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Charles Darwin University

## When can Indigenous Territorians retire?

### Impacts from increasing the age pension qualifying age

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# Research Brief

Issue 1, 2015

## **When can Indigenous Territorians retire? Impacts from increasing the age pension qualifying age.**

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## RESEARCH AIM

*Increasing the age pension qualifying age is one mechanism by which governments of developed nations are attempting to manage increasing costs associated with population ageing. In Australia however, there are a number of groups within the population who will be affected differently by a recent decision to increase the qualifying age to 70 by the year 2035.*

*In this research brief we use scenario modeling and analysis to explore the effects of changes to the age pension qualifying age, and in light of changing life expectancies for Indigenous Australians in the Northern Territory, determine the effects on years in 'retirement' and compare these effects to the non-Indigenous population.*

## KEY FINDINGS

- In 2011, Indigenous Australians had around ten years lower life expectancy (LE) compared with non-Indigenous Australians, however the gap in LE in the Northern Territory (NT) was more than 14 years. Because of this, recent (2014 Australian Government Budget) moves to increase the qualifying age to 70 by 2035 will impact differently on Indigenous people who, on average, do not 'enjoy' the same length of retirement before death as non-Indigenous people.
- LE gaps between Indigenous and non-Indigenous Australians are projected to reduce in coming decades by around 3.5 years (to around 11 years) by 2035.
- A National Commission of Audit (NCOA) report has recommended that eligibility for the age pension be determined as a percentage of LE, with a graduated increase in the eligibility for age pension to 70 years by 2053. Applying this methodology to the NT Indigenous population at 2011 revealed that, on average, Indigenous females spent 5 percent of their lives in retirement and Indigenous males 0 percent (LE was below age pension qualifying age). However, under current assumptions for LE changes, this would increase to 8 percent for Indigenous females and 3 percent for Indigenous males by 2033, and to 12 percent and 8 percent (respectively) by 2053.
- Applying the NCOA method to the proposed Australian Government increase to 70 years for eligibility for the age pension by 2035 would see, on average, Indigenous females spending 6 percent of their lives in retirement, and Indigenous males just 1 percent.
- These results suggest that the timing of the policy implementation for increasing the qualifying age will, on average, continue to place Indigenous Territorians at a disadvantage by limiting the number of potential years in retirement before LEs are projected to improve enough to reach parity with non-Indigenous Australians.

## **I. Introduction**

Increasing the age pension qualifying age is one mechanism by which governments in developed nations are attempting to manage increasing costs associated with population ageing (Productivity Commission, 2013). A comparison of pension qualifying ages for the 34 OECD countries shows that the average pensionable age is forecast to increase for males from 63.3 years in 2010 to 64.8 years by 2030 and 65.6 years by 2050, and for females from 61.9 years in 2010 to 64.1 years by 2030 and 65.0 years by 2050 (OECD, 2012 p. 198). In Australia, the current age pension qualifying age is 65 years. Due to the increasing average at-birth life expectancy of the Australian population the 2014 Australian Government Budget (further referred to as Federal Budget) outlined a graduated increase of the pension eligibility age from 65 years to 70 years by 2035 (Australian Government, 2014).

There are, however, a number of groups within the Australian population who will be affected differently by the decision to increase the age pension qualifying age, as average life expectancy (LE) is determined from the total Australian population. These include those living in regional and remote areas (ABS, 2011; NRHA, 2010), workers in harsh occupations (Pestieau & Racionero, 2013) and Indigenous Australians, who in 2010-2012 had a LE of 69.1 years for males and 73.7 years for females, compared to 79.7 years for non-Indigenous males and 83.1 years for non-Indigenous females (ABS, 2013; ABS, 2013a).

### **I.1 A focus on the Northern Territory**

The Indigenous population in the Northern Territory (NT) accounts for around 30% of its total population (ABS, 2013a), and have significantly different at-birth LEs to the non-Indigenous population. In the NT the LE for Indigenous males in 2010-2012 was 63.4 years and for Indigenous females was 68.7 years, compared with a LE for non-Indigenous males of 77.8 years and for non-Indigenous females of 83.1 years (Table 1). This gap of over 14 years was the largest for any state or territory except for the male LE in WA where the gap was estimated at 15 years.

