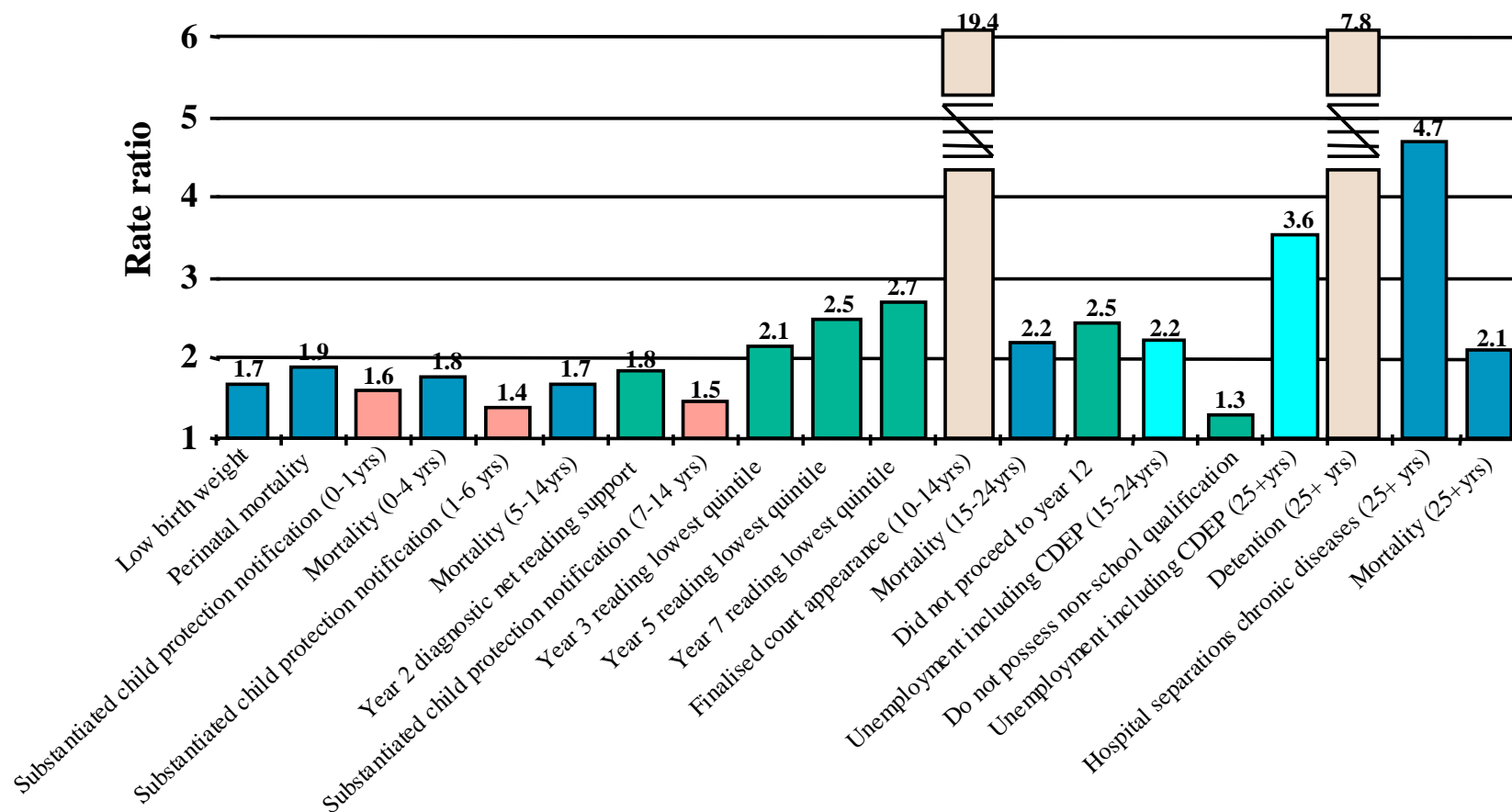


Indigenous indicators for Queensland Health

Bryan Kennedy (Manager)
Statistical and Library Service Centre,
Queensland Health

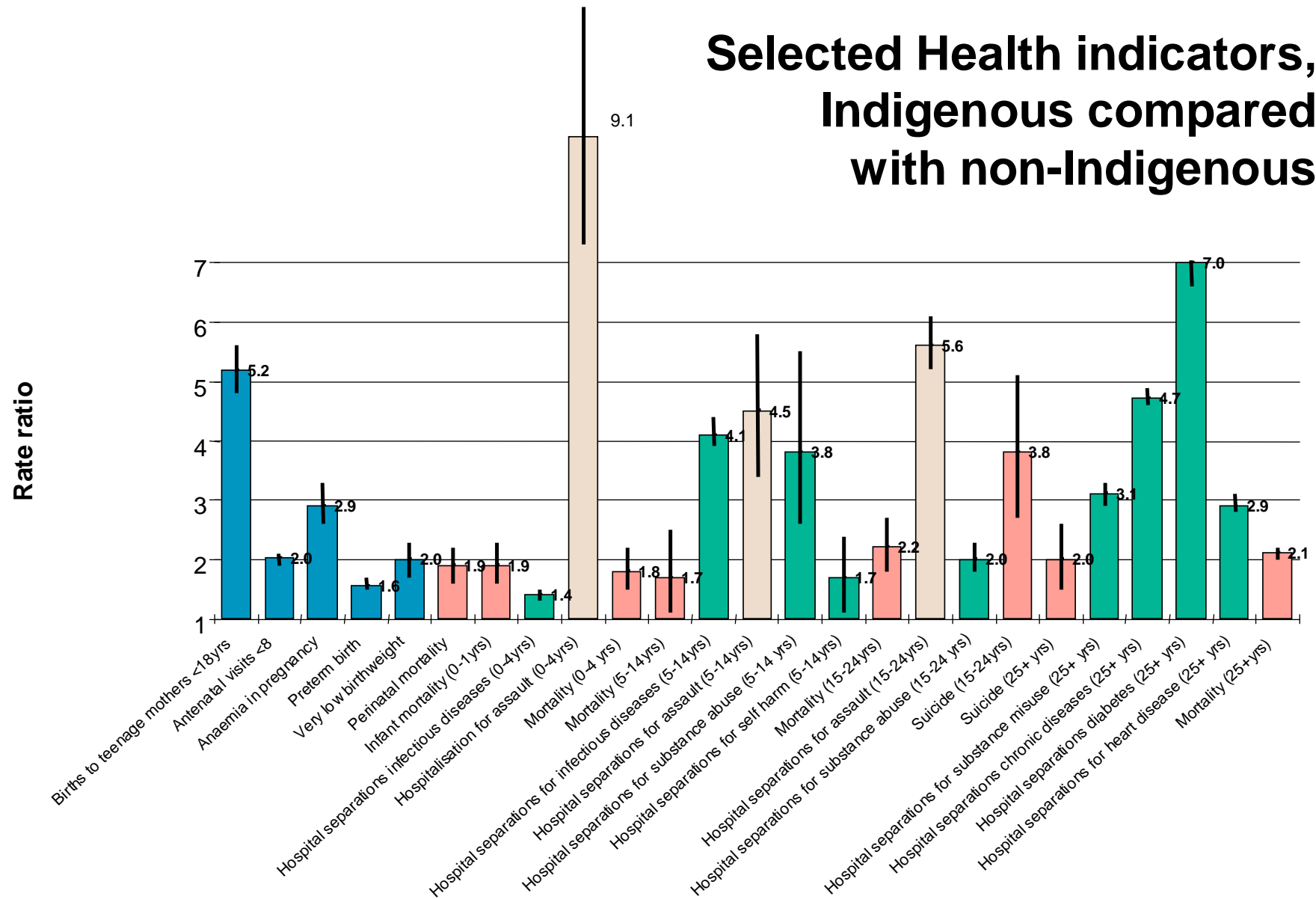
Selected overarching indicators, Indigenous compared to non-Indigenous



