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Dr Darren Benham is Senior Adviser, Office of Aboriginal and Torres Strait Islander Health, Department of Health and Ageing, Canberra.

A medical demographer by training, Darren has over 15 years experience in applied demographic, epidemiological and survey research, including many years collecting and analysing demographic and health data on Australia's Indigenous population.

Since joining OATSIH, Darren has been heavily involved in a number of large research projects in Indigenous health, including: an assessment the contribution of social and economic factors to Indigenous health outcomes and life expectancy; analysis of the contribution of chronic disease to Indigenous mortality and life expectancy; estimation of the economic costs of Indigenous chronic disease; assessment of the quality of the Medicare Voluntary Indigenous Identifier (VII) data; and analysis of adherence to diabetes treatment among Indigenous patients.

Darren Benham Abstract

Statistical basis for monitoring progress on Closing the Gap

The Council of Australian Governments (COAG) has committed to close the gap in life expectancy at birth between Indigenous and non-Indigenous Australians within a generation and halve the gap in mortality rates for Indigenous children under five within a decade. A selection of headline indicators and priority progress measures have been developed to track progress in closing the life expectancy and child mortality gaps and these will be used as the basis for the Prime Minister's annual report to the Commonwealth Parliament on progress towards closing the gaps. The COAG targets are ambitious and achieving them is complicated by the relative nature of the indicators. The gaps to be closed are moving targets with life expectancy and child mortality for both the Indigenous and non-Indigenous populations changing over time. Furthermore, deficiencies in the available Indigenous mortality data pose significant challenges in accurately monitoring the COAG targets. Fundamental problems include: data sets that do not identify Indigenous status; the under-identification of Indigenous people in those data sets that do identify status; changes to the rate of under-identification over time; and inadequate sampling in surveys (including small sample sizes and poor sampling techniques). These problems are compounded by uncertainties in the underlying population statistics and inconsistencies across the jurisdictions.

Statistical basis for monitoring progress on Closing the Gap

By

Dr Darren Benham

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Presentation

1. The COAG targets
2. The reporting environment
3. Indigenous data issues
4. Indigenous mortality and life expectancy
5. Are the targets achievable?
6. What the evidence shows

Closing the Gap - COAG Targets

Outcomes-focused targets COAG 20 Dec 2007:

- Close the LE gap in a generation
- Halve the child mortality gap in 10 years
- Halve the literacy and numeracy gap

Further targets COAG 26 March 2008:

- Halve the gap in employment outcomes within a decade
- Halve the gap for Indigenous students in Year 12 by 2020
- In five years all Indigenous four year olds in remote Indigenous communities will have access to a quality early childhood education program.

COAG target setting – broad principles

Valid target setting requires:

- Good quality base-line data
- Good quality time-series data
- An evidence base that establishes links between interventions to outcomes
- An ability to exercise influence over the outcomes being targeted

COAG target setting - key definitions

Term	Definition	Draft
<i>Headline indicators</i>	The precise measure of the outcome target	Life expectancy estimates, released five yearly by ABS
<i>Proxy indicators</i>	An annual indicator to be used where the headline indicator is only available in the 5 yearly Census.	Death rate by jurisdiction, age and gender.
<i>Interim targets</i>	Goals or milestones to aim for over time, ie, at regular intervals between now and the target year.	The gap in life expectancy at 5, 10, 15, 20, 25 years
<i>Trajectory</i>	The line or path to be taken to reach the target	To be determined. This could be a straight line from now to 25 years.
<i>Progress indicators</i>	Key indicators of the most significant factors which provide the best measure of progress, ie, based on evidence that they reflect the delivery chain or provide a line of sight between what we do and changes in the headline indicator.	Access to primary health care. Changes in leading causes of mortality such as smoking rates, prevalence of overweight and obesity. Early detection and treatment rates. Chronic disease management.
<i>Priority progress indicators</i>	A small set of progress indicators selected for inclusion in the annual report on progress.	To be determined.
<i>Contributing factors</i>	Factors which are known to influence the outcomes (ie, the targets). The progress indicators are measures of some of these	Education. Employment status, Income.