**Table 1: Summary of at-birth life expectancies for 2010-2012 by sex and Indigenous status.**

State/Territory	Sex	Indigenous (years)	Non-Indigenous (years)	Total population (years)	Difference between Indigenous and non-Indigenous LE (years)
NSW	Male	70.5	79.8	79.5	9.3
	Female	74.6	83.1	82.9	8.5
QLD	Male	68.7	79.4	78.9	10.7
	Female	74.4	83.0	82.6	8.6
WA	Male	65.0	80.1	79.5	15.1
	Female	70.2	83.7	83.2	13.5
NT	Male	63.4	77.8	74.3	14.4
	Female	68.7	83.1	78.9	14.4
Australia	Male	67.4	79.8	79.4	12.4
	Female	72.3	83.2	82.9	10.9

Source: ABS Cat no. 3302.0.55.003

## **I.2 Recommendations from the National Commission of Audit report**

Changes to life expectancies are one factor which means changes to the age pension qualifying age affect sub-groups in the population in different ways. In 2014, a National Commission of Audit report (NCOA, 2014) proposed a graduated increase of the age pension age to reach 70 years by the year 2053. Under this proposal it recommended linking the eligibility age for the age pension to 77% of life expectancy at the age of 65 years. It considered that a period of measure of LE at 65 years of age to be a better basis for indexation of the age pension as it precludes rises in the age pension qualifying age from the 'dividend' to LEs which may occur due to improvements in infant mortality rates. Whilst it is clear that Indigenous childhood (0-5 years) mortality rates are higher than total-Australian rates, according to Wilson (2014) rate differences have narrowed considerably between the periods of 1966-1971 and 2006-2011, down from 7.8 to 3.0 times the total-Australia rate for females, and from 5.6 to 2.6 times for males.

To date there has been no research which has explored and articulated the combined and interactive effects of changing life expectancies with changes to the age pension qualifying age for Indigenous Australians. In this research brief we used scenario analyses (see the Methods section for how this was done) to explore the likely future effects, for the whole population, of possible changes to individuals' pension access eligibility ages. We investigate the effects of these changes to the age pension qualifying age for the Indigenous population in the Northern

Territory (NT) across a range of LE assumptions to determine when Indigenous persons in the NT might experience the same average number of years of eligibility for the age pension as the non-Indigenous population. We also model the effects of linking the pension age to the recommendations outlined in the NCOA report.

## 2. Methods

In this research brief we utilise scenario modelling based on a range of published secondary data, predominantly sourced from the ABS publications on Life Tables (ABS, 2013; ABS, 2013a). To the life tables data we apply life expectancy (LE) assumptions from the ABS Population Projections (ABS, 2013b) to determine possible future LEs for Indigenous and non-Indigenous persons. LE estimates can be measured from any age, however in this study, and unless otherwise stated, LEs refer to longevity from birth. Whilst the researchers acknowledge that retirement can occur at any age, and depends on specific circumstances for individuals (early access to superannuation, self-funded retirement, for example), in this research brief it has been used to signify age eligibility for age pension income support benefits.

### 2.1 Extrapolation of ABS LE assumptions

Due to a change in methodology that has been incorporated into the most recent ABS Life Tables, two sets of LE results at the total Australia level were produced by the ABS for 2010-2012 (ABS, 2013a). The 'headline' estimates were calculated using an 'improved methodology', which takes into account age-specific identification rates for Indigenous status. These adjust LEs to account for the under-identification of Aboriginal and Torres Strait Islanders in death registrations, as identified in the Census Data Enhancement Aboriginal and Torres Strait Islander Mortality Study (ABS, 2013a). This method could not be applied at the state or territory levels because of data issues associated with the methods used to calculate age-specific identification rates.

