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Indigenous demography and related information - issues and trends

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Topics that will be covered

Changes over time in Indigenous population

- Census counts
 - The drivers of change
- Estimated resident populations
- ABS Experimental population projections
 - Low and high projections
- Using Indigenous demographic data for denominators
- Under-enumeration at a small area level
 - Alternative sources of data (the Cape Justice Study)
 - Indigenous Identifiers on statistical collections and alternative analytical approaches



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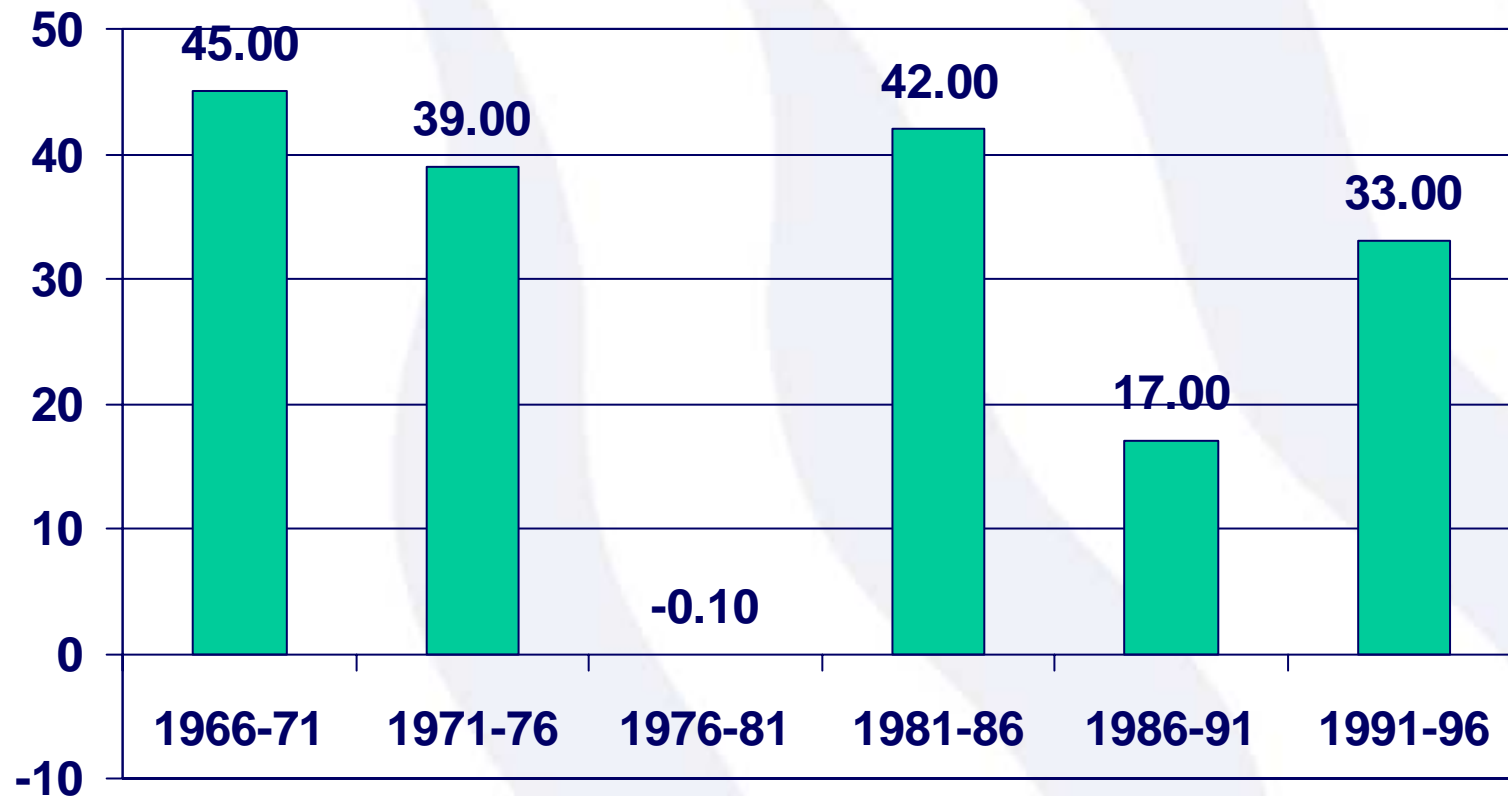
Who is an Indigenous Person? - Current Definition

- Of Aboriginal or Torres Strait Islander descent
- Who identifies as an Aboriginal or Torres Strait Islander
- Is accepted as such by the community in which he/she lives
- Which element(s) does the 1996 and 2001 Census question cover?

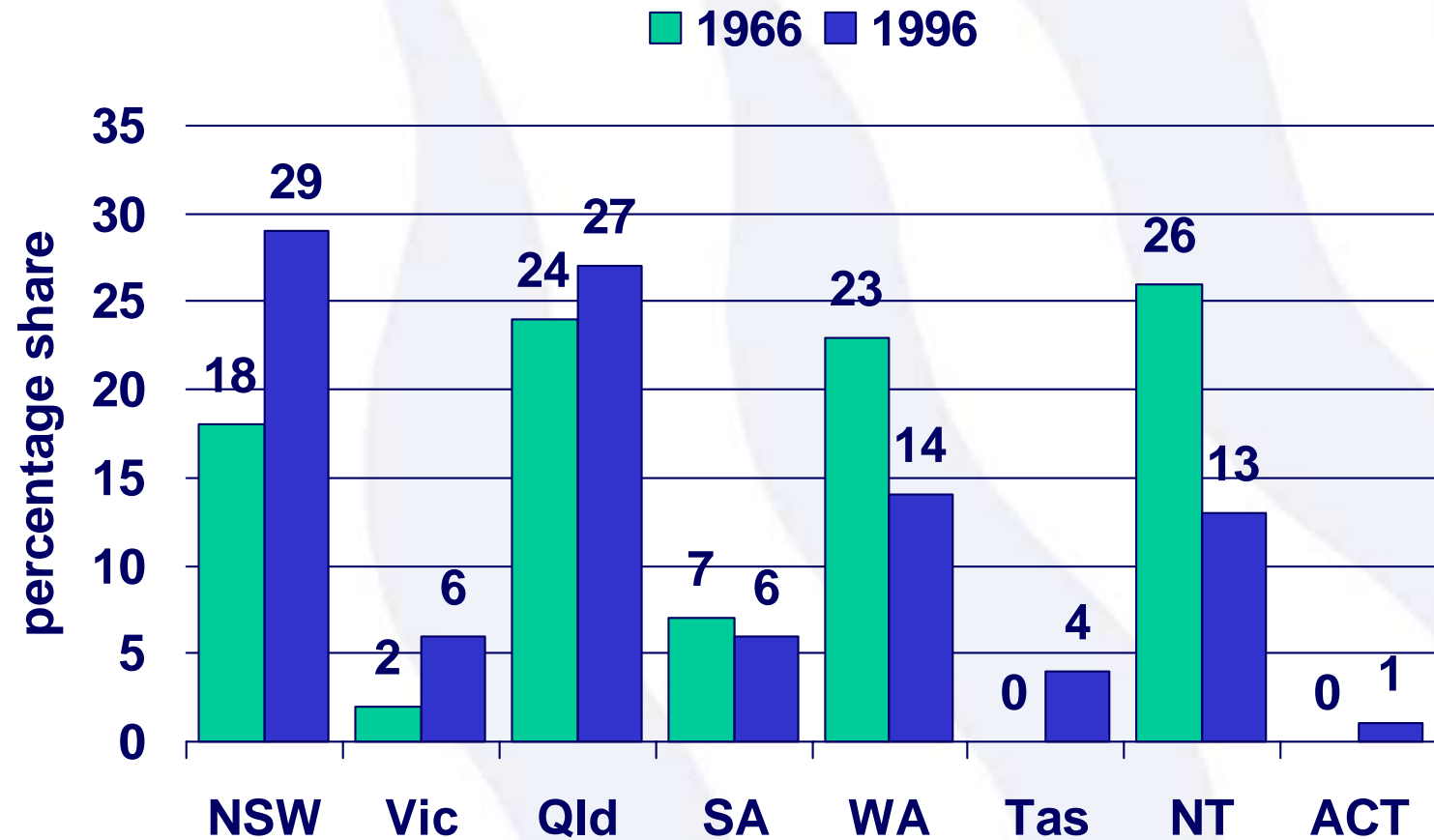
ABS Experimental Indigenous ERP June 1996

State/Territory	Number ('000)	Proportion (%)	Proportion of total State pop (%)
NSW	109.9	28.5	1.8
VIC	22.6	5.9	0.5
Qld	104.8	27.2	3.1
SA	22.1	5.7	1.5
WA	56.2	14.6	3.2
Tas	15.3	4.0	3.2
NT	51.9	13.4	28.5
ACT	3.1	0.8	1.0
Australia	386.0	100.0	2.1

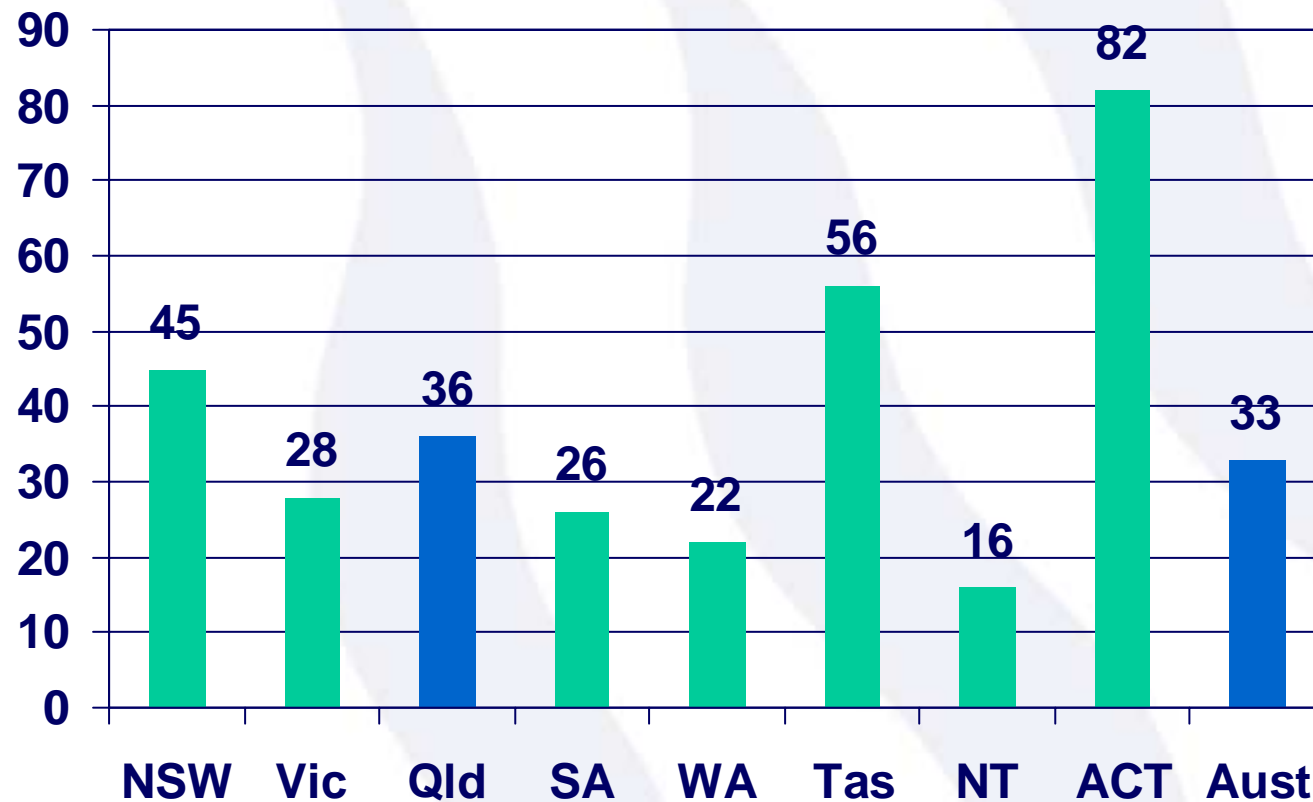
Intercensal Change in Census Counts, Australia (%)