Notes on method of calculation: Rate/ratios are calculated by comparing the actual Indigenous number to the expected Indigenous number if the same rate of the non-Indigenous population was applied to the Indigenous population. For example, if there are 1,000 Indigenous people incarcerated and by applying the non-Indigenous rate to the Indigenous population at risk you would expect 100 Indigenous people to be incarcerated the rate/ratio of the Indigenous to the non-Indigenous would be 10:1.

This technique has been used for all the indicators in the graph. For example, Indigenous babies at birth are 1.7 times more likely to be of low birth weight compared with non-Indigenous babies. All indicators have been orientated so that a value of greater than 1 indicates Indigenous disadvantage (x) number of times greater than the non-Indigenous population.

Selected Health indicators, Indigenous compared with non-Indigenous



Notes on method of calculation: Rate ratios are calculated by comparing the actual Indigenous number to the expected Indigenous number if the same rate of the non-Indigenous population was applied to the Indigenous population. For example if there are 1,000 Indigenous people incarcerated and by applying the non-Indigenous rate to the Indigenous population at risk you would expect 100 Indigenous people to be incarcerated the rate/ratio of the Indigenous to the non-Indigenous would be 10:1.

This technique has been used for all the indicators used in the graph. For example Indigenous babies at birth are 2.0 times more likely to be of very low birth weight compared with non-Indigenous babies. All variables have been orientated so that a value of greater than one indicates Indigenous disadvantage (x) number of times greater than the non-Indigenous population.

Doing the Dollars?

Total number, excess number and excess cost of Indigenous Public Hospital Separations 2006-07 financial year ranked by Major Diagnostic Category (MDC)

Major Diagnostic Category All ages	Total number of seps	Number of excess seps	Excess cost \$000,000s	% of total excess cost
Kidney & Urinary Tract	20,784	19,058	13.7	17.7
Circulatory System	2,874	1,938	8.4	10.8
Musculoskeletal Sys & Conn Tissue & Skin, Subcutaneous Tissue & Breast	4,193	1,976	8.1	10.4
Respiratory System	2,703	1,819	7.5	9.7
Mental Diseases & Disorders	1,175	602	5.2	6.7
Pregnancy, Childbirth & Puerperium (where complications)	3,550	2,108	5.2	6.6
Endocrine, Nutritional & Metabolic incl Diabetes	933	670	4.5	5.8
Nervous system	1,863	978	3.8	4.8
Digestive System	3,071	1,261	3.6	4.6
Ear, Nose, Mouth & Throat and Eye Diseases and Disorders	2,530	1,165	3.4	4.4
Hepatobiliary System & Pancreas	892	626	3.0	3.9
Infectious & Parasitic Diseases	653	380	2.1	2.7
Injury, Poison, Burns & toxic effects of drugs	1,747	892	2.0	2.5
Alcohol/Drug Use & Disorders	609	473	1.4	1.8
Newborns & Other Neonates	852	185	1.0	1.3
Other conditions	3,156	990	4.8	6.2
Total All Conditions	51,585	35,120	\$77.6	100.0

Indigenous district indicators – criteria for selection

- Data are available from existing collections
 - Highlights main areas of Indigenous health disadvantage
 - Indicators are sensitive and amenable to change with improved health system performance
- Focuses on three key areas
 - Data quality and health system performance
 - Maternal health and early childhood
 - Chronic disease

Factors considered in the selection of Indicators

- Using indicators in existing performance frameworks:
 - National Health Performance Framework
 - COAG (Overcoming Indigenous Disadvantage, and Indigenous Generational Reform Frameworks)
 - Partnerships Queensland Whole of Government Performance Framework
 - Queensland Health - National Core Maternity Indicators Project. Qld Health Maternity Services Steering Committee (still to be endorsed)

Factors considered in the selection of Indicators – Cont.

- Data are available from existing sources primarily
 - Perinatal collection
 - Hospital morbidity collection
- Data are timely
- Where possible indicators are responsive to changes in service delivery
- Volatility of small numbers

Methods of measurement

- Counts of Indigenous and non-Indigenous
- % of separations that are Indigenous
- Age standardised rates of Indigenous and non-Indigenous – useful for comparing the relative rates and importance across conditions
- Age standardised rate/ratios – measures the relative gap between Indigenous and non-Indigenous
- Median age at admission – measures early onset of chronic disease
- Time series – are rates improving?

Who will do the measurement and the steps required

- Core business for SLSC – have the systems and resources to extract, analyse and present the indicators.
 - Have developed presentation templates and the baseline from which to measure change.
 - Will be completed by the end of March
 - Measuring change from the baseline – every 6 months or annually depending on the indicator

What are the key Indicator areas for Indigenous health?