ABS recommends that the 'headline' estimates (Table 2) should not be compared with data for any state or territory, or remoteness area. Consequently, when providing comparisons of the total Australian population to state or territory results we utilise the 'non-headline' Australian totals (Table 3). These LE tables by state and territory were not produced using this 'improved methodology' (so were calculated without age-specific adjustments, due to the concerns with data issues). This has limited impact on this study as it is predominantly focused on Indigenous and non-Indigenous comparisons at the state and territory level, comparing the non-adjusted figures for both these cohorts.

**Table 2: ‘Headline’ estimate of at-birth life expectancies of the Australian population by Indigenous status, 2010-2012**

Australia	Sex	Indigenous (years)	Non-Indigenous (years)	Total (years)	Difference between Indigenous and non-Indigenous (years)
	Male	69.1	79.7	79.4	10.6
	Female	73.7	83.1	82.9	9.4

Source: ABS 3302.0.55.003, results utilise ‘improved methodology’ which takes into account age specific identification rates.

**Table 3: ‘Non-headline’ estimate of at-birth life expectancies of the Australian population by Indigenous status, 2010-2012**

Australia	Sex	Indigenous (years)	Non-Indigenous (years)	Total (years)	Difference between Indigenous and non-Indigenous (years)
	Male	67.4	79.8	79.4	12.4
	Female	72.3	83.2	82.9	10.9

Source: ABS 3302.0.55.003, non-headline LEs calculated without age-specific adjustments

In producing its official population projections, the ABS makes a series of assumptions for LEs. For the total Australian population two assumptions were made. Assumption one follows a ‘high’ life expectancy at-birth trajectory (LE increases at a constant rate of 0.25 years per annum for males and 0.19 years per annum for females); the second assumption follows a ‘mid’ life expectancy at-birth trajectory (LE increases at a rate of 0.25 years per annum for males and 0.19 years per annum for females until 2015-2016; 0.2 years per annum and 0.15 years per annum until 2020-2021; 0.15 years per annum and 0.11 years per annum until 2025-2026; 0.1 years per annum and 0.08 years per annum until 2030-2031; then 0.07 years per annum and 0.05 years per annum until 2060-2061) (ABS, 2013c). The ABS does not provide LE assumptions specific to the non-Indigenous population, as such for this research we have adopted the LE assumptions made for the total population as representing the non-Indigenous population.

For the Indigenous population, ABS projections provide three assumptions. ‘High’ life expectancy at-birth trajectory (LE increases at a constant rate of 0.5 years per annum for males and at a constant rate of 0.45 years per annum for females); ‘mid’ life expectancy at-birth trajectory (LE increases at a constant rate of 0.3 years per annum for males and at a constant rate of 0.25 years per annum for females) and ‘low’ life expectancy at-birth trajectory (increases at a constant rate of 0.2 years per annum for males and at a constant rate of 0.15 years per annum for females) (ABS, 2014). We examine the 2010-2012 at-birth LE of the Northern Territory’s population and map out what these are projected to be when the age pension qualifying age increases to 70 years in 2035.

## 2.2 Applying the NCOA recommendations

The NCOA report proposed a graduated increase of the age pension age to reach 70 years by 2053. Under this proposal it recommended indexing the eligibility age for the age pension to 77% of life expectancy at the age of 65 years. The authors have defined this as:

$$\text{NCOA index} = (\text{age-pension age} / \text{LE at-65 years}) * 100$$

A simplified assumption from this being that the average person would spend 23% of their life over the age pension qualifying age by the year 2053 (i.e. the average years of 'life remaining'). Table 4 shows the schedule as proposed in the NCOA report.

**Table 4: NCOA age pension age and life expectancies**

Year	Proposed age pension age	Life expectancy at age 65	NCOA index
2014	65.0	86.0	76%
2015	65.0	86.2	75%
2017	65.5	86.5	76%
2019	66.0	86.7	76%
2021	66.5	87.0	76%
2023	67.0	87.3	77%
2033	68.0	88.5	77%
2038	68.5	89.1	77%
2043	69.0	89.6	77%
2048	69.5	90.2	77%
2053	70.0	90.7	77%

Source: NCOA (2014) Table 9.1.1 p. 169.