COAG target setting - Key Results Areas (KRA) and 'Best Buys" (BB)

Key result area – Risk factor modification

- Smoking cessation and prevention programs (BB)
- Intervention for risky and high risk alcohol use (BB)
- Nutrition, weight loss and physical activity programs (BB/KRA)

Key result area – Early detection and early treatment

- Uptake of child and adult health checks (BB/KRA)
- Adult immunisation (BB)
- Aggressive blood pressure lowering to prevent renal disease (BB)
- Regular monitoring of disease (BB)

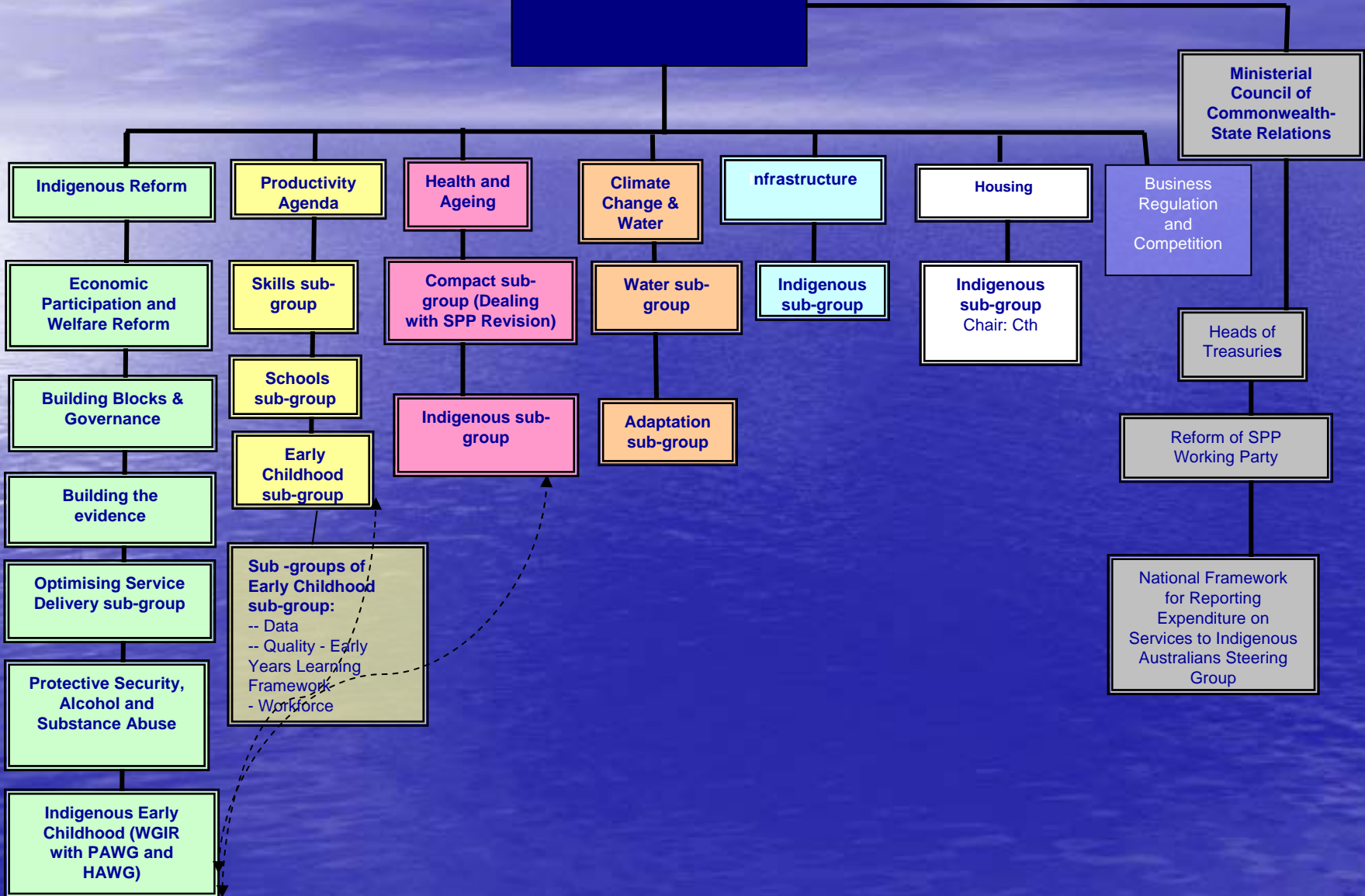
Key result area – Best practice management

