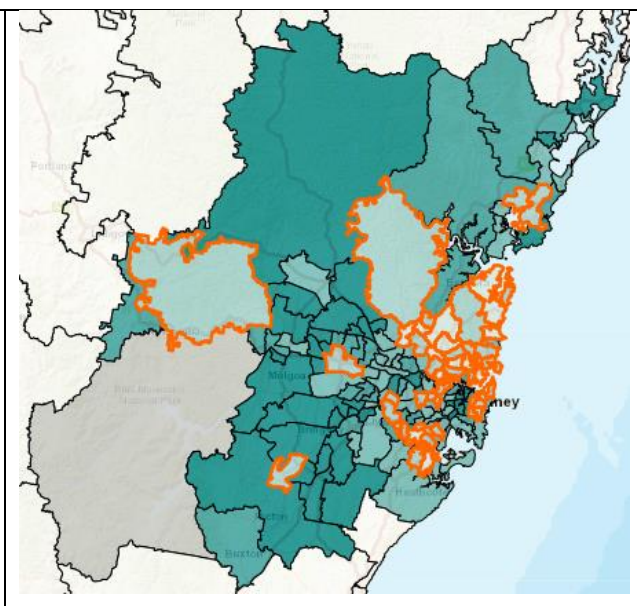

Progression in median age at death: Sydney

Map 3 repeats Map 1 (for deaths at ages 86 to 88 years) and, in Map 4, deaths at 83.5 to 85 years have been added, showing further clustering on the north shore and in the east and south, with some additional PHAs further out.

Map 3: 86 to 88 years of age at death   Map 4: Deaths at 83.5 to 85 years of age added

Adding PHAs with a median age of death from 81 to 83 years brings in a number of inner and middle suburbs, including several along the coast to the north and south of the city centre (Map 5). Including PHAs with populations with a median age at death as low as 77.5 years further infills the middle, and some inner, suburbs (Map 6).

Map 5: Deaths at 81 to 83 years of age added   Map 6: Deaths at 77.5 to 80 years of age added
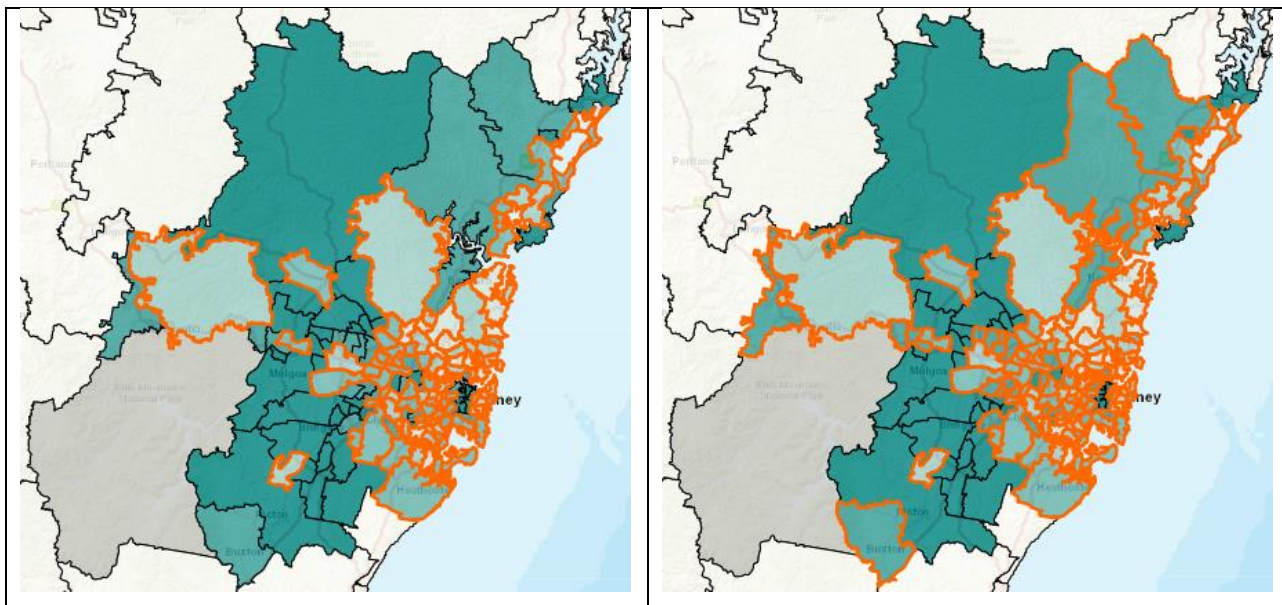
As noted above, people in PHAs in three main areas (inner Sydney, outer north-east and a group of PHAs lying contiguously from Hawkesbuty in the north to Douglas Park - Appin/The Oaks - Oakdale in the south) had the shortest lives over this five-year period, as shown by the darkest shading (Map 7).