- Maternal and early child health
 - Maternal and early childhood health status significant predictor of whole-of-life health outcomes and life expectancy
- Chronic disease and avoidable hospitalisation
 - Major contributor to excess costs in the health system
 - Low life expectancy (about 17 years lower for the Queensland Indigenous population)

District Indicators signed off by EMT

- Estimated completion of Indigenous identifier for admitted patients for Queensland
- Comparative rate of discharge at own risk
- Rate of less than 5 antenatal visits
- Comparative rate of low birth weight births
- Maternal smoking and cessation rates
- Avoidable admissions for selected conditions
- Comparable rates of hospitalisation, children aged 0-14 for selected conditions

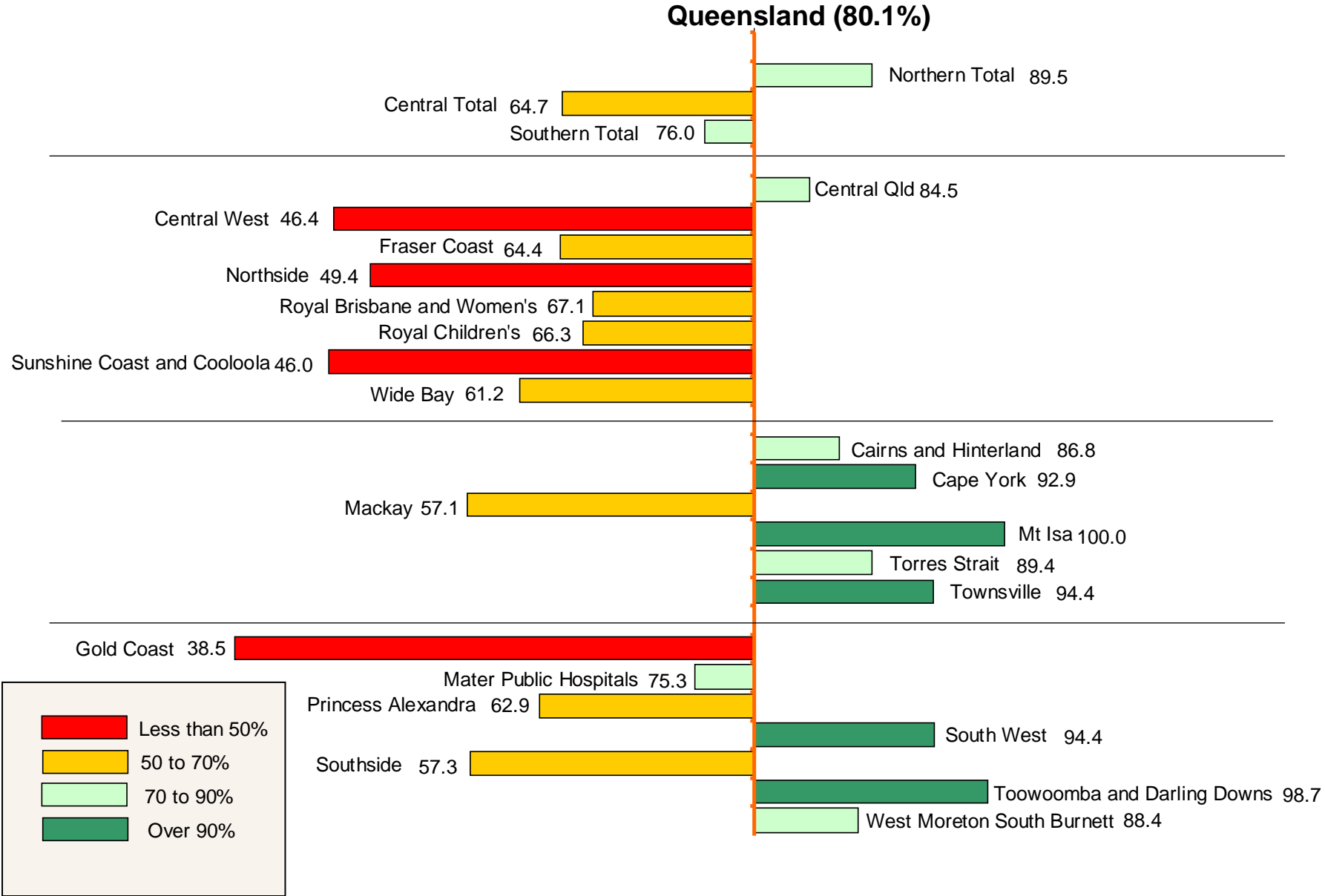
Data quality issues

- Completeness and accuracy of Indigenous identification critical for monitoring performance
 - Admitted patients data
 - AIHW audit results
 - Synthetic estimation of completeness
 - Data linkage and how Indigenous status changes

AIHW audit results and estimates of completion

ARIA Description	Estimated % identified	AIHW Audit results (Includes Dialysis patients)
Hospitals subject to AIHW audit 2007		
Major City	66.9	66.7 (55.7-77.5)
Inner Regional	84.8	86.3 (76.0-93.0)
Outer Regional	84.7	92.8 (87.8-96.2)
Remote/Very Remote	100.0	94.9 (90.6-97.1)
Audited Total	83.2	86.6 (85.6-87.5)
Un-audited hospitals		
Major City	58.8	
Inner Regional	62.3	
Outer Regional	90.5	
Remote/Very Remote	90.4	
Un-audited hospitals Total	76.1	
All Public Hospitals		
Major City	62.8	
Inner Regional	75.1	
Outer Regional	86.7	
Remote/Very Remote	95.1	
Total Queensland	80.1	

Queensland admitted patients 2006-07 (excluding dialysis patients) - Estimated level of completion of Indigenous status by District and Area Health Service



Example of planned district reports

Area health service	District	Facility Name	Actual number of Indigenous Separations	Estimated level of completion of Indigenous status
AAA	AA	A	11	Too small to report
		B	32	50 to 70%
		C	80	Over 90%
		D	65	50 to 70%
		E	198	Less than 50%
		F	74	70 to 89%
		G	19	50 to 70%
		H	1675	Over 90%
		I	18	50 to 70%
		J	32	Over 90%
		K	349	Over 90%
		L	33	Less than 50%
		AA Total		