- Prevention of complications of diabetes (BB/KRA)
- Aggressive management of heart attacks and CVD (BB)
- Rehabilitation programs (cardiac, respiratory, renal) (BB)
- Brief interventions & advice re risk factors (nutrition, tobacco, physical activity) (BB/KRA)

The reporting environment

- The Australian Government has committed to providing an annual Closing the Gap report to parliament.
- Content of this report is yet to be determined but key life expectancy target is only updated every 5 years.
- The reporting environment is complex.

COAG



Indigenous data issues

Much is known about the state of Indigenous health:

- Analyses of Indigenous mortality and life expectancy (COAG Closing the Gap)
- Aboriginal and Torres Strait Islander Health Performance Framework Report 2006
- Indigenous burden of disease
- Expenditures on Indigenous health
- Economic impacts of Indigenous chronic disease
- Modelling the social determinants of Indigenous health
- Data development by ABS, AIHW, Registrars, hospitals and Medicare to improve the quality of Indigenous reporting

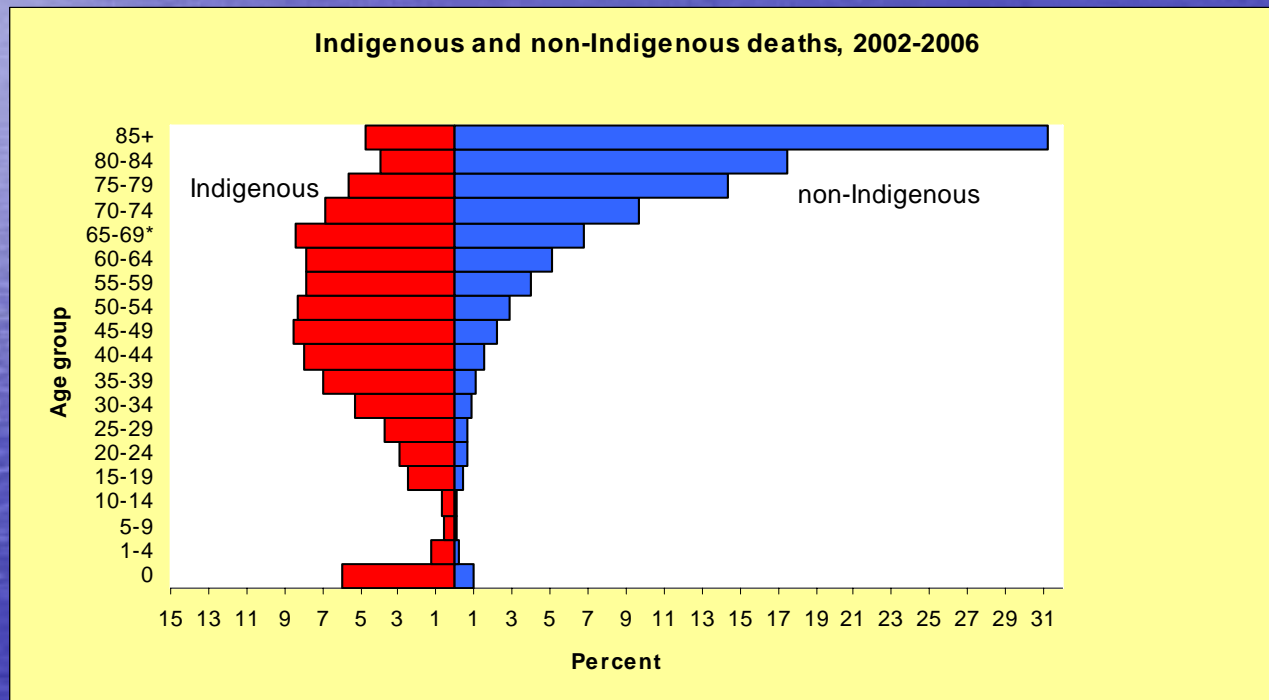
But significant deficiencies exist in Indigenous population and health data due to uncertainties around identification. This affects the quality of Indigenous mortality and life expectancy estimation.