Map 7: Deaths at 67 to 70 years of age added
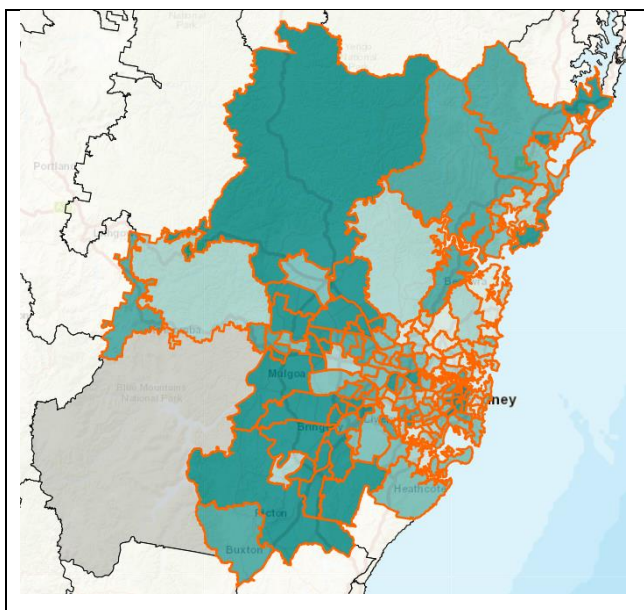

Overview for Adelaide

There is also a striking difference in the locations of the population in Adelaide when viewed by their median age at death, in particular in the City of Adelaide, between North Adelaide at 86 years and Adelaide, at 68 years (Map 8). North Adelaide had one of the highest rates of residetial aged care places over this period, and Adelaide PHA had a high rate of supported accommodation and of the capital city's homeless people.

People with the highest median ages at death were found in PHAs in a group from Hope Valley - Modbury, Payneham - Felixstowe and Glenside - Beuamont/Toorak Gardens in the east of the city centre; through Unley - Parkside, Goodwood - Millswood and Colonel Light Gardens/ Mitcham to the south; and then through Plympton to Brighton/ Glenelg and Fulham/ West Beach (Map 8).

PHAs whose populations had the lowest median ages at death included Adelaide and the socioeconomically disadvantaged areas of Davoren Park and Elizabeth/ Smithfield - Elizabeth North in the outer north, and Christie Downs/ Hackham West - Hunfield Heights and Morphett Vale - East and Morphett Vale - West in the outer south (Map 9). Other PHAs with relatively poor outcomes on this measure were generally located in the outer north and the north-east.