The NCOA considers that a period of measure of life expectancy, based at 65 years of age, is a better basis for indexation of the age pension as it precludes rises in age pension age that may occur with improved infant mortality rates.

This study however has adopted to utilise LE at-birth. Although this means that average at-birth LEs might be inflated as a result of improvements to the Indigenous infant mortality rates the use of LE at-65 years would also preclude the large number of Indigenous persons who do not live to 65 years of age. As such, and in order to provide comparisons with the ABS LE assumptions and to align with the Federal Budget (Australian Government, 2014, p.9), we have modified the NCOA index by applying the age pension as a percentage of LE to the projected LEs at-birth for Indigenous and non-Indigenous Territorians.

$$\text{Modified NCOA index} = (\text{age-pension age} / \text{LE at-birth}) * 100$$



Using the scheduled increases to the age pension outlined in the 2014 Federal Budget, which proposed a graduated increase to 70 years by 2035, we also explore the capacity for Indigenous Australians to qualify for the age pension given the proposed increases to the eligibility age.

## **3. Results**

### **3.1 Changing life expectancies**

In 2010-12 the at-birth life expectancy (LE) in the NT for Indigenous males was 63.4 years and for Indigenous females was 68.7 years (ABS, 2013a). The qualifying age for the age pension at this time was 65 years (for females the eligibility age was 64.5 years, however as it changed to 65 years from July 2013 we have used this as the eligibility age for both males and females) (DSS, 2013). This shows that in the NT the average LE of Indigenous males was 1.6 years less than the age pension qualifying age and the average LE of Indigenous females was only 3.7 years higher than the qualifying age. In comparison, the LE in the NT of non-Indigenous males was 77.8 years and for non-Indigenous females was 83.1 years, showing that the average LE in the NT for non-Indigenous males was 12.8 years higher than the qualifying age and for non-Indigenous females it was 18.1 years higher.