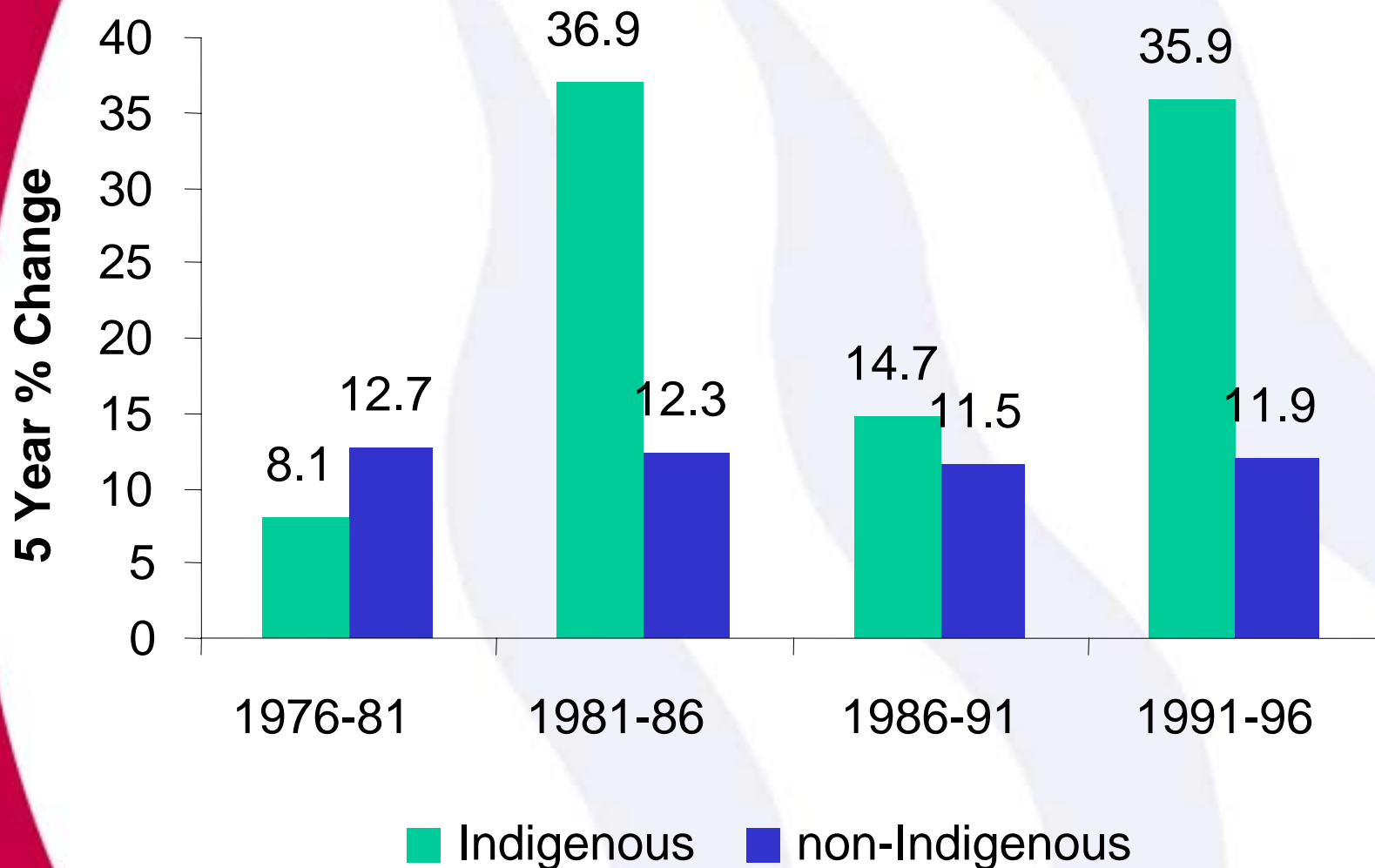
Percentage share of Indigenous population by state 1966 & 1996



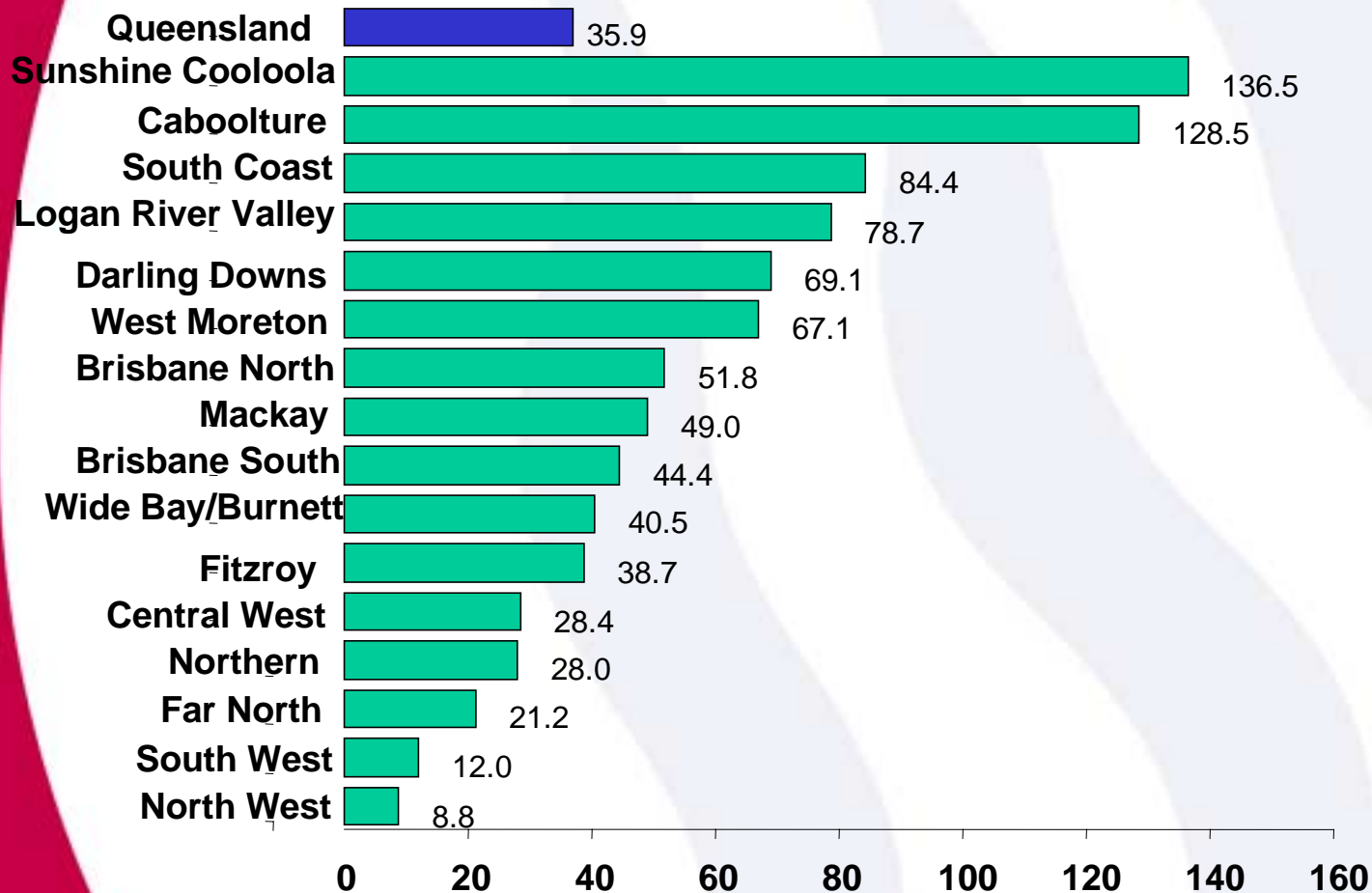
Increase in Indigenous Census Counts, 1991-96(%)



Queensland intercensal population change (%) by Indigenous status



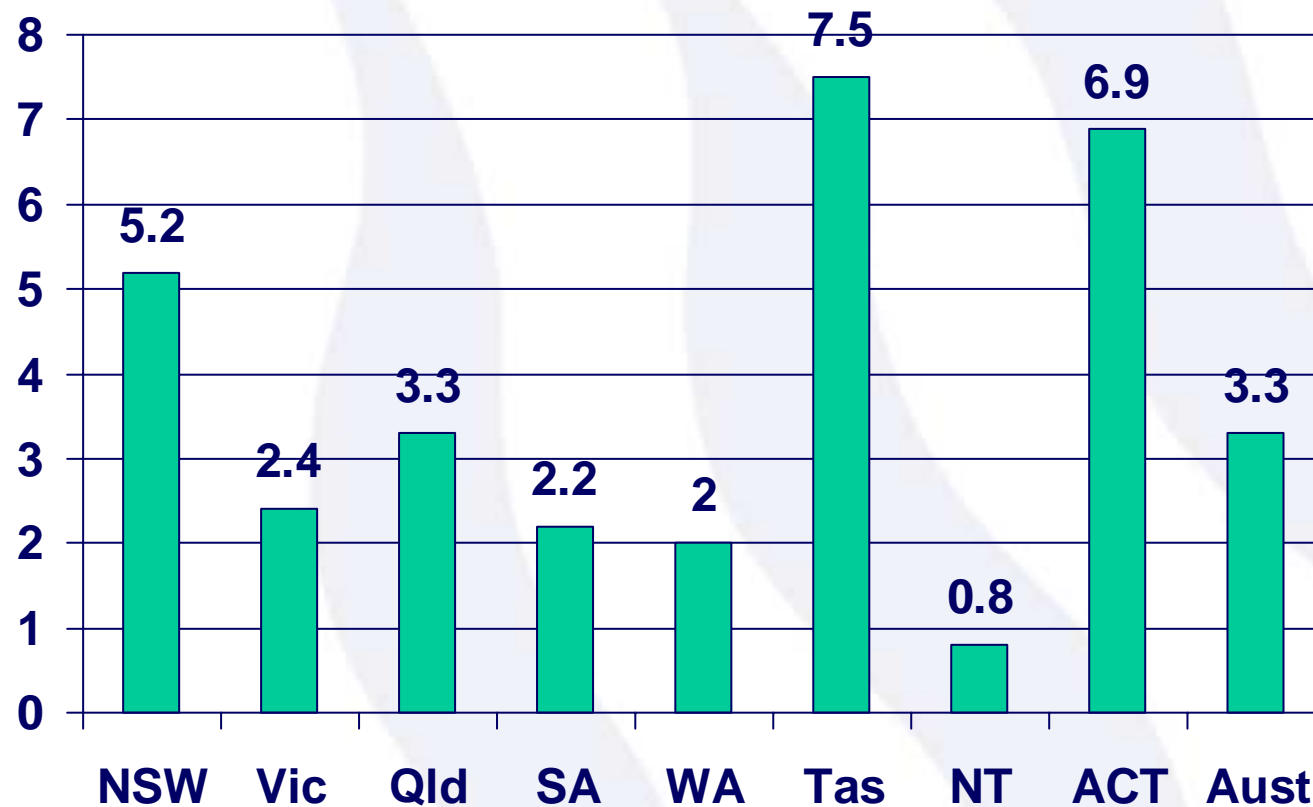
ABS Population & Housing Census, percentage increase in numbers identifying as Indigenous from 1991 to 1996



Changing Propensity to Identity as Indigenous

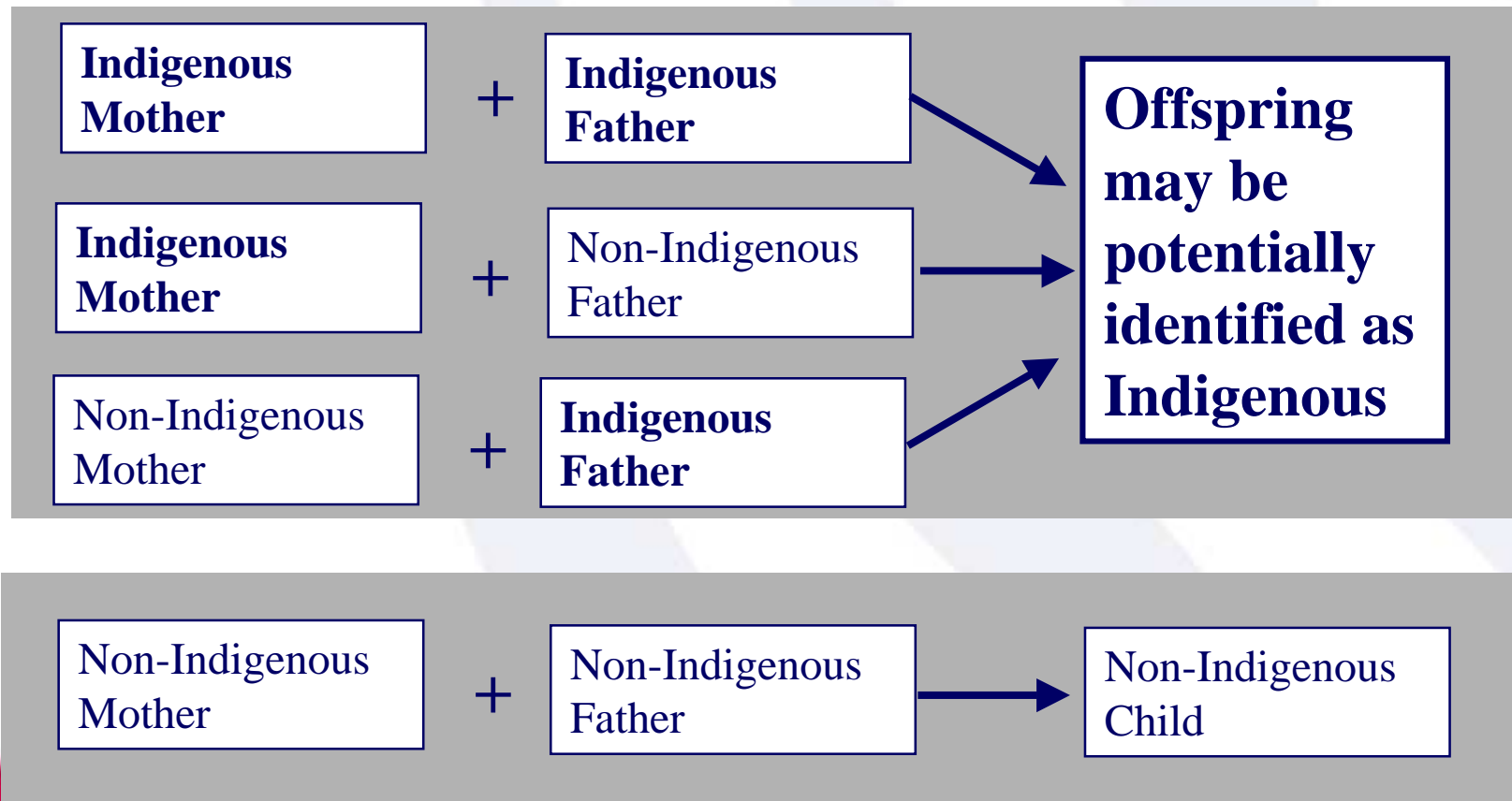
- 33% increase in census counts
- just over half can be explained by
 - births and deaths
 - migration
 - changes in transmission rate
 - census edits
- most of the remaining increase
 - changes in propensity to identify as Indigenous

Annual Propensity to Identity, 1991-1996 (%)



What is a transmission rate?