Map 8: 86 to 88 years of age at death

Map 9: 66 to 78 years of age at death
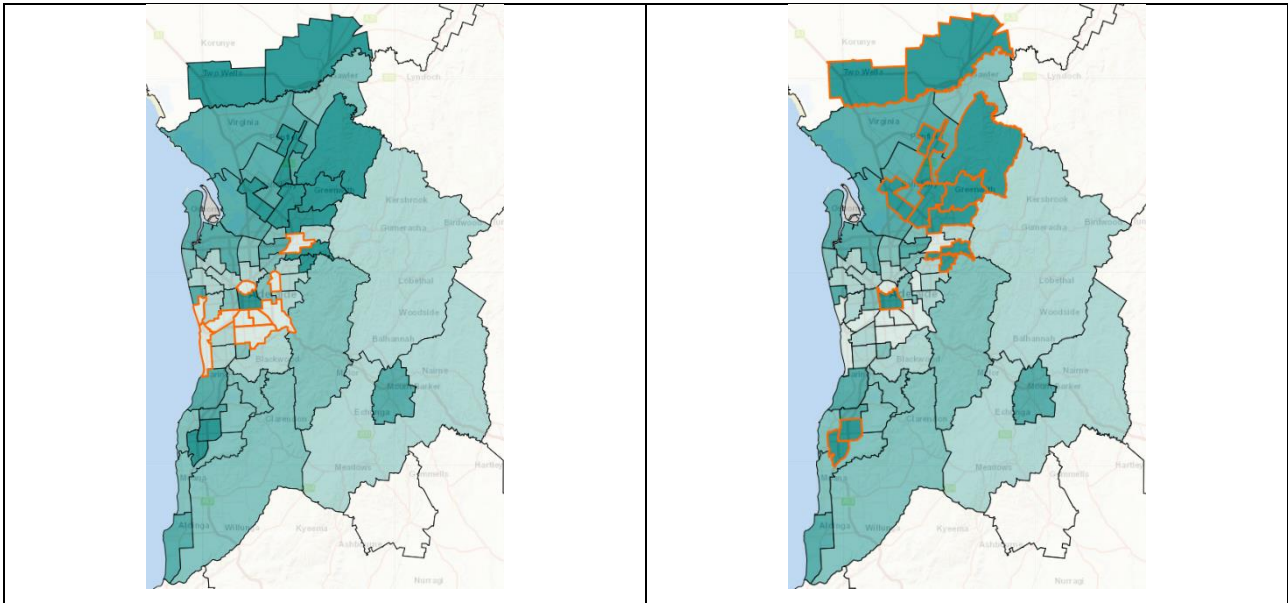
Progression in median age at death: Adelaide

Map 10 repeats Map 8 (for deaths at ages 86 to 88 years) and, in Map 11, deaths at 84 to 85 years have been added, showing further clustering of PHAs around the city centre, to the east, south and west, with additional PHAs further out in the Adelaide Hills, in Adelaide Hills/ Lobethal - Woodside and Hahndorf - Echunga/ Mount Barker Region/ Nairne.

Map 10: 86 to 88 years of age at death

Map 11: Deaths at 84 to 85 years of age added
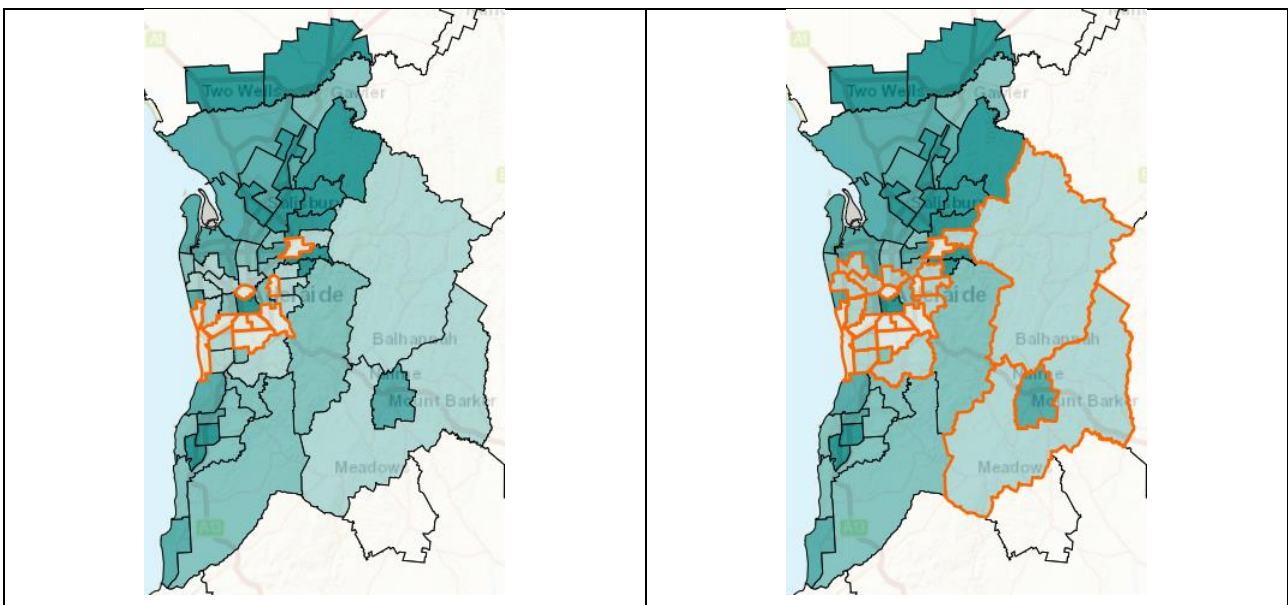
Adding PHAs where the median age at death was between 82 and 83 years shows further infill around the city centre, in particular to the immediate north and north-east; further out, several PHAs in the outer south are also in this range (Map 12).