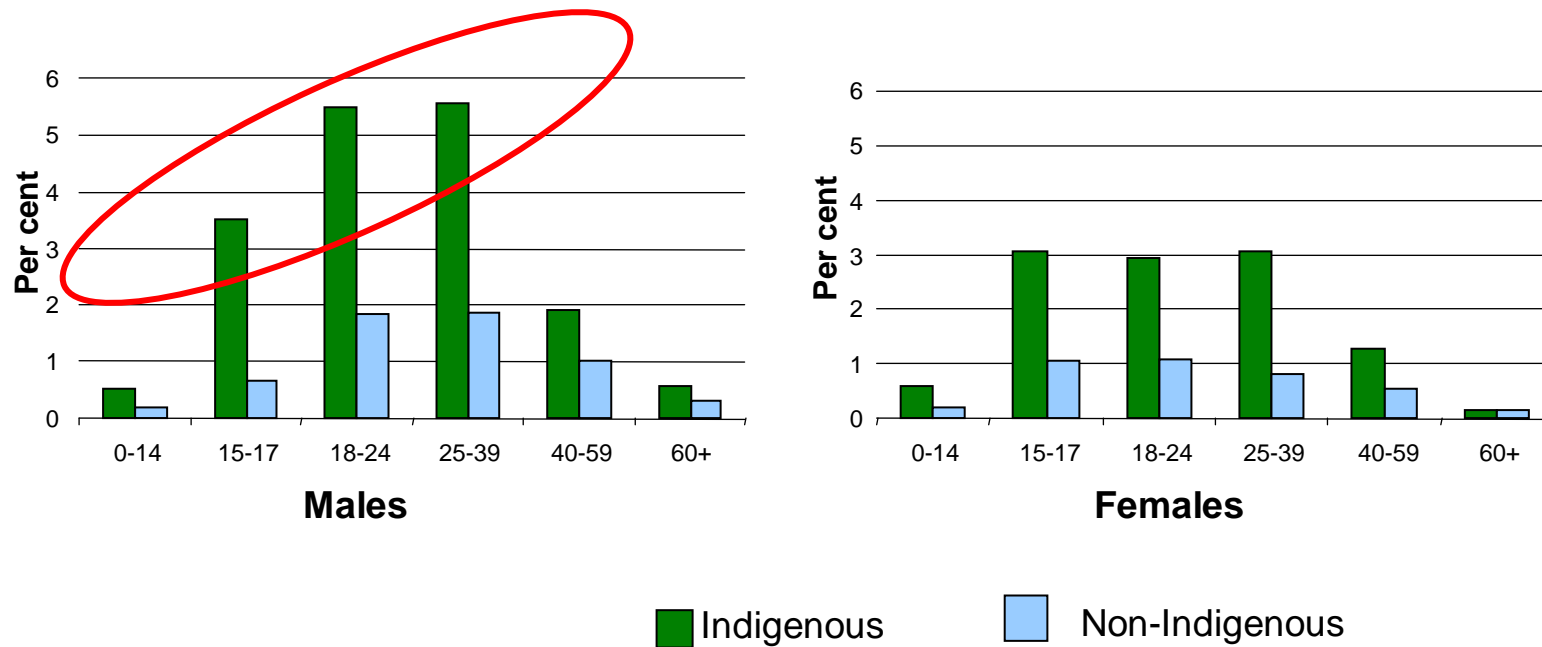
Public hospital linkage – Changes in Indigenous identification - Preliminary results

- Using linked data from 1995/96 to 2007/08 –
- Considerable fluidity in how Indigenous people identify or are identified
- Of 133,719 individuals who identified as Indigenous on one or more episode of care
 - 15.5% of individual's recorded Indigenous status changed on one or more occasions
 - 2.8% movement between the Aboriginal and Torres Strait Islander categories
 - Indigenous status was recorded as “Not stated” on one or more occasions for 3.4% of individuals

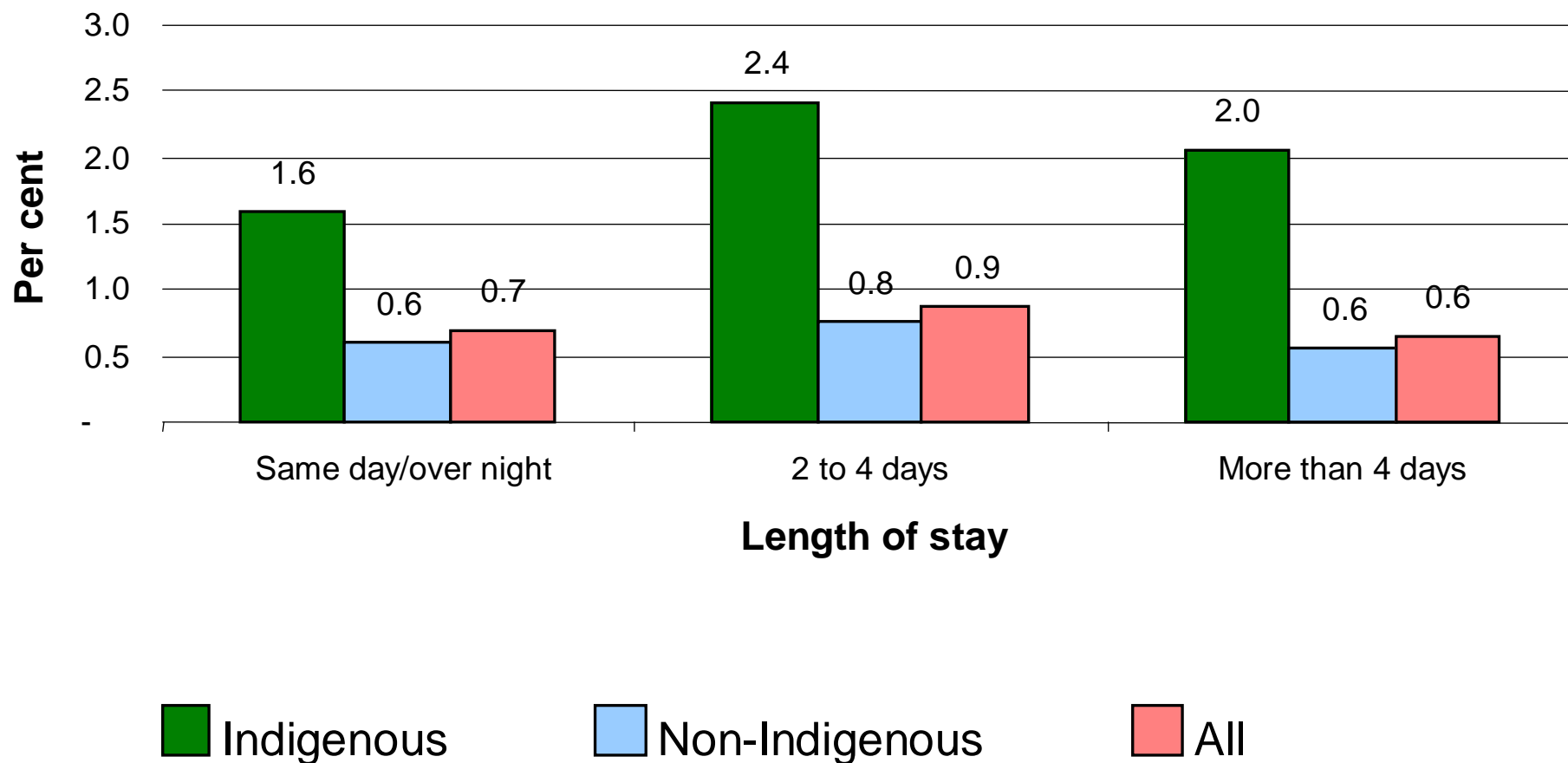
Discharge from hospital at own risk

- Rates high for Indigenous patients
 - Literature shows high likelihood of readmission – significant cost and poor outcomes
 - Large variation in rates between hospitals and districts
 - Potentially a measure of cultural competence of staff and effectiveness of Indigenous liaison services
 - Planned workshop in May with hospital liaison officers to develop protocols of best practice