The rate of transfer of Indigenous status within the population - The greater the level of intermarriage the greater the potential transmission rate



Transmission rates: Percentage of Indigenous births to Indigenous and non-Indigenous mothers, 1999

	Qld	NSW	WA	Tas	NT	Aust
Births to Indigenous mothers	72	67	79	57	92	73
Births to non-Indigenous mothers	28	33	21	43	8	27

Comparing statistics based on two censuses

- Take extra care
- should not be accepted at face value
- differences may be largely due to non-demographic increase in census counts although this varies greatly at a small area level



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Estimating population

- What is a population estimate?
- What does an estimate add over a Census count?
 - Timeliness
 - Usual Residence concept (including residents overseas on census night)
 - Undercount adjustment
 - Other demographic adjustments eg persons aged < 1



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Estimates at census date

- census counts, usual residence
- both parents born overseas
- non-response to the census question
- net census under-count
- under-reporting of infants



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Estimating population

The balancing equation:

$$P_{t+1} = P_t + B_t - D_t + NM_t$$

where

P_{t+1} = is the population we are estimating

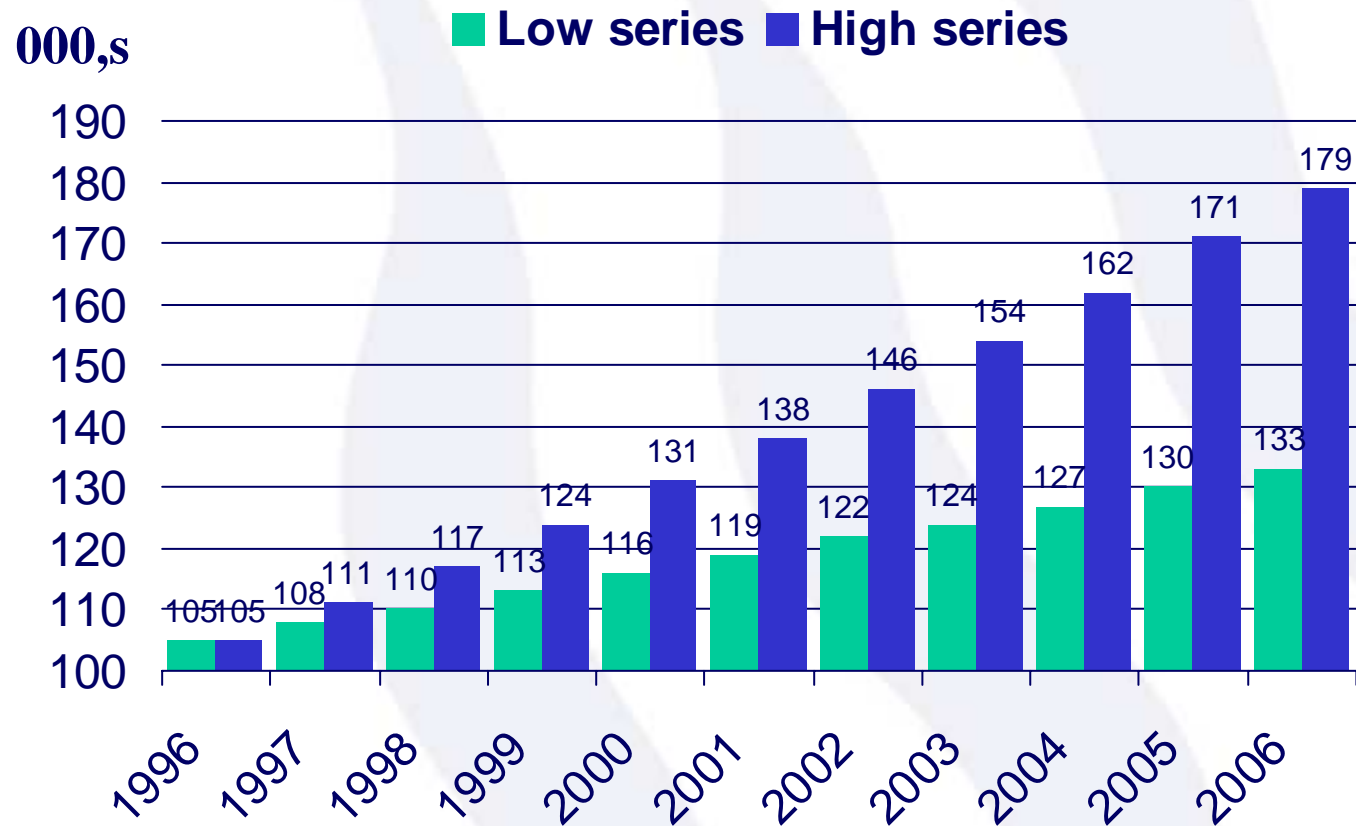
P_t = Is a previously 'known population'

B_t = births occurring between **t** and **t+1**

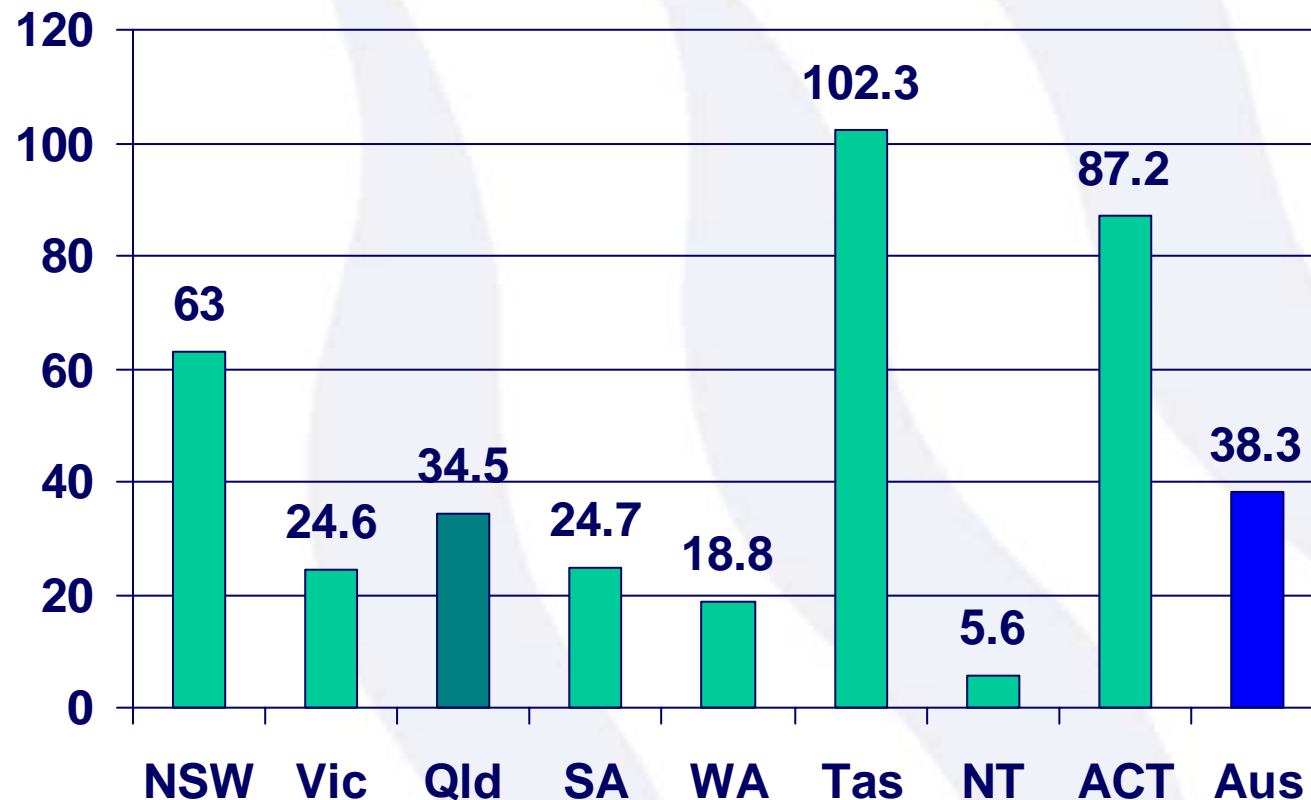
D_t = deaths occurring between **t** and **t+1**

NM_t = net migration between **t** and **t+1**

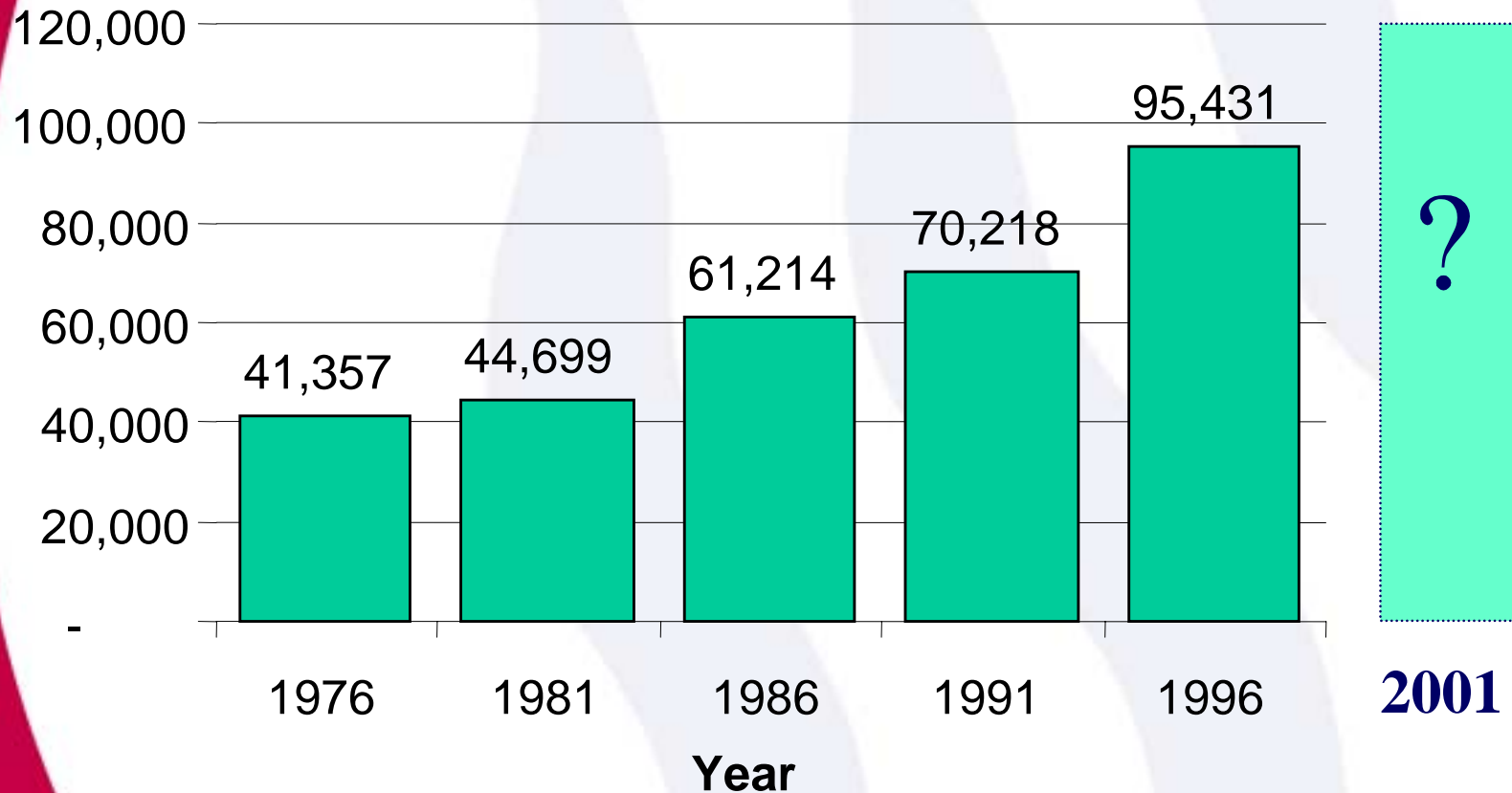
ABS Indigenous population projections Queensland