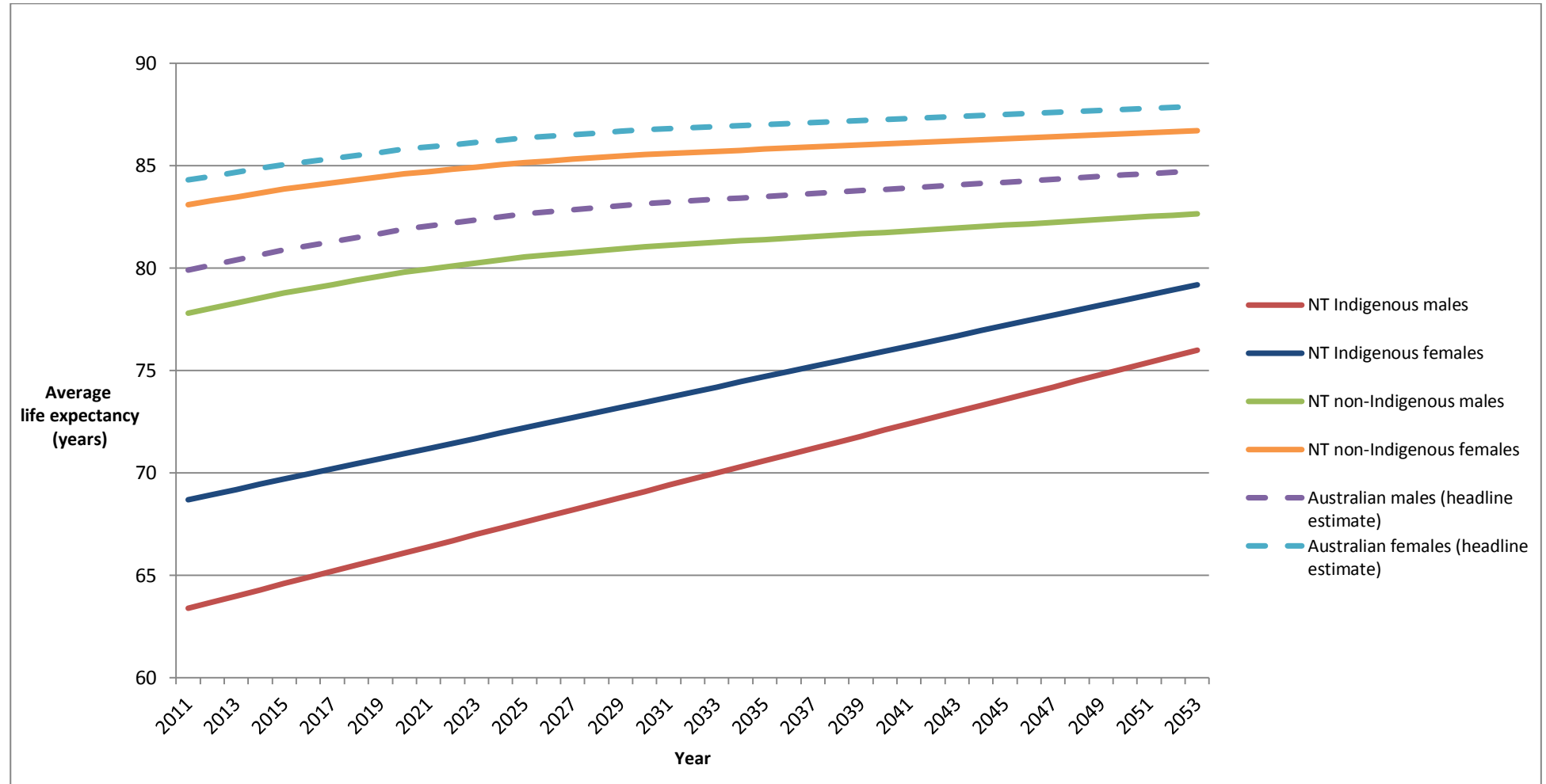
Using the ABS 'mid' LE assumptions, by 2035, when the age pension qualifying age is set to increase to 70 years, the average LE in the NT for Indigenous males is projected to be 70.6 years and 74.7 years for Indigenous females, reducing the LE gap between Indigenous and non-Indigenous persons by roughly 3.5 years (from over 14 years to around 11 years) (Table 5). Whilst the gain in LEs during this period (2011-2035) is anticipated to be significant for both Indigenous males and females, increasing by 7.2 years for Indigenous males and 6 years for Indigenous females, due to the increase in the eligibility age for the age pension the average LE by the year 2035 would be only 0.6 years higher for Indigenous males and 4.7 years higher than the age pension qualifying age for Indigenous females. In comparison, the average LE for non-Indigenous males is projected to be 81.4 years, and 85.8 years for non-Indigenous females such that the average LE for non-Indigenous males will be 11.4 years higher than the age pension qualifying age and 15.8 years higher for non-Indigenous females.

**Table 5: Summary of projected life expectancies by 2035**

State/Territory	Sex	Indigenous (years)	Non-Indigenous (years)	Total population (years)	Difference between Indigenous and non-Indigenous LE (years)
NSW	Male	77.7	83.4	83.1	5.7
	Female	80.6	85.8	85.6	5.2
QLD	Male	75.9	83.0	82.5	7.1
	Female	80.4	85.7	85.3	5.3
WA	Male	72.2	83.7	83.1	11.5
	Female	76.2	86.4	85.9	10.2
NT	Male	70.6	81.4	77.9	10.8
	Female	74.7	85.8	81.6	11.1
Australia	Male	74.6	83.4	83.0	8.8
	Female	78.3	85.9	85.6	7.6