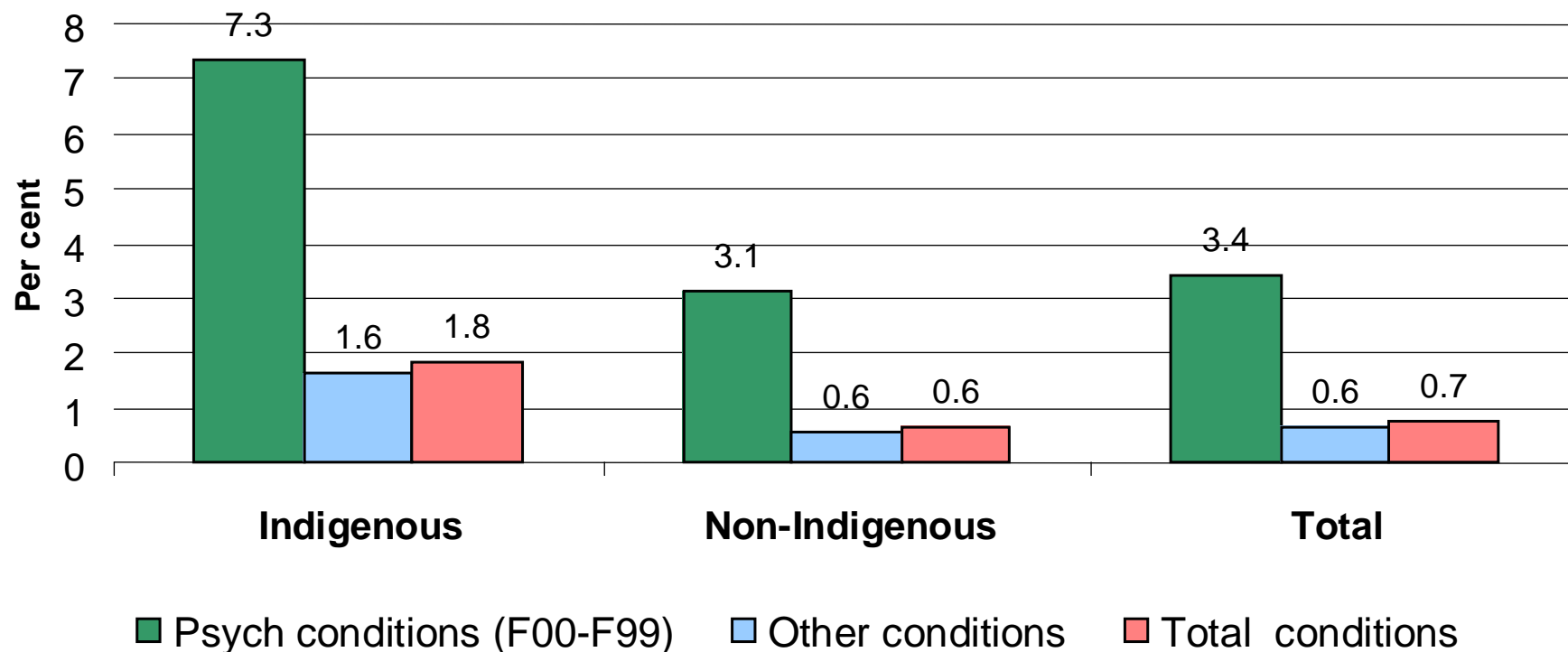
Discharge at own risk from Queensland Public Hospitals by Indigenous status, age group and sex



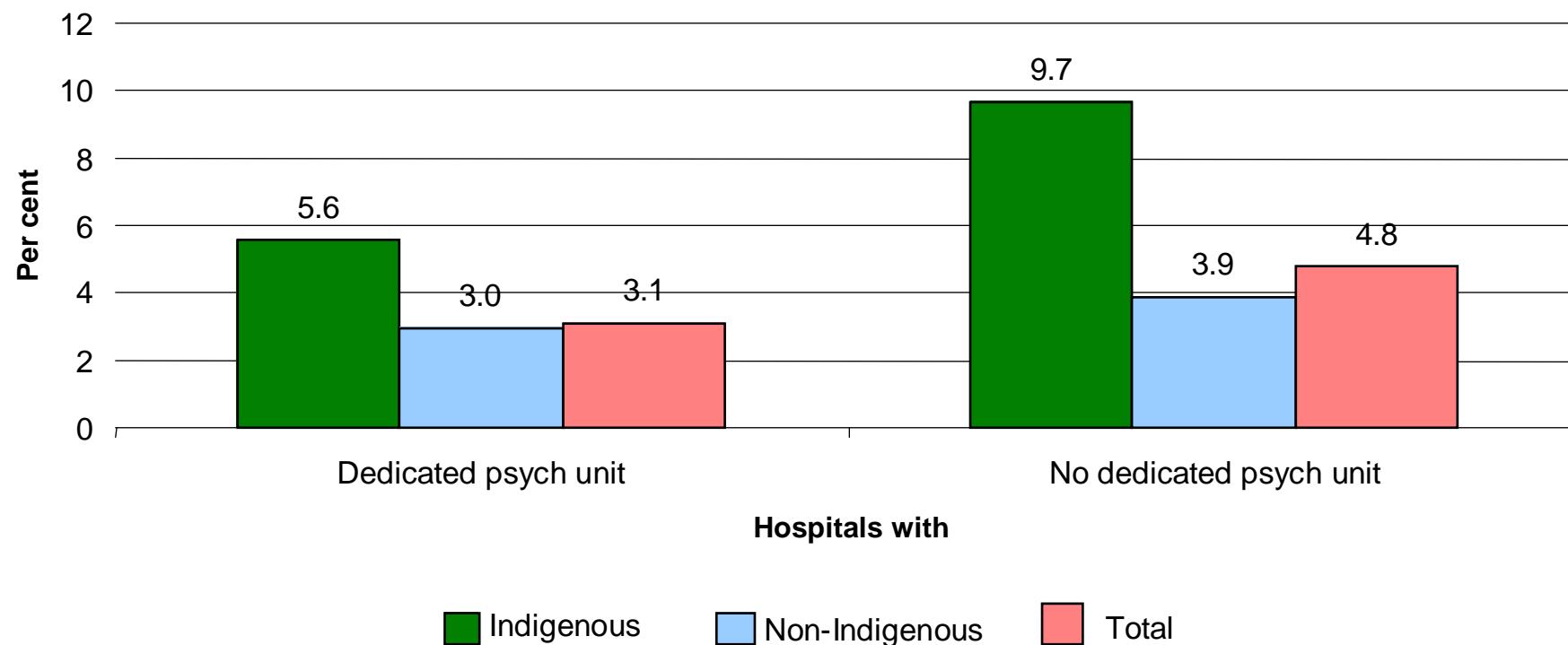
Queensland public hospitals 2003/04 to 2006/07, Per cent discharged at own risk by Indigenous status and length of stay