Indigenous mortality – what do we know??

In 2002-2006 (QLD, SA, WA, NT):

- Male deaths – 4,368
- Female deaths – 3,323
- Total registered deaths – 7,691
- Annual registered deaths – 1,540
- ABS estimates that Indigenous deaths could be as high as 1,617 per year

Indigenous mortality – what do we know??



Indigenous mortality –what do we know??

Infant mortality rate 2002-2006:

- 14.3 deaths per 1,000 births (4.6)
-rate ratio of 3.1

Child mortality (1-4 years) rate:

74.1 deaths per 100,000 population (29.2)
-rate ratio of 2.5

Indigenous mortality – what do we know??

Leading causes of mortality

- Circulatory disease (27%)
- Injury and poisoning (15%)
- Diabetes (13%)
- Respiratory diseases (10%)
- Cancer (8%)

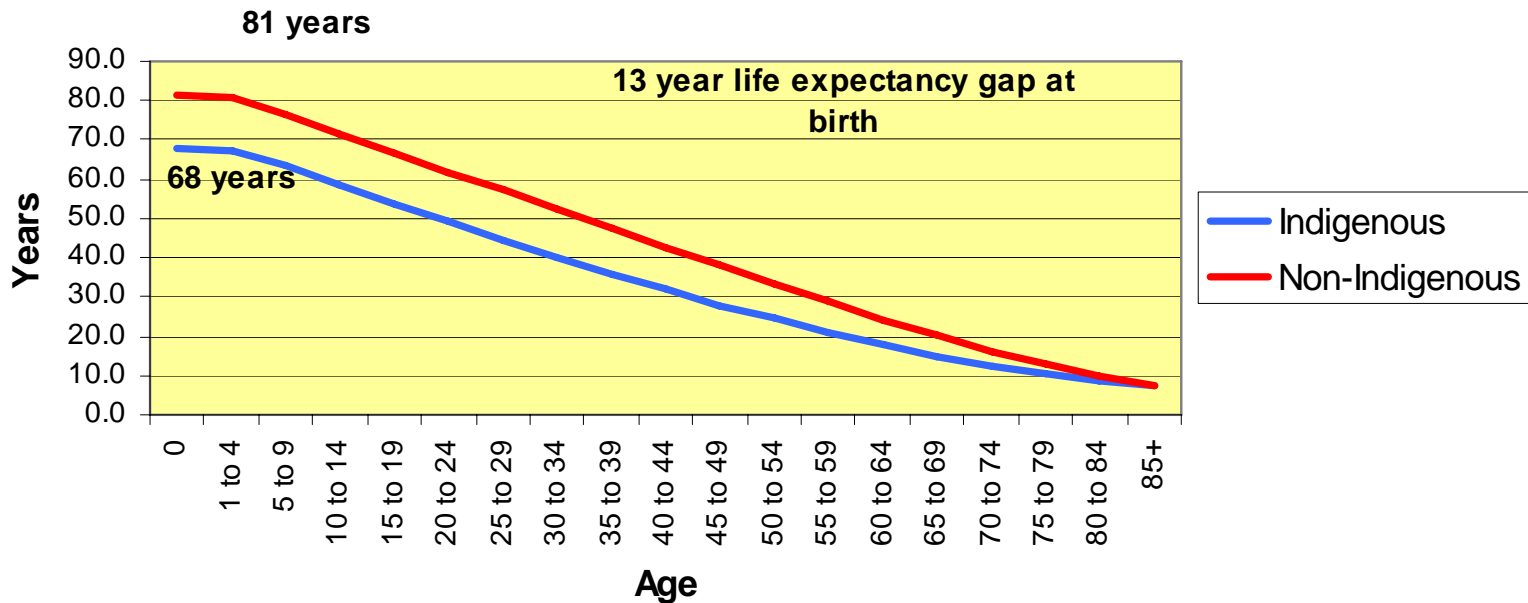
Indigenous mortality – what do we know??