Despite anticipated improvements to Indigenous LEs, significant differences between the Indigenous and non-Indigenous populations in the NT are anticipated in the foreseeable future. Following the ‘mid’ LE scenario, for example, it would not be until the year 2082 for males (84.7 years) and 2091 for females (88.7 years) that the two groups reached LE parity. Consequently, Indigenous people will continue to experience a deficit in the number of years of retirement. A comparison of the projected LE results can be found in Figure 1 showing changes to LEs projected for the Indigenous population. By 2053 significant gains are projected to be made, reducing the gap between Indigenous and non-Indigenous life expectancies. The Australian headline estimates are provided as a comparison, however it is important to note that they are not directly comparable with the NT LEs as they utilise ‘improved methodology’ which takes into account age-specific identification rates.

**Figure 1: Projected changes to at-birth life expectancies by Indigenous status and sex, 2011-2053**



### 3.2 Applying the modified NCOA index to the proposed age pension changes in the 2014 Budget

By applying the age pension as a percentage of LE method proposed by the NCOA to the projected LEs at-birth for Indigenous and non-Indigenous Territorians we can determine, on average, the proportion of living years which might be spent in retirement. Using the schedule outlined in the Federal Budget, a graduated increase to 70 years by 2035, we explore the capacity for the NT population to qualify for the age pension, and dissect the schedule based on the NCOA report recommending a graduated increase to 70 years by 2053 (Table 6).

Both schedules follow similar increases in the eligibility age through to 2023 (due to increases in eligibility age implemented by the Rudd Government in 2009), resulting in Indigenous females, on average, anticipated to spend up to 7 percent of their lives in retirement, whilst Indigenous males are not anticipated to spend any time in retirement (as 100 percent of their LE is under the eligibility age for the age pension). However, the year 2025 is where the two schedules deviate, with Indigenous females anticipated to experience 6 percent of their lives in retirement, and Indigenous males only 1 percent by 2035, under the 2014 Budget schedule.

In comparison, under the NCOA schedule, by 2033 Indigenous females on average are anticipated to spend 8 percent of their lives in retirement, and Indigenous males 3 percent. By 2053 this is anticipated to have increased to 12 percent for Indigenous females, and 8 percent for Indigenous males.

**Table 6: Age pension age as a percentage of LE for the NT Indigenous population, 2011 to 2053**

Year	Proposed age pension age (years)	Life expectancies for males (years)	Modified NCOA index	Life expectancies for females (years)	Modified NCOA index
<b>Proposed Federal Budget schedule</b>					
<b>2011</b>	65	63.4	103%	68.7	95%
<b>2019</b>	66	65.8	100%	70.7	93%
<b>2023</b>	67	67.0	100%	71.7	93%
<b>2027</b>	68	68.2	100%	72.7	94%
<b>2031</b>	69	69.4	99%	73.7	94%
<b>2035</b>	70	70.6	99%	74.7	94%
<b>NCOA schedule</b>					
<b>2014</b>	65	64.3	101%	69.5	94%
<b>2019</b>	66	65.8	100%	70.7	93%
<b>2023</b>	67	67.0	100%	71.7	93%

<b>2033</b>	68	70.0	97%	74.2	92%
<b>2043</b>	69	73.0	95%	76.7	90%
<b>2053</b>	70	76.0	92%	79.2	88%

Using the same schedules for the non-Indigenous population in the NT (Table 7), we see that through to 2023 there are only slight differences in the amount of time that these cohorts are anticipated to spend in retirement, from 22 percent to 21 percent for non-Indigenous females, and from 16 percent to 17 percent for non-Indigenous males. Under the Federal Budget schedule, by 2035 this would decrease to 18 percent for non-Indigenous females and 14 percent for non-Indigenous males. In comparison, under the NCOA schedule the decreases would be slightly less. By 2033, non-Indigenous females are anticipated to spend on average 21 percent of their lives in retirement, and non-Indigenous males 16 percent and by 2053 this is anticipated to decrease to 19 percent for non-Indigenous females and 15 percent for non-Indigenous males.