Queensland Public Hospitals 2003-04/2006-07 - Percentage discharged at own risk by Indigenous status and Psych/other conditions

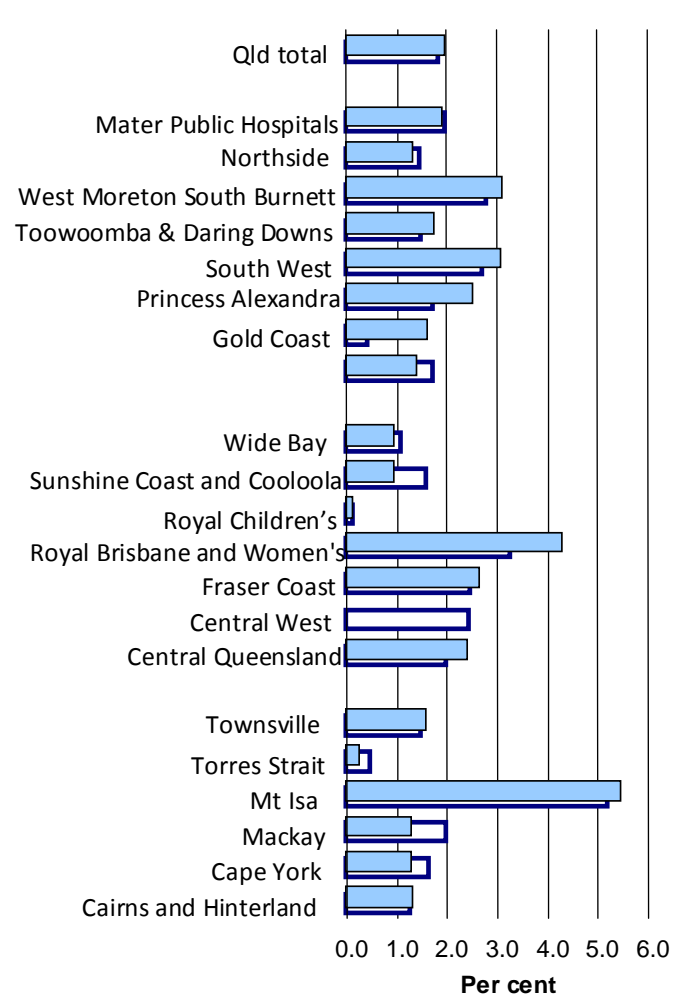


Queensland Public Hospitals 2003-04/2006-07 - Percentage of patients with a psychiatric diagnosis discharged at own risk by Indigenous status and whether hospital has a dedicated psychiatric unit



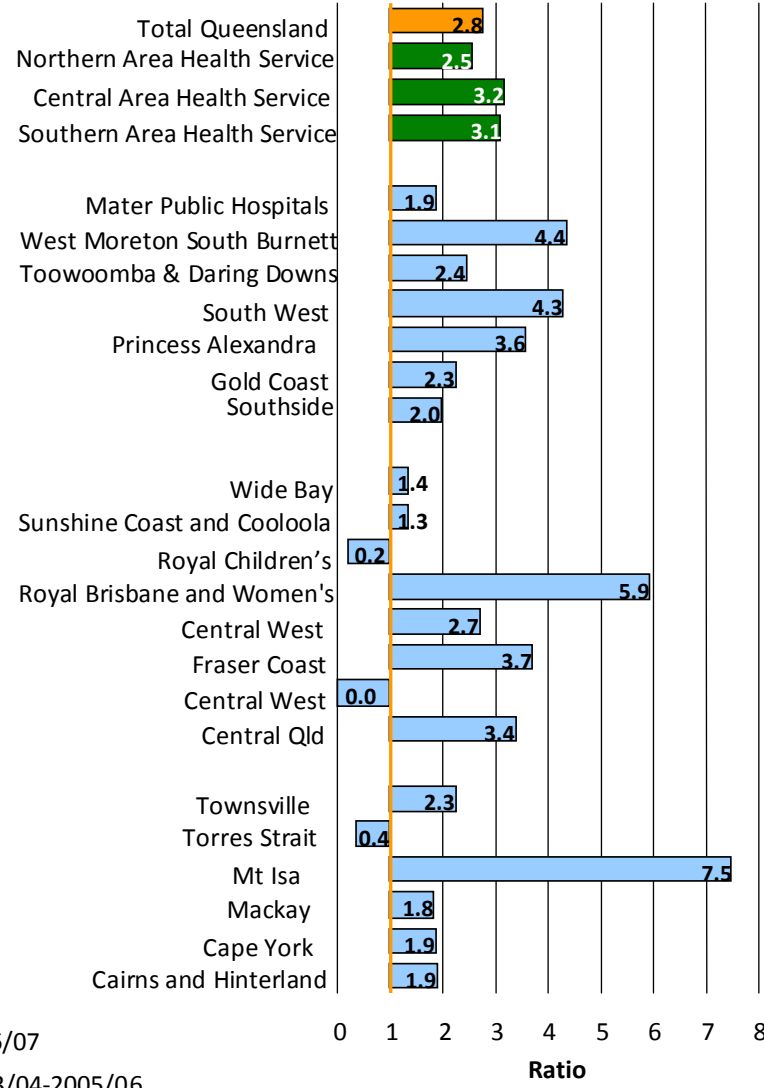
Admitted patients discharged at own risk

Percentage of Indigenous patients discharged at own risk, by facility district, 2003/04-2005/06 & 2006/07



% patients discharged at own risk, 2006/07
 % patients discharged at own risk 2003/04-2005/06

Admitted patients discharged at own risk from public health facilities, by facility district, 2006/07 : ratio of expected to actual*