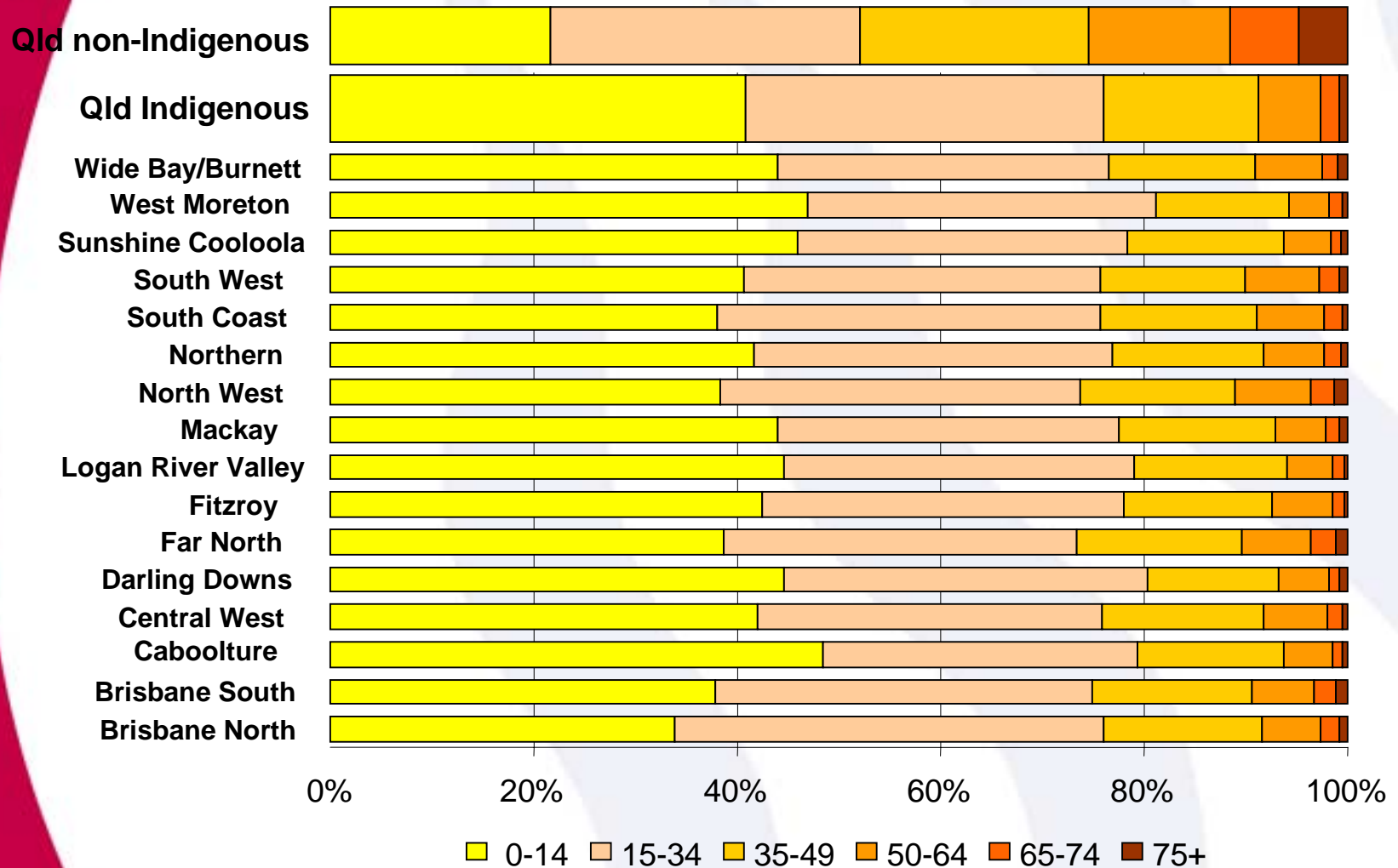
Percentage difference between ABS projected low and high Indigenous population series at 2006



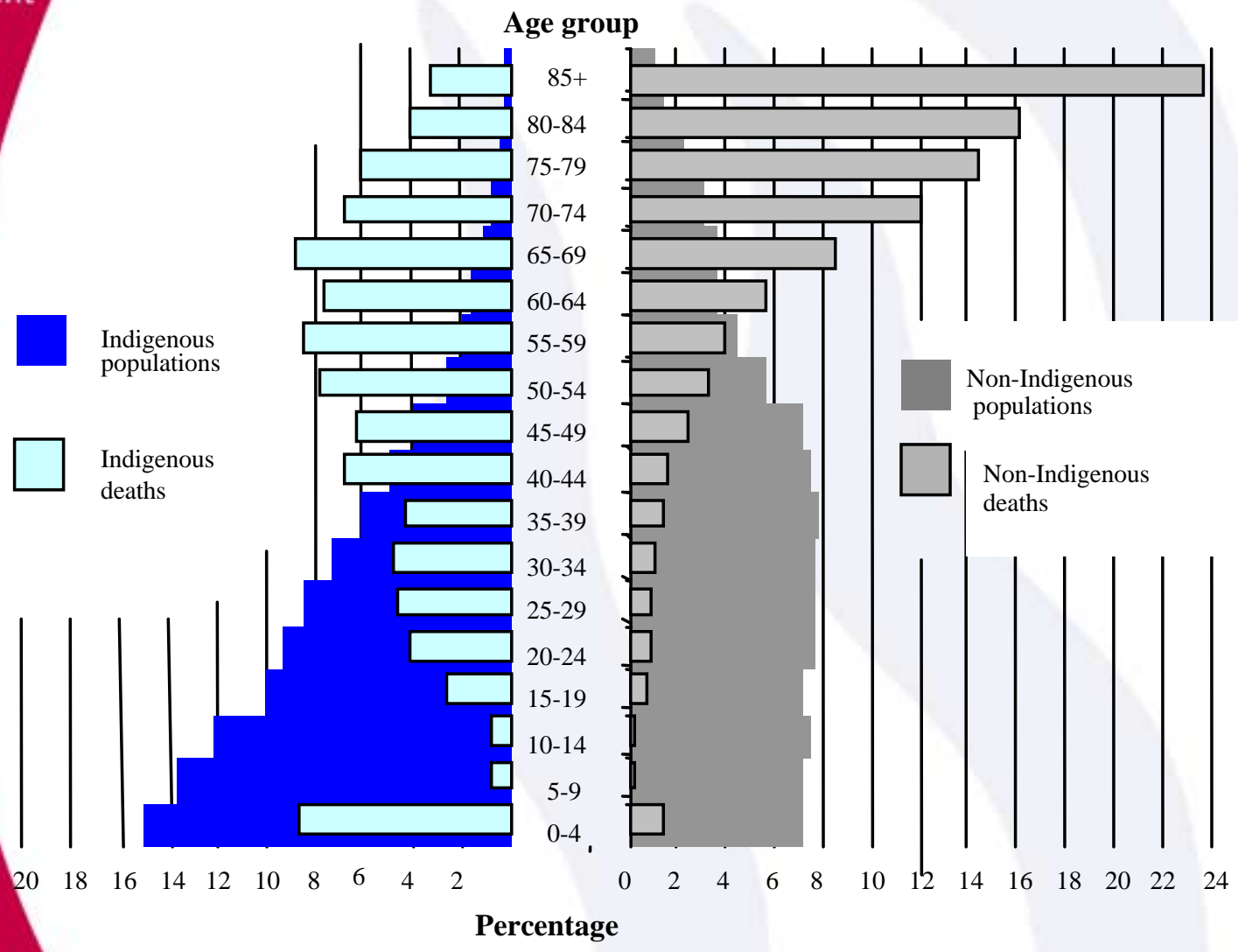
Queensland Indigenous population ABS census counts 1976 to 1996



ABS Population & Housing Census, percentage share by age group 1996



Population and mortality percentage distribution Queensland 1999



Indigenous demographic data availability

- Census data - every 5 years by place of enumeration or place of usual residence
 - small area level by age and sex
 - urban centre locality
 - SLA & LGA - small cells will be randomised
- Estimated Resident Populations
 - Statewide level only by age and sex
- ABS Experimental projections
 - Statewide level only by age and sex
 - Low and high series available



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Using Census Data - - -

- Rates and ratios calculation
 - need accurate population
 - uncertainties about Indigenous population
- additional errors in rates and ratios if
 - numerators and denominators are
 - different sources
 - of different quality
 - collection method is different
 - rates of Indigenous identification are different

Indigenous under-identification in collections- major issues

- Completeness of identification may vary greatly:
 - across years
 - across statistical collections
 - across geographical areas
- Inconsistency between numerators and denominators in the individual's propensity to identify and related problems of analysis



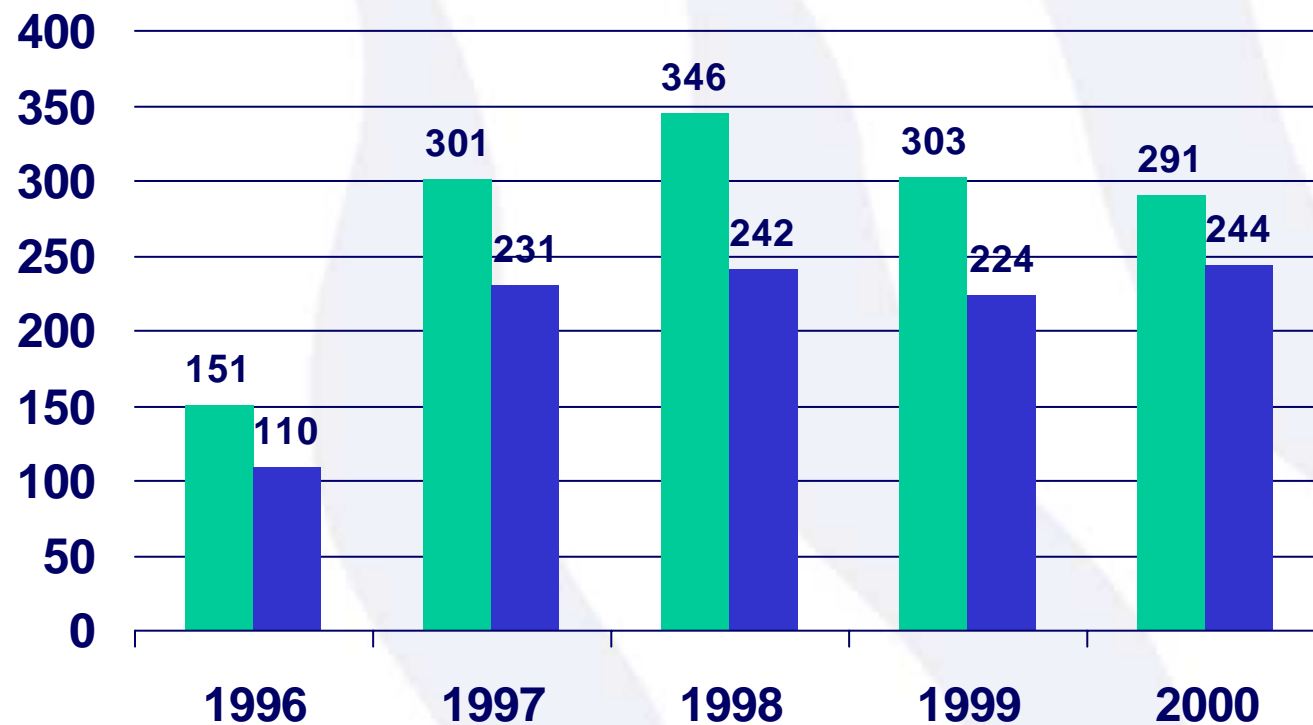
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Measuring trends

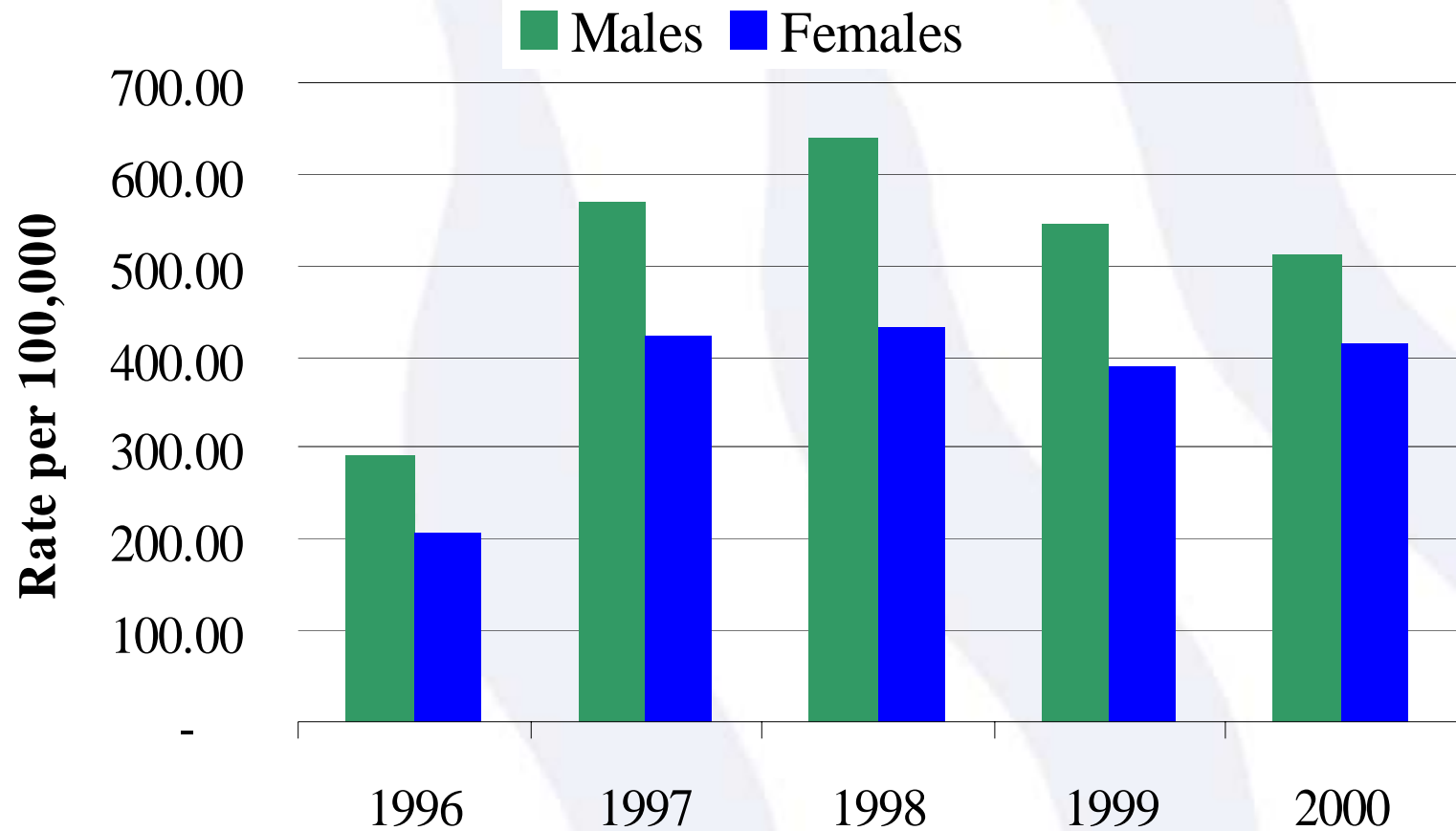
- Numerator /denominator = **Rate**
 - Increase in denominator reduces rate
 - Increase in numerator increases rate
 - Numerator and/or denominator may increase/decrease due to propensity to identify rather than any real change - may affect trends significantly
- **Conclusion - difficult to accurately assess real trends in rates in Indigenous population**