**Table 7: Age pension age as a percentage of LE for NT non-Indigenous population, 2011-2053**

Year	Proposed age pension age (years)	Life expectancies for males (years)	Modified NCOA index	Life expectancies for females (years)	Modified NCOA index
<b>Proposed Federal Budget schedule</b>					
<b>2011</b>	65	77.8	84%	83.1	78%
<b>2019</b>	66	79.6	83%	84.5	78%
<b>2023</b>	67	80.3	83%	84.9	79%
<b>2027</b>	68	80.8	84%	85.3	80%
<b>2031</b>	69	81.1	85%	85.6	81%
<b>2035</b>	70	81.4	86%	85.8	82%
<b>NCOA schedule</b>					
<b>2014</b>	65	78.6	83%	83.7	78%
<b>2019</b>	66	79.6	83%	84.5	78%
<b>2023</b>	67	80.3	83%	84.9	79%
<b>2033</b>	68	81.3	84%	85.7	79%
<b>2043</b>	69	82.0	84%	86.2	80%
<b>2053</b>	70	82.7	85%	86.7	81%

The scenarios above suggest increasing the age pension qualifying age at a slower rate affords the Indigenous population the opportunity to spend an increased (albeit relatively small) amount of their lives in retirement, whilst still decreasing the amount of time the non-Indigenous population

would spend in retirement (a key Government mechanism to manage increasing costs associated with population ageing).

## 4. Discussion and Conclusion

Using scenario analysis of published secondary data we explored life expectancy (LE) assumptions of the Indigenous and non-Indigenous populations of the NT to determine how proposed increases to the age pension qualifying age might impact on potential years in retirement. Whilst the results show there will be improvements in at-birth LEs of Indigenous persons of around 3.5 years by 2035, there still remain significant differences between the Indigenous and non-Indigenous population.

Much of the scenario analysis in this research relies on the LE assumptions provided in the ABS population projections. These projections show a narrowing between the LEs of the Indigenous population and the total Australian population. Despite these substantial improvements in the coming decades the scheduled increases to the age-pension qualifying age outlined in the 2014 Federal Budget would all but counter these gains with the proposed changes continuing to place Indigenous Territorians at a significant disadvantage by limiting the number of potential years in retirement before LEs are projected to improve enough to reach parity with non-Indigenous Australians.

What is surprising is that so little work seems to have been done to explore how different groups, like Indigenous Australians, might be affected before the policy was tabled. It would be beneficial to repeat the exercise across a range of sub-populations such as migrants, people in remote areas and so on. Work of this nature demonstrates the sorts of disproportionate impacts which can be anticipated (or which were not actually anticipated by policy makers) from the application of a global policy under circumstances where the starting conditions (LE) clearly afford one group in the population an advantage.

Readers should keep in mind that the extrapolation of indicators of years in retirement and of future LEs is based on relatively simplistic assumptions of a blanket shift in population LEs and ignoring the diversity of individual circumstances associated with retirement. Indeed, the assumptions in applying LEs contained in ABS data are that the socio-economic determinants of health will improve so as to shift age-specific mortality rates in the scale and direction required to 'produce' the specified LE outcomes in future years. In reality there are almost unlimited permutations for age-specific life expectancies and, consequently and by necessity, this study is premised on achieving the projected ABS LEs. The NCOA and Federal Budget scenarios also rely on the assumption that the LE gap between the Indigenous and non-Indigenous populations will close significantly over the course of the next 40 years. The ABS acknowledge these difficulties stating; '...changes in life expectancy are often much smaller than the changes of other measures. For instance, life expectancy at-birth for the population of Australia changed by around 0.25 years of life per year, from 1901 to 2001, despite major changes in infant and child mortality and other mortality trends' (ABS, 2013d).

This study meets a gap in research and policy consideration by articulating the sorts of impacts which can be anticipated by the change in government policy, to increase the age pension qualifying age to 70 years by 2035. It highlights ongoing LE disparities which are anticipated between Indigenous and other Australians, and particularly in the NT and Western Australia (Wilson, 2014; Taylor and Barnes, 2013). Further research is needed to understand the economic impacts of this increase for Indigenous persons. In particular a schedule of effects on the incomes of older Indigenous people would add depth to this initial study which has laid out the main issues associated with the proposed change.