For those 35- 54 years old the gap in death rates is the greatest

- ischaemic heart disease (12 times non-Indigenous death rate)
- diseases of the liver (12 times non-Indigenous death rate)
- diabetes (30 times the non-Indigenous death rate)
- intentional self-harm (1.3 times the non-Indigenous death rate).

Indigenous Life expectancy – what do we do know??

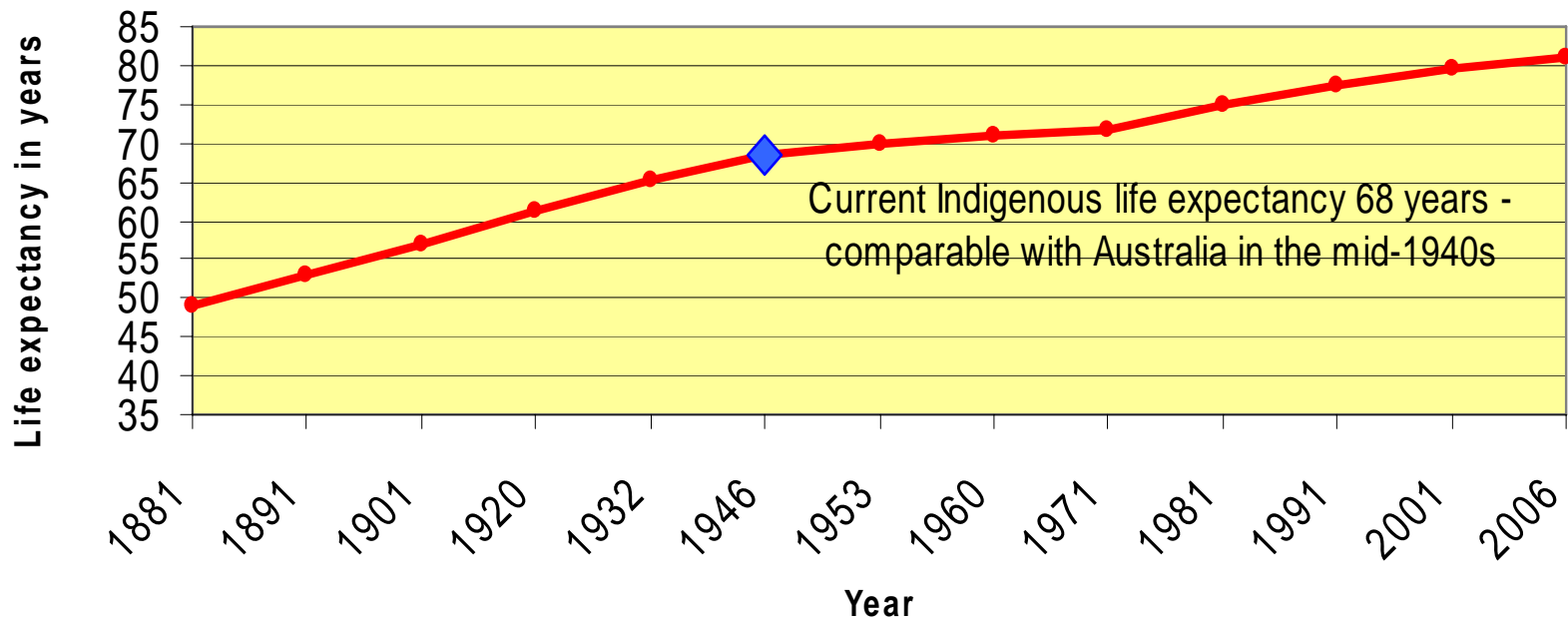
Life expectancy profiles of Indigenous and non-Indigenous Australians
2002-2006



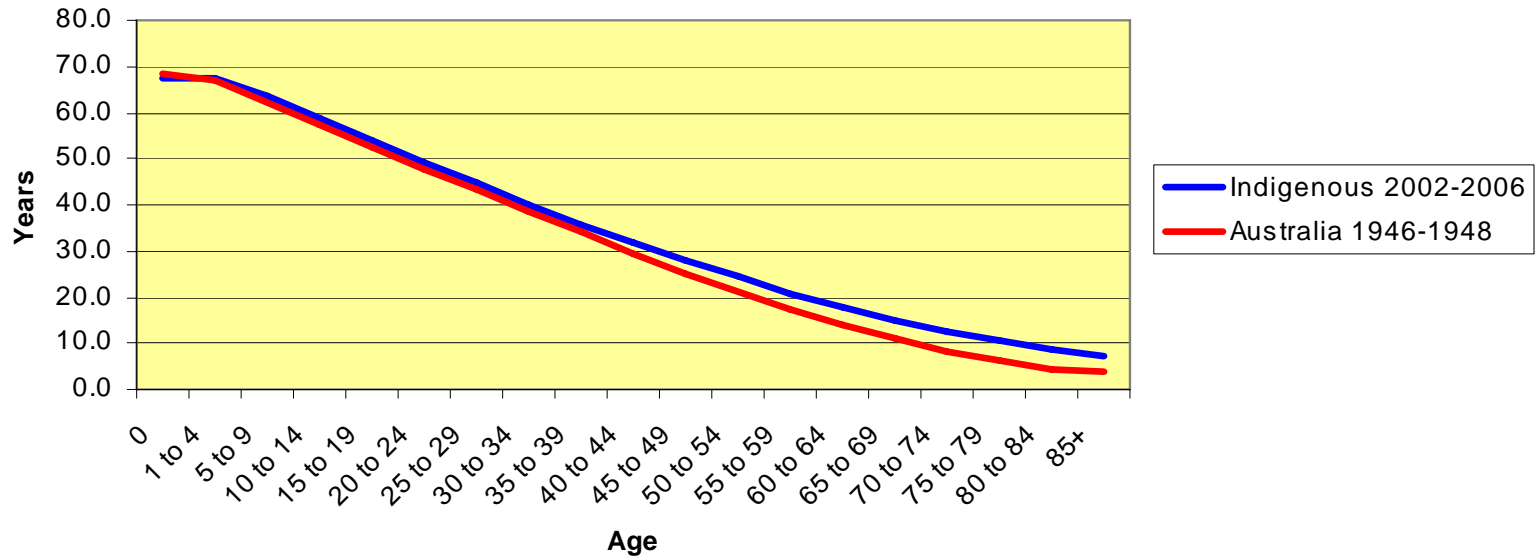
- Life expectancy increases slowly
- Life expectancy at birth in Australia has increased from 68 years in the mid-late 1940s to 81 years in 2006 – a gain of 13 years over the last 60 years

Life expectancy at birth, Australia 1881-2006

Non-Indigenous life expectancy currently 81 years



Life expectancy profiles for Indigenous Australians 2002-2006 and the Australian Population 1946-1948