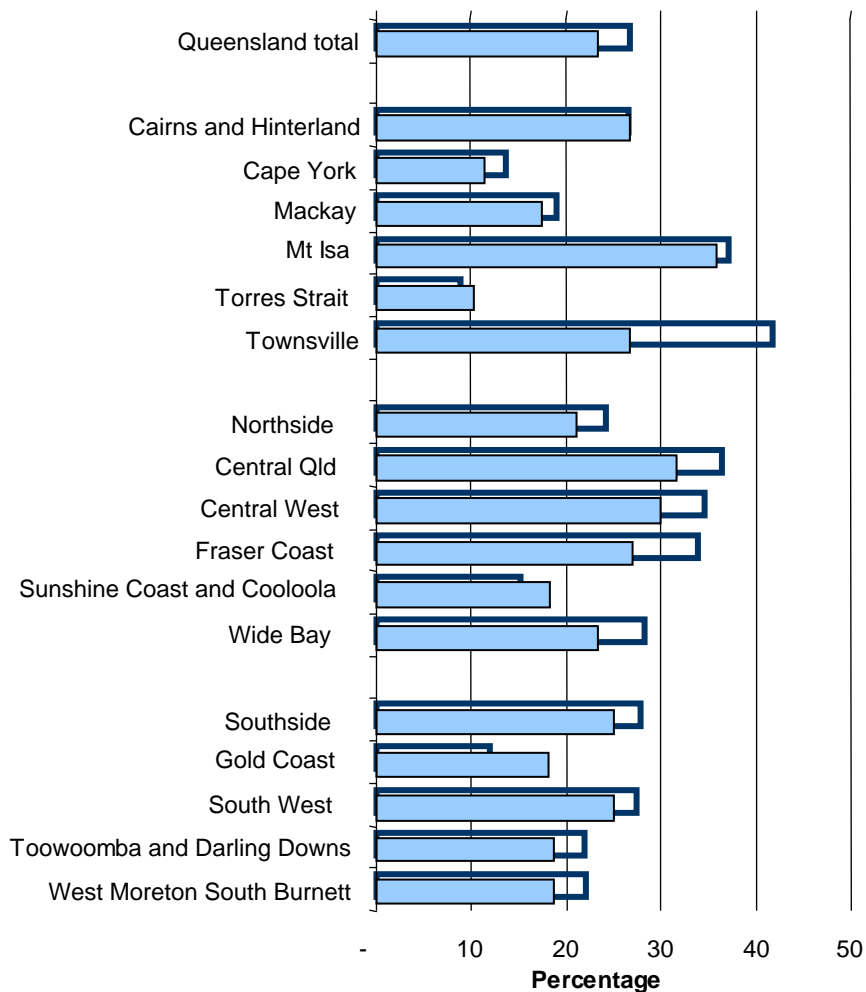


2.8
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 1.9

Service-related and output indicators

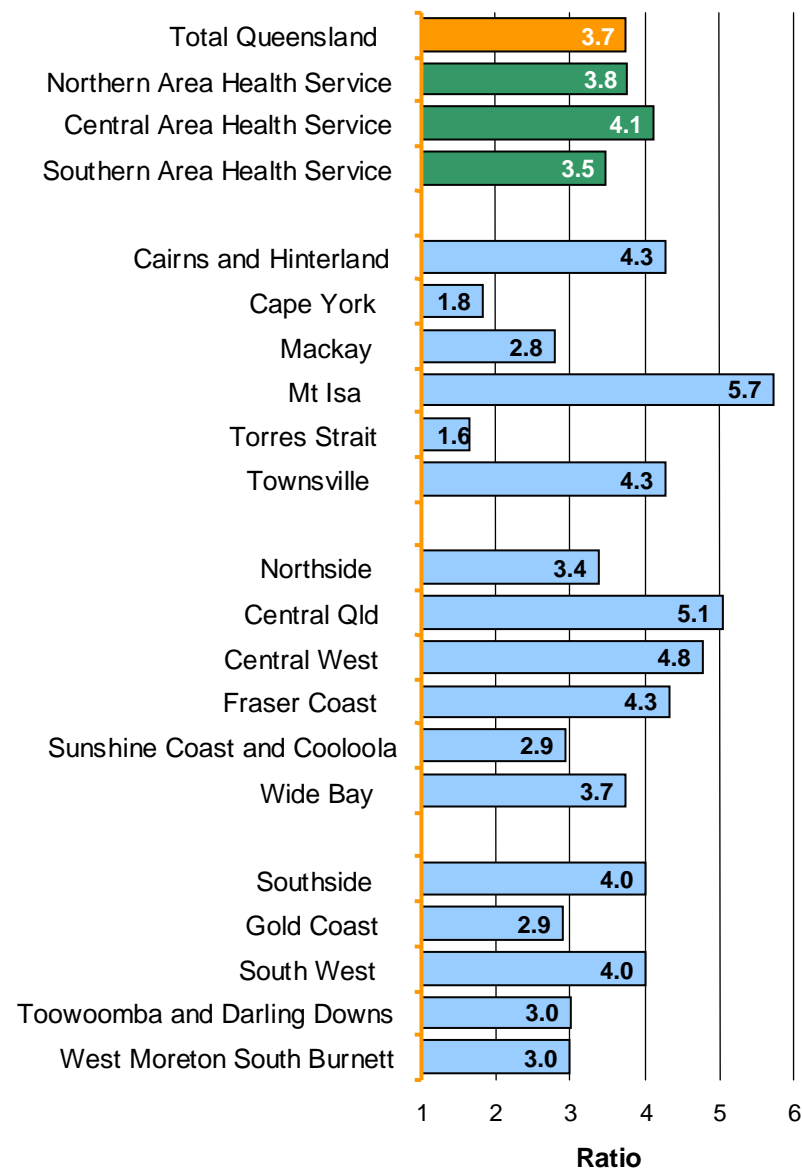
- Antenatal visits
 - Townsville Mothers and Babies Program increased antenatal visits - improved outcomes in birthweights and perinatal mortality
- Maternal smoking and cessation during pregnancy
 - Rates extraordinarily high and extremely low smoking cessation rates
- Low birthweight babies

Percentage of Indigenous mothers who had less than 5 antenatal visits, 2003/04-2005/06 & 2006/07