## 5. References

- ABS (2011), *Health Outside of Major Cities: Australian Social Trends*, Cat. No. 4102.0, viewed online 18/8/2014, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Main+Features30Mar+2011>.
- ABS (2013), *Life Tables, States, Territories and Australia, 2010-2012*, Cat No. 3302.0.55.001, viewed online 3/7/2014, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/97E435FA3B82A89DCA2570A6000573D3?opendocument>.
- ABS (2013a), *Life Tables for Aboriginal and Torres Strait Islander Australians, 2010-2012*, Cat. No. 3302.0.55.003, viewed online 3/7/2014, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3302.0.55.003Main+Features12010-2012?OpenDocument>.
- ABS (2013b), *Estimates of Aboriginal or Torres Strait Islander Australians, June 2011*. Cat. No. 3238.0.55.001, viewed online 18/8/2014, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3238.0.55.001Main+Features1June%202011?OpenDocument>.
- ABS (2013c), *Population Projections Australia, 2012 (base) to 2101*. Cat. No. 3222.0, viewed online 3/7/2014, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/3222.0>.
- ABS (2013d), *Fact Sheet: Life expectancy estimates for Aboriginal and Torres Strait Islander Australians*, Cat. No. 3302.0.55.003, viewed online 3/7/2014, [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/412AB412E190136FCA257C230011CA6F/\\$File/ABS%20Life%20Expectancy%20Fact%20Sheet.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/412AB412E190136FCA257C230011CA6F/$File/ABS%20Life%20Expectancy%20Fact%20Sheet.pdf)
- ABS (2014), *Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 2001-2026*, Cat. No. 3238.0, viewed online 3/7/2014, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/4EF9B192CB67360CCA256F1B0082C453>.
- Australian Government (2014), *Budget 2014-2015 Social Services*, The Commonwealth of Australia, viewed online 12/05/14, <http://www.budget.gov.au/2014-15/content/glossy/welfare/html/index.htm>.
- Department of Social Services, DSS (2013), *Income support customers: a statistical overview*, Statistical Paper No. 11, The Commonwealth of Australia, viewed online 11/09/2014, <http://www.dss.gov.au/about-the-department/publications-articles/research-publications/statistical-paper-series>.
- National Commission of Audit, NCOA (2014), *Towards Responsible Government, Appendix to the Report of the National Commission of Audit*, Volume 1, The Commonwealth of Australia, viewed online 25/06/2014, <http://www.ncoa.gov.au/>.
- National Rural Health Alliance, NRHA (2010), *Fact Sheet 23; Measuring the metropolitan-rural inequity*, viewed online 18/8/2014, [http://ruralhealth.org.au/sites/default/files/fact-sheets/Fact-Sheet-23-%20measuring%20the%20metropolitan-rural%20inequity\\_0.pdf](http://ruralhealth.org.au/sites/default/files/fact-sheets/Fact-Sheet-23-%20measuring%20the%20metropolitan-rural%20inequity_0.pdf).
- Organisation for Economic Cooperation and Development, OECD (2012), *OECD Pensions Outlook 2012*. OECD Publishing, Paris
- Pestieau, P. and Racionero, M., (2013), *Harsh occupations, life expectancy and social security*. Discussion paper No. 678, Centre for Economic Policy Research, The Australian National University.
- Productivity Commission (2013), *An Ageing Australia: Preparing for the Future*. Commission Research Paper, Canberra.
- Taylor, A. and Barnes, T. (2013). Closing the gap on Indigenous life expectancies: What if we succeed? *Journal of Population Research*. 30(2). DOI:10.1007/s12546-013-9106-0.
- Wilson T (2014) *New Population and Life Expectancy Estimates for the Indigenous Population of Australia's Northern Territory, 1966-2011*. PLoS ONE 9(5).