Indigenous deaths Queensland 1996 to 2000

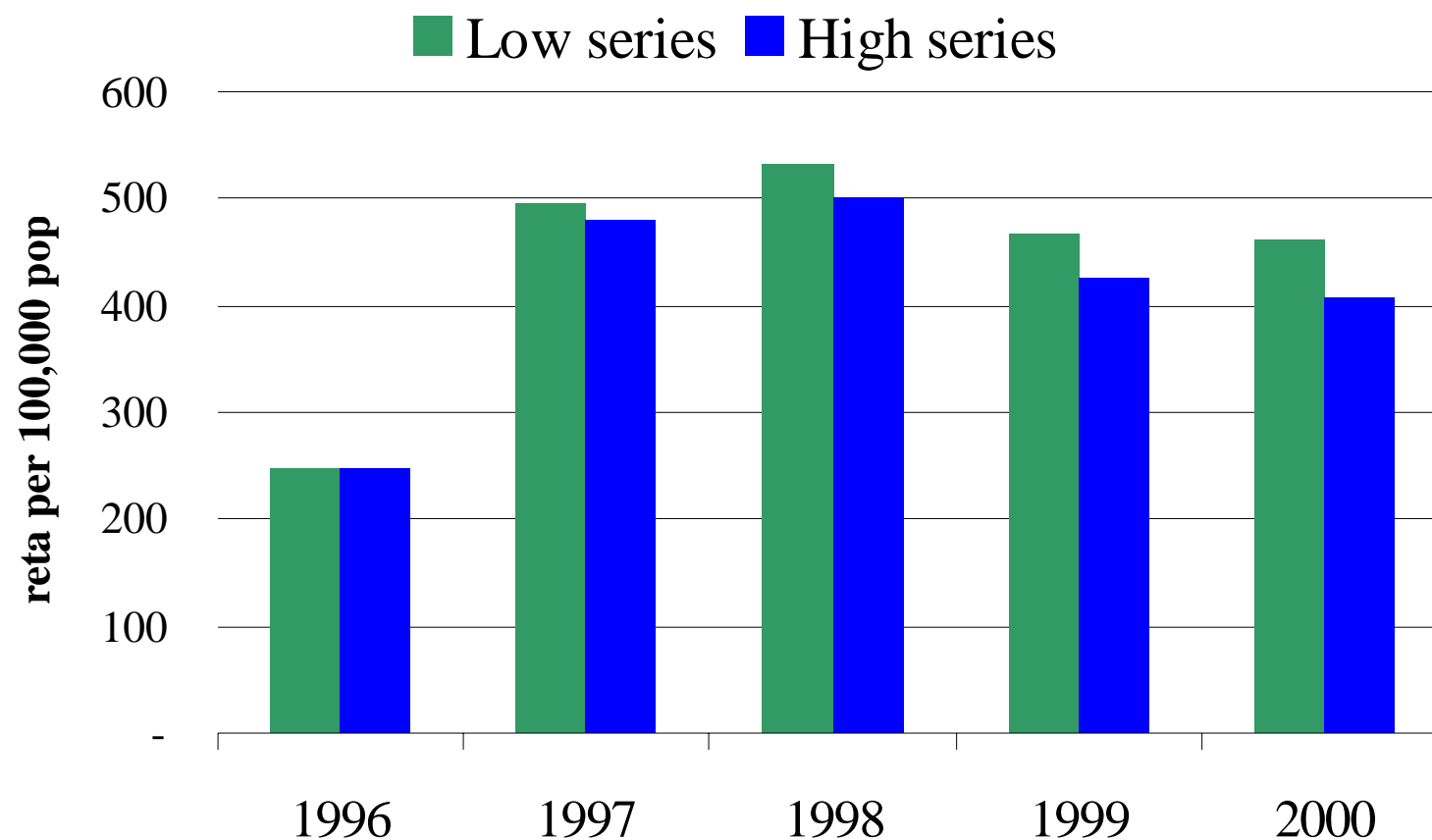
■ Males ■ Females



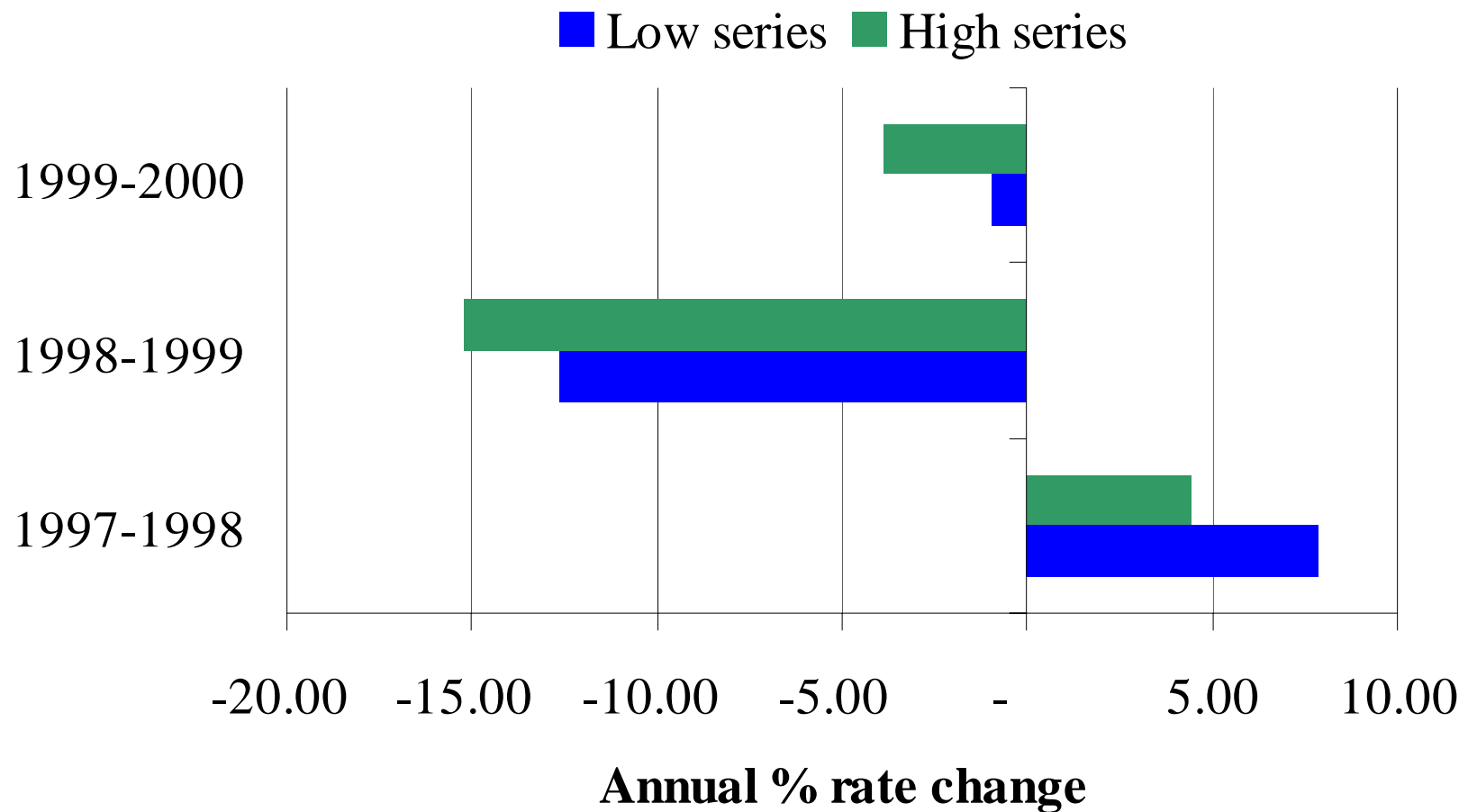
Indigenous crude death rates Qld 1996-2000, using ABS low experimental population estimates



Indigenous crude death rates Qld 1996-2000, using ABS low and high series experimental population estimates



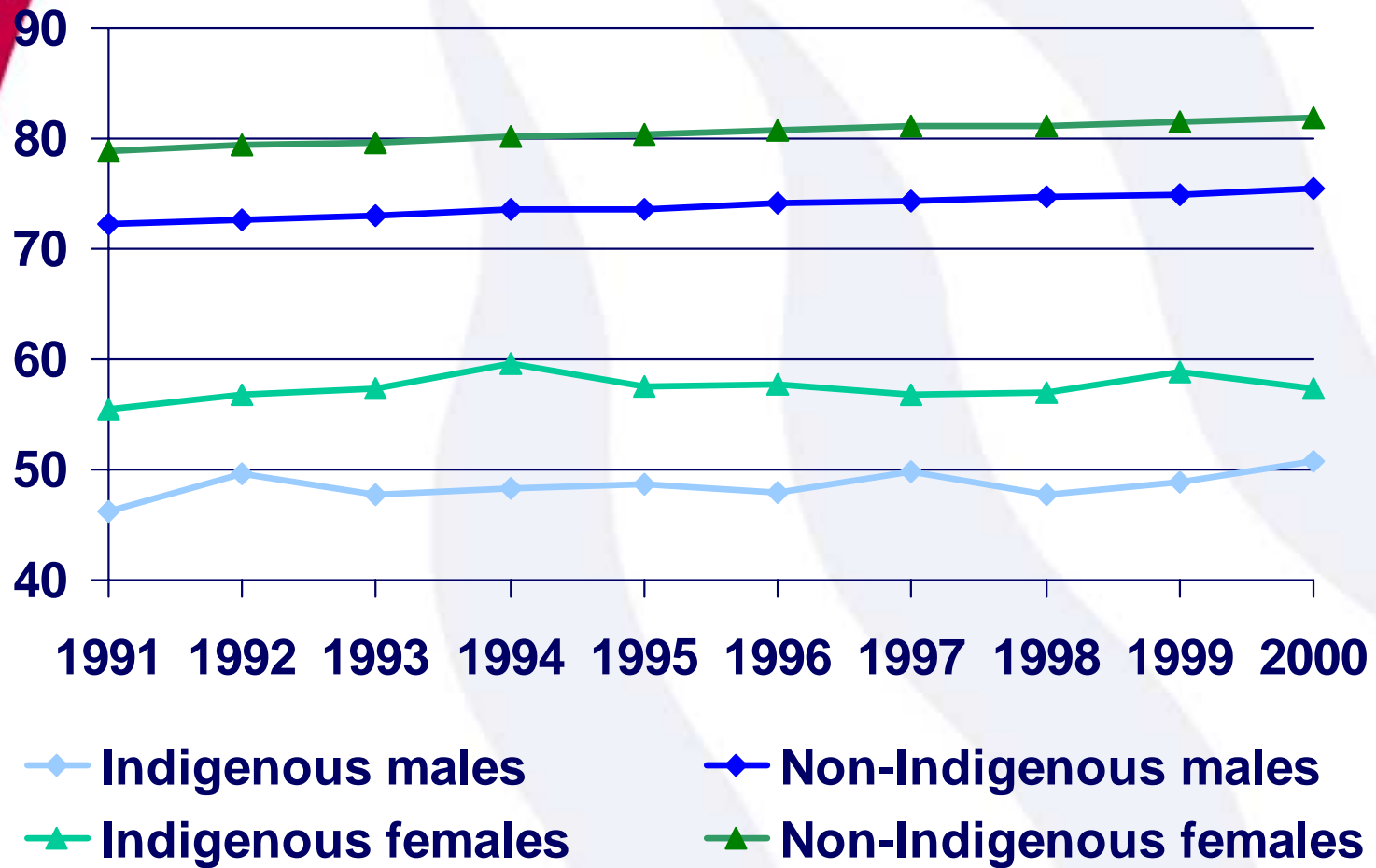
Annual % change in Indigenous crude death rates Qld 1997-2000, using ABS low and high series experimental population estimates