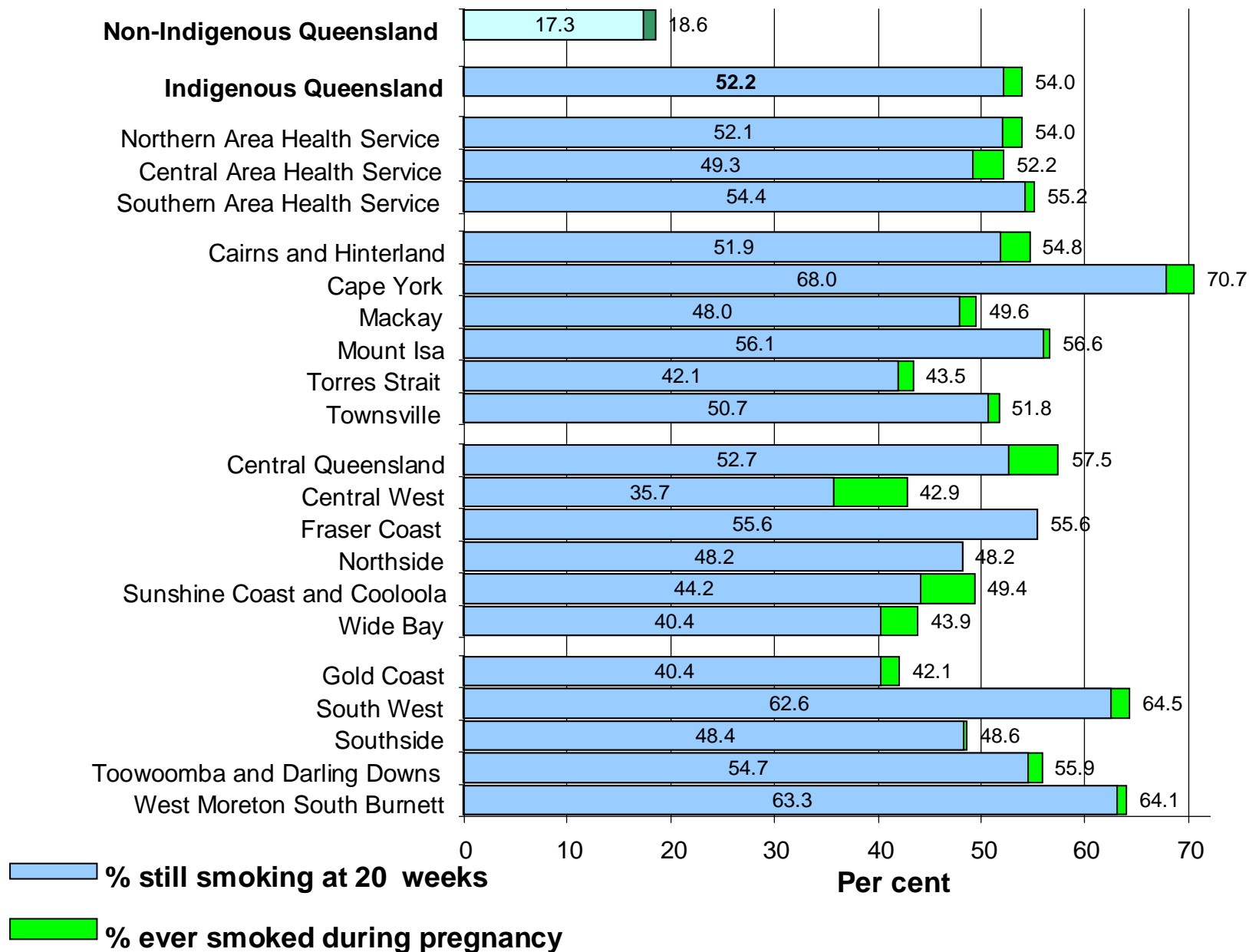


% mothers with less than 5 antenatal visits 2003/04-2005/06
 % mothers with less than 5 antenatal visits 2006/07

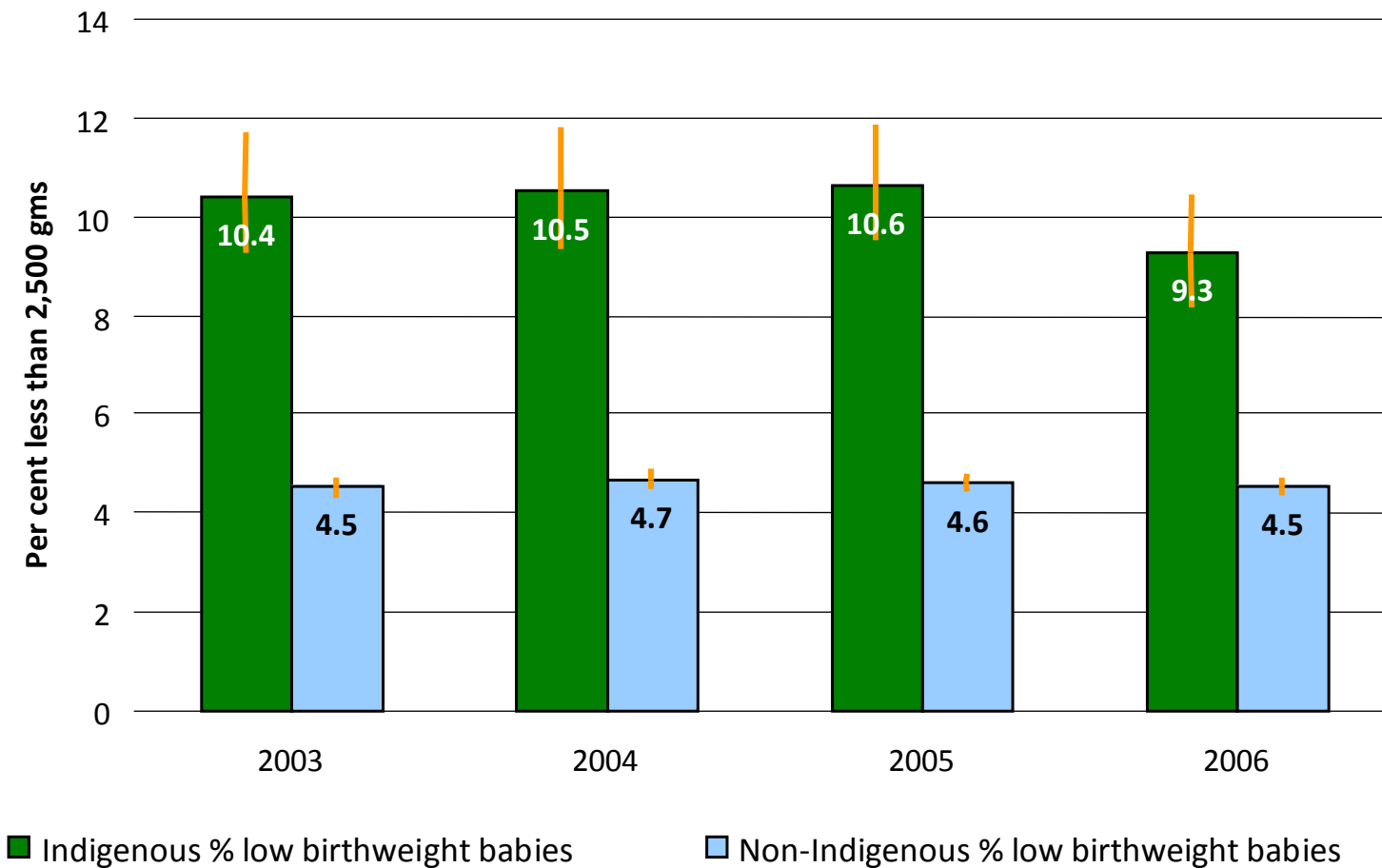
Mothers with less than 5 antenatal visits - District Indigenous & non-Indigenous to Qld non-Indigenous rate/ratios