The main change evident with the inclusion of PHAs with a median age at death of between 79 and 81 years is greater coverage in the norh-west and outer north; Mount Barker to the south-east is also in this range (Map 13).

Map 12: Deaths at 82 to 83 years of age added   Map 13: Deaths at 79 to 81 years of age added
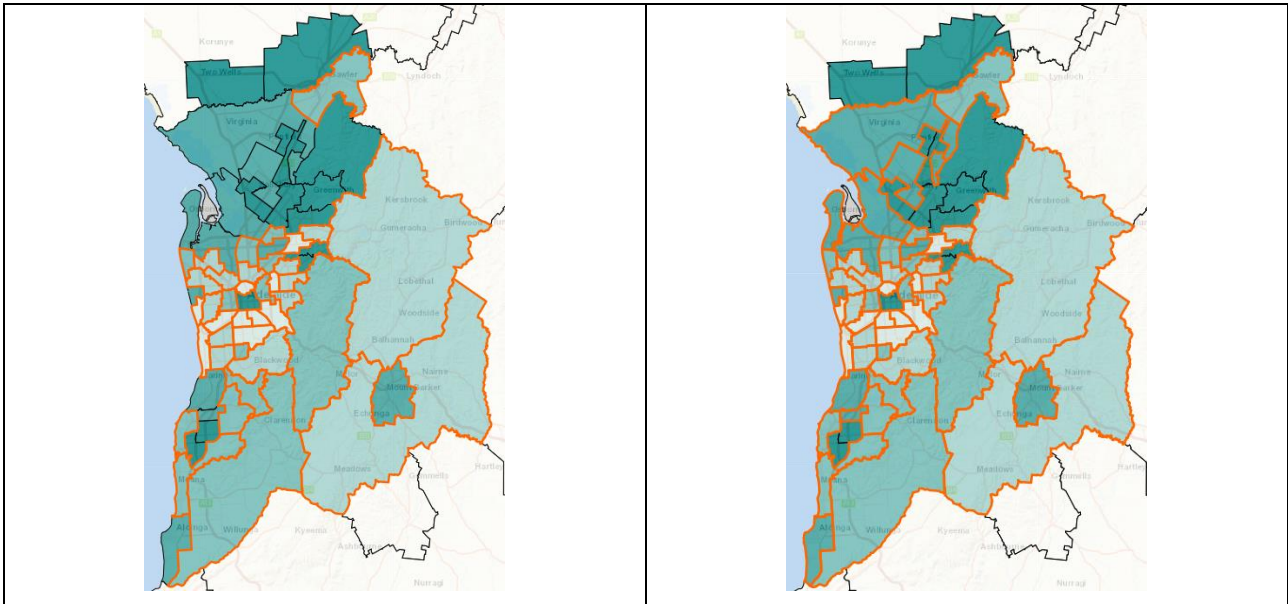
As noted for Map 9, above, PHAs other than Adelaide whose populations had the lowest median ages at death were generally in the outer north and outer south. They included the socioeconomically disadvantaged areas of Davoren Park and Elizabeth/ Smithfield - Elizabeth North in the outer north, and Christie Downs/ Hackham West - Hunfield Heights and Morphett Vale - East and Morphett Vale - West in the outer south (Map 14). Other PHAs with relatively poor outcomes on this measure were generally located in the outer north and the north east.

Map 14: Deaths at 66 to 78 years of age added