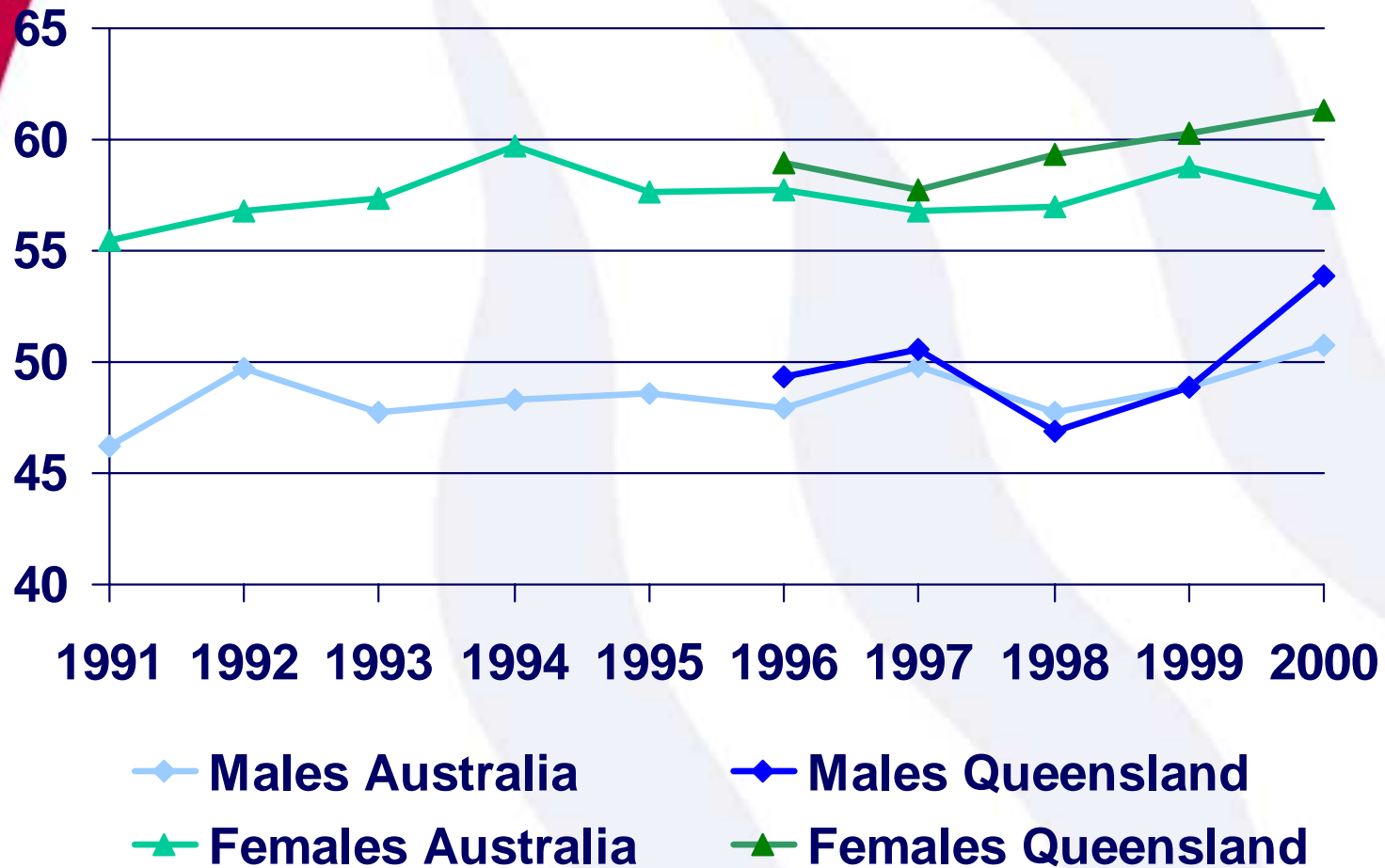


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Median age at death, Australia

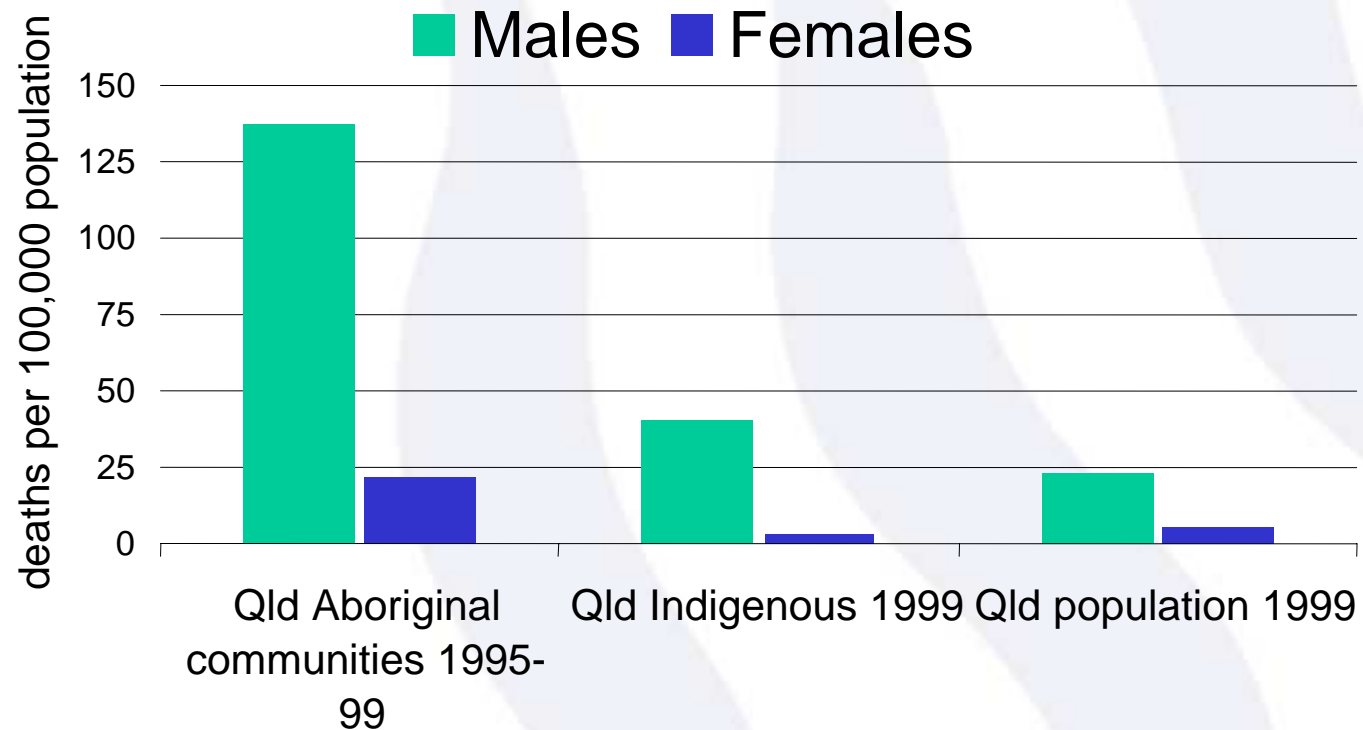


Indigenous median age at death, Qld and Aus

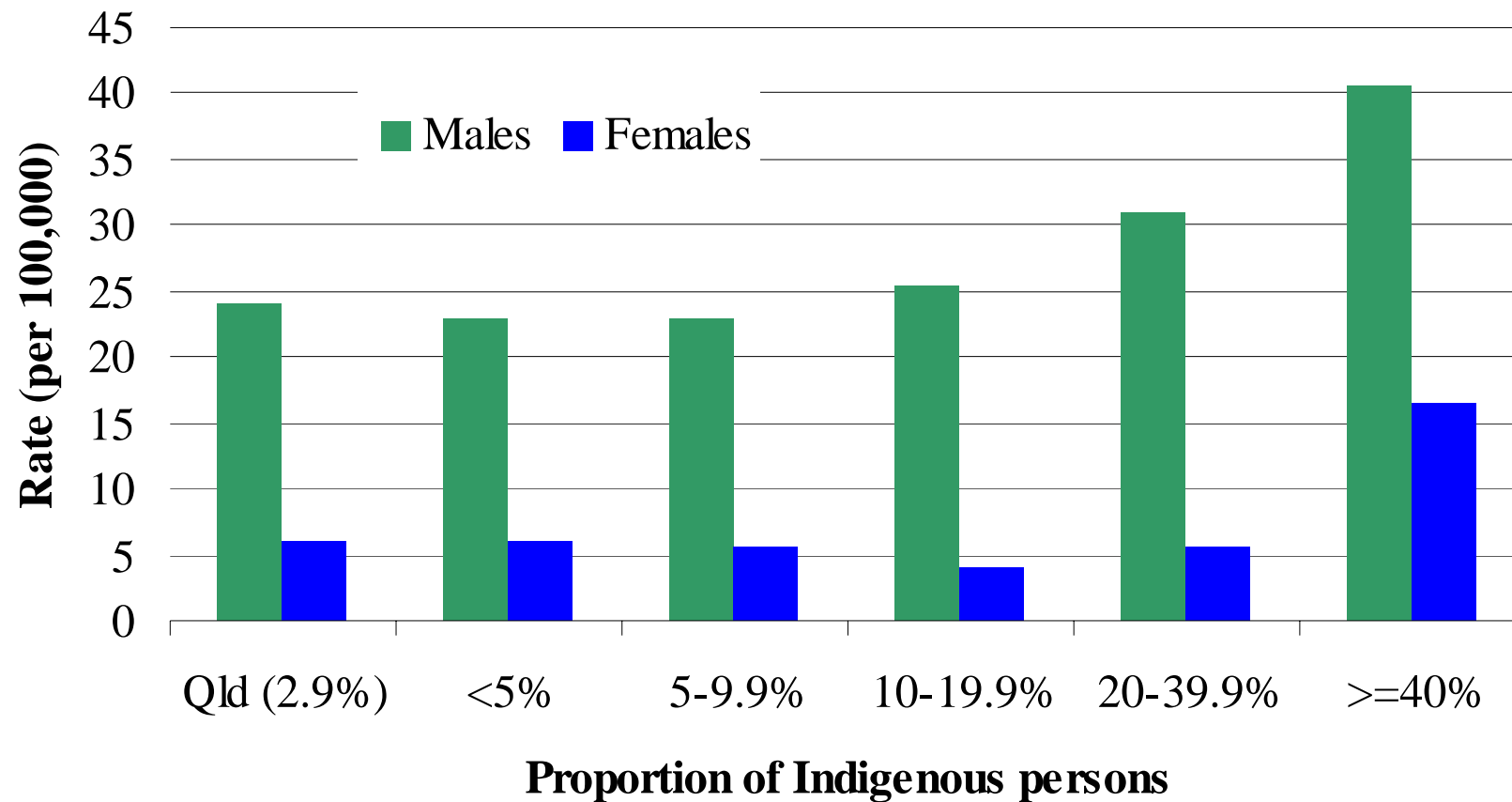


Suicide Rates

Suicide mortality rates per 100,000 by Indigenous status 1995 to 1999



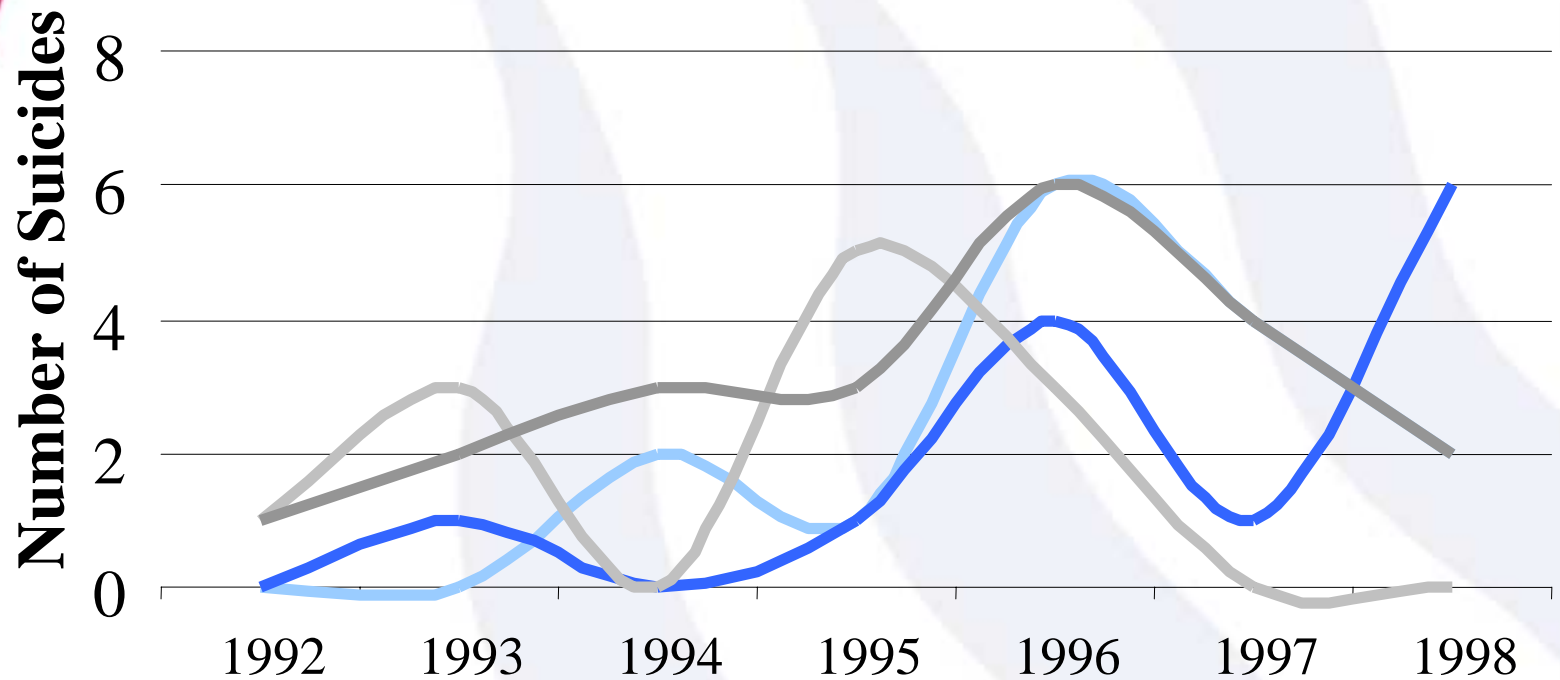
Suicide in Qld and in SLAs with increasing proportions of Indigenous persons 1994-1998