The size of the challenge

Halving the gap in the child mortality rate within 10 years is achievable

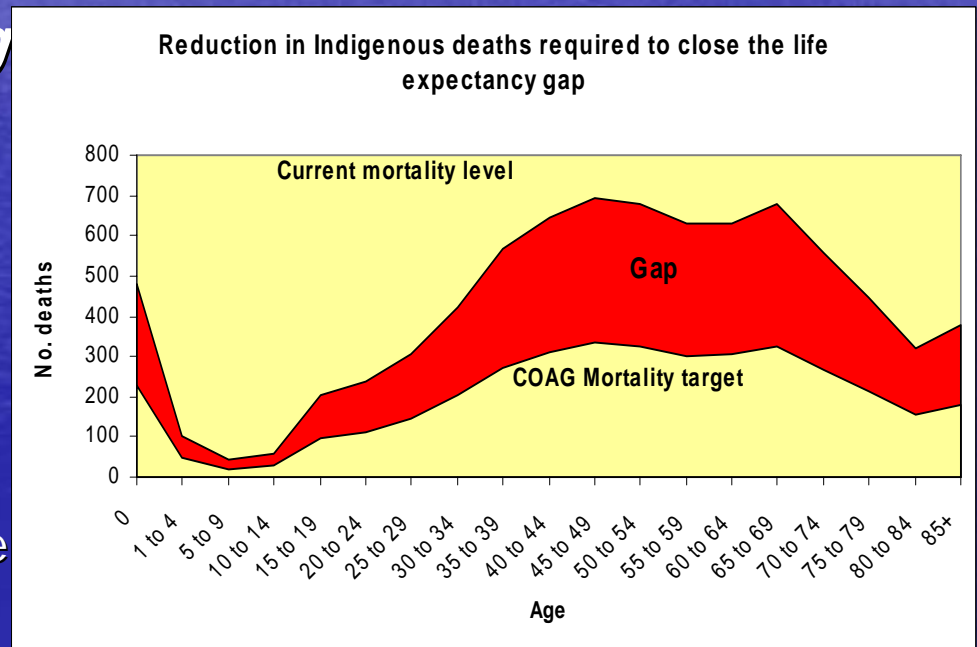
Currently: 2006

- Indigenous under five (age 0-4) mortality rate – 2.3 (1.1) deaths per 1,000 population or 130 deaths a year
- Indigenous child mortality rate needs to fall from 2.3 to 1.7 deaths per 1,000 population (or from 130 to 98 deaths a year) to halve the gap – a saving of 3.2 extra children a year over the next 10 years

The size of the challenge

Closing the gap in Indigenous life expectancy – the big challenge

- closing the life expectancy gap at birth within a generation means that overall Indigenous mortality will need to fall by more than 50%
- bulk of the savings in mortality will need to occur at the middle and older adult ages where (absolute) numbers of deaths are greatest



What the evidence shows

Closing the gap is an enormous challenge. Improvements in treatment and technology have brought significant gains.

- ☺ The contribution to the life expectancy gap of communicable diseases, maternal, perinatal and nutritional conditions halved during the 20 years to 2000.
- ☺ The contribution of infectious diseases, respiratory infections and respiratory diseases also declined considerably.

Reason – improvements in access to quality primary health care.

What the evidence shows

- ⊖ These gains were offset by increases in chronic diseases such as diabetes and cardiovascular diseases for Indigenous women and cardiovascular diseases, cancers and digestive diseases for Indigenous men.

Reason- failure to address the social, economic and cultural determinants of Indigenous health

What the evidence shows

- *The causes of the health gap have changed over time, with a shift from communicable to non-communicable diseases.*
- *The main contributors to the gap in life expectancy are non-communicable chronic diseases and conditions that are largely preventable and share common causes*
- *As most chronic diseases have their origins at younger ages, there are many opportunities for prevention*
- *There are significant opportunities for health gain through tobacco control programs and health promotion initiatives addressing obesity*

What the evidence shows

Improving the effectiveness, accessibility, responsiveness, and appropriateness of comprehensive primary health care services, and secondary and tertiary services improves health.

Strengthening prevention and health promotion:

- reduce risk factors and their determinants
- enhance protective factors
- promote health across the life course
- build partnerships for intersectoral action, and
- supportive public policies

Improving systems of care for those with chronic disease:

- improving access to quality primary health care services
- strengthening the role of prevention in the health care system
- improving early detection and intervention
- integrated primary health care systems
- care partnerships and consumer participation.

Further information:

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