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Number of suicides 1992-1998 for selected Aboriginal Communities



Community X

Community Y

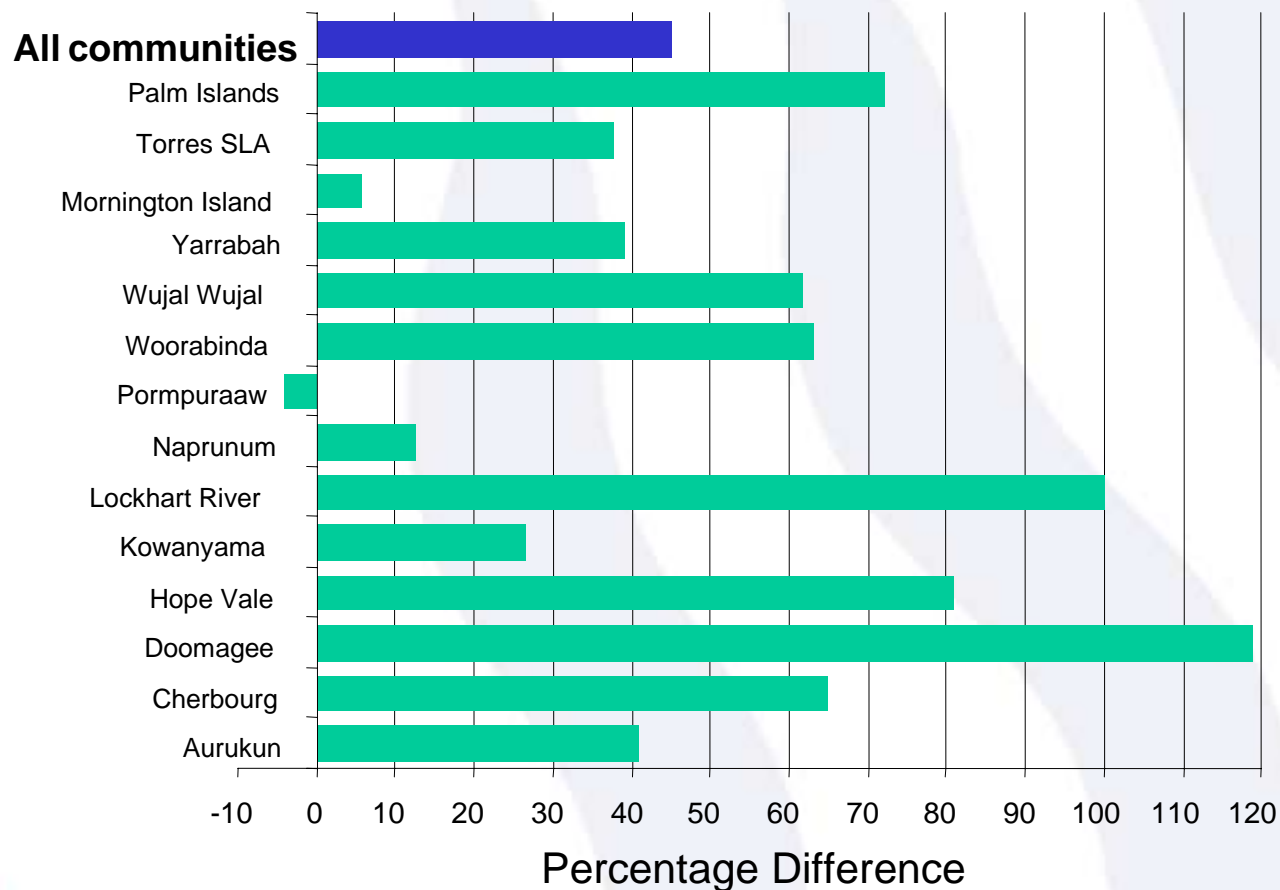
Community Z

Other Qld Aboriginal communities

Census undercounts in remote Indigenous communities - the great debate - (ABS versus the rest)

- Initial analysis undertaken by Queensland Health
 - Comparison of Centrelink benefit recipient data with Census counts
 - Other data sources comparison - the case of Palm Islands
- Cape Justice Study
 - Using alternative sources of data

Comparison of number of Centrelink beneficiaries Oct. 1998 with ABS Census counts - August 1996 for persons aged 20 & over





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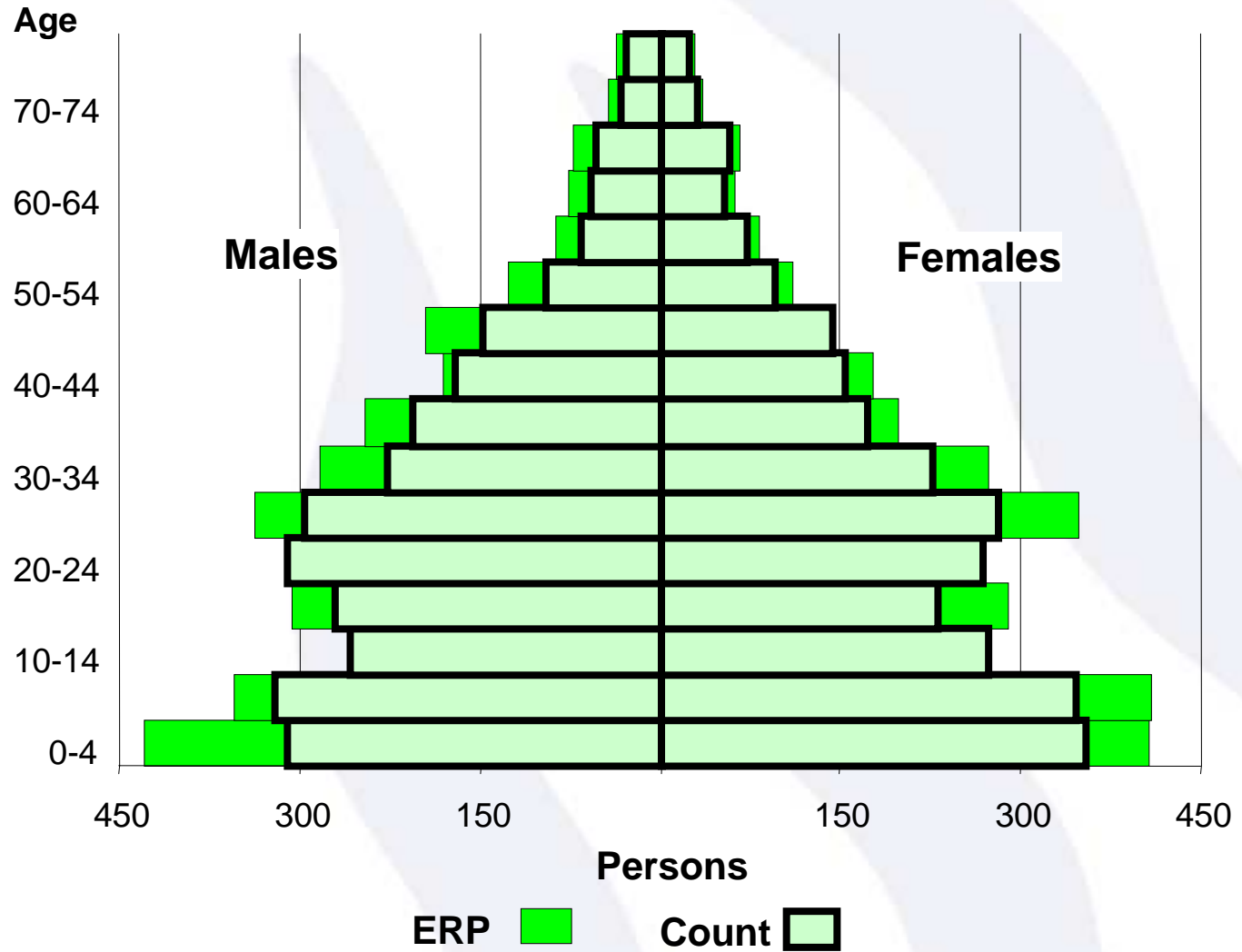
The case of Palm Islands

- 1996 ABS Census Counts - 1996 people
- Community estimates - 3,000 to 3,500
- In 1998 - 2,600 individuals accessed health services in 6 month period
- More children 10-14 enrolled in schools than counted in Census
- 1998 Centrelink data - 1,923 individuals aged 20 & over receiving a benefit compared to ABS Census count of 1,116
- Queensland Health estimate - approximately 3,200

Estimating Cape Community populations (Martin Bell & John Taylor, 2001)

- Perinatal data (0-1 age group)
- Education Qld School enrolment data (6-11) year olds
- Qld Health, well persons health check - selected communities only (13 years and over)
- Centrelink data (20 years and over) - *used as check only but not in calculation*

Cooktown ATSI Region 1996 Census Counts and Composite ERP



Possible reasons for the Census under-count

- Mobility of Indigenous population at a local level
 - Seasonal variation
 - Outstations
- Suspicion of potential inappropriate use of Census data (eg housing allocation)
- Notion of household as an inappropriate social construct



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Conclusions and lessons

- Indigenous under-identification in population and data collections will be an ongoing problem
- With increasing transmission rates, variation in the propensity to identify across collections and time is likely to increase
- View official population statistics critically - especially if used at a small area level
- Cross check if possible with other sources



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Background to the Cape York Justice Inquiry

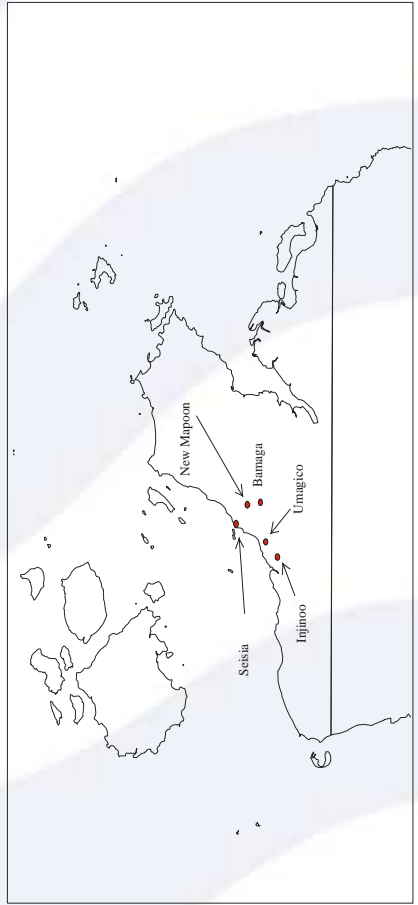
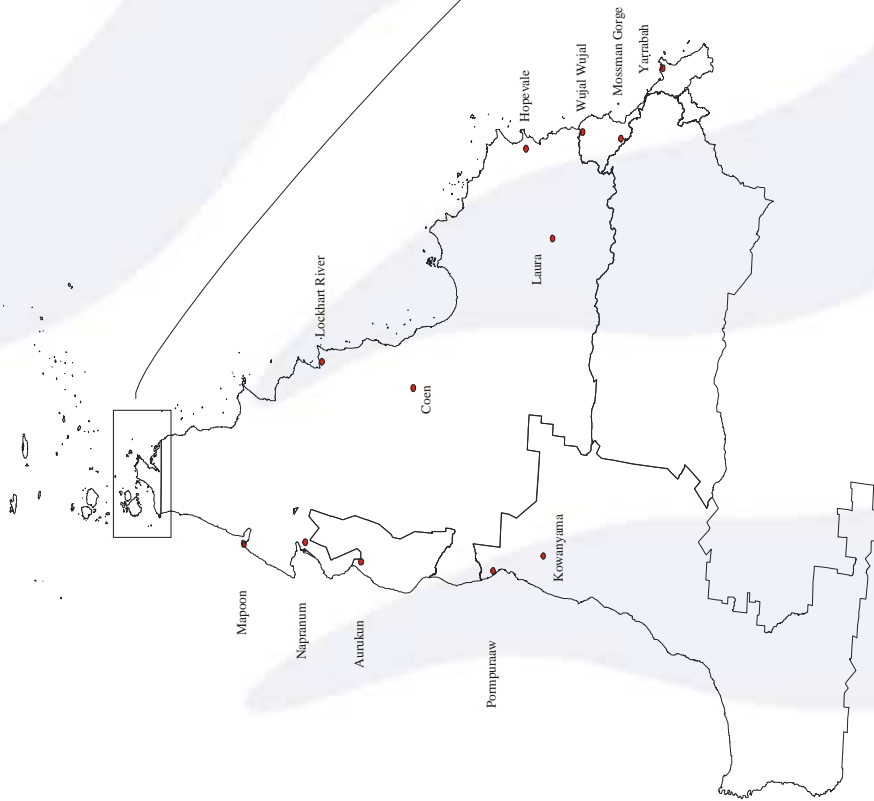
- Terms of reference
 - Identify cause, nature and breaches of law
 - Causes and nature of substance abuse
 - Identify relationships between the above
 - Impact on the communities of the above
 - Identify and produce strategies to address the identified problems

Background to the Cape York Justice Inquiry

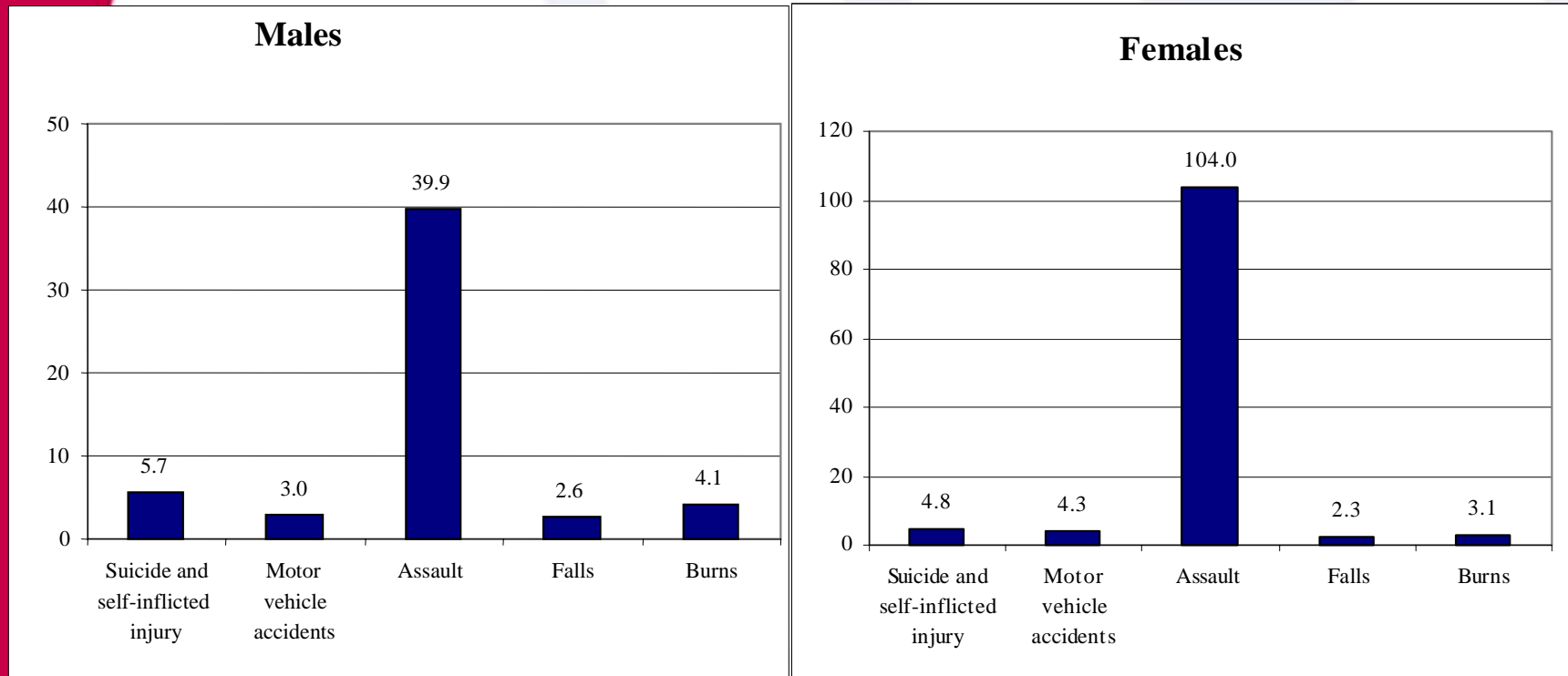
- Types of information requested
 - Background demographic information (estimating the Cape Indigenous population)
 - Crime and Justice Information
 - Health Information related to injury and excessive alcohol consumption



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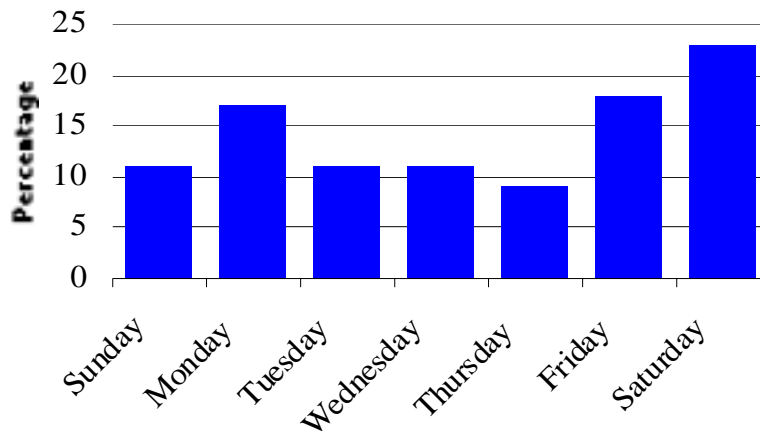


Hospital Injury Separation Rate Ratios (Queensland = 1)

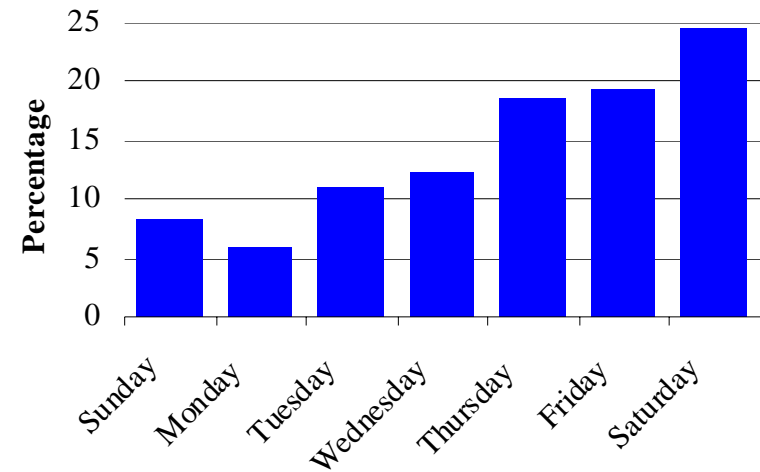


Admissions to Hospital for selected external causes by day of week

**Motor vehicle accidents - Cape
Aboriginal Communities hospital
admissions by day of the week
(Percentage)**

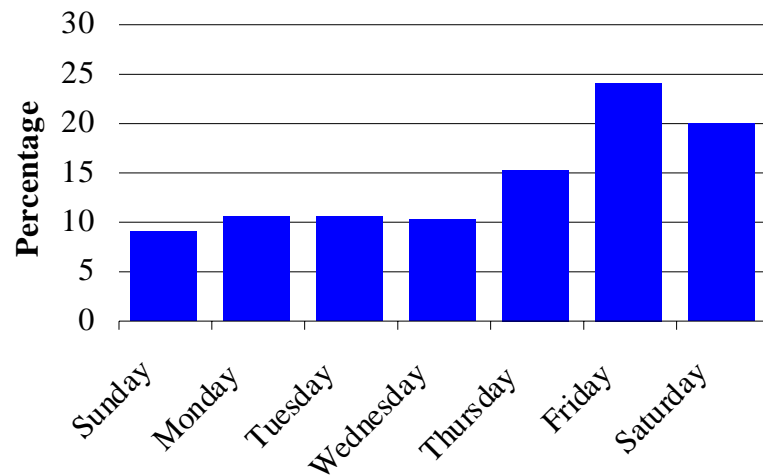


**Falls - Cape Aboriginal Communities
hospital admissions by day of the week
(Percentage)**

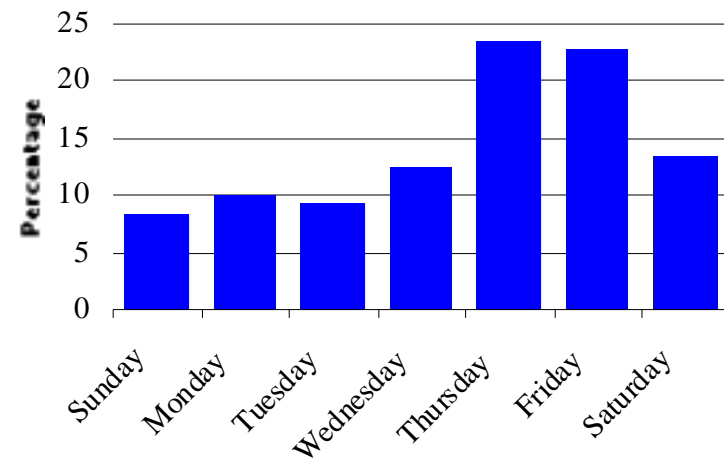


Admissions to Hospital for selected external causes by day of week

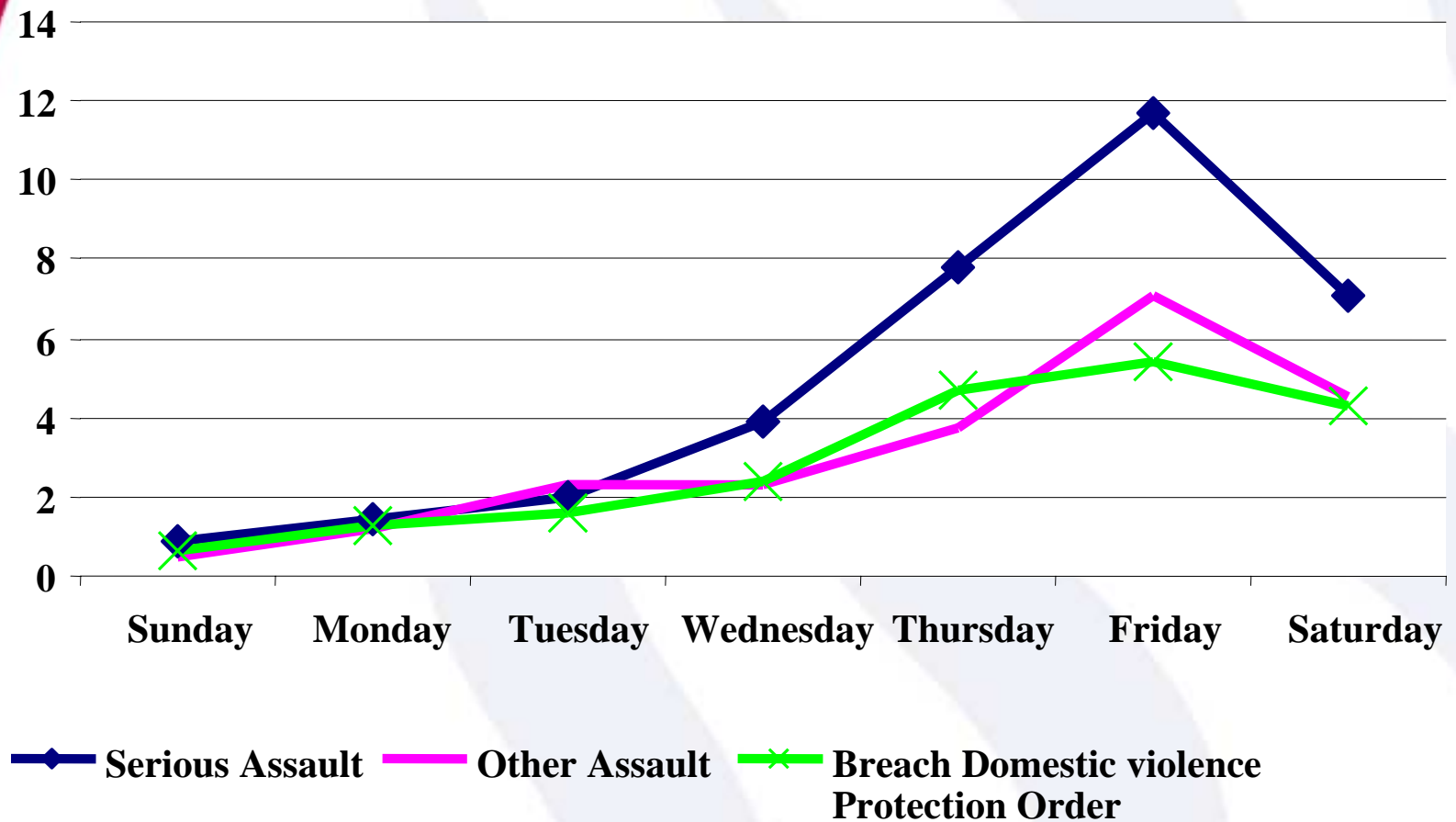
**Assault - Cape Aboriginal Communities
hospital admissions by day of the week
(Percentage)**



**Self-inflicted Injury - Cape Aboriginal
Communities hospital admissions by day
of the week (Percentage)**



Average community - number of offences by day of the week



Proportion of Indigenous people of school age who left school aged 16 years or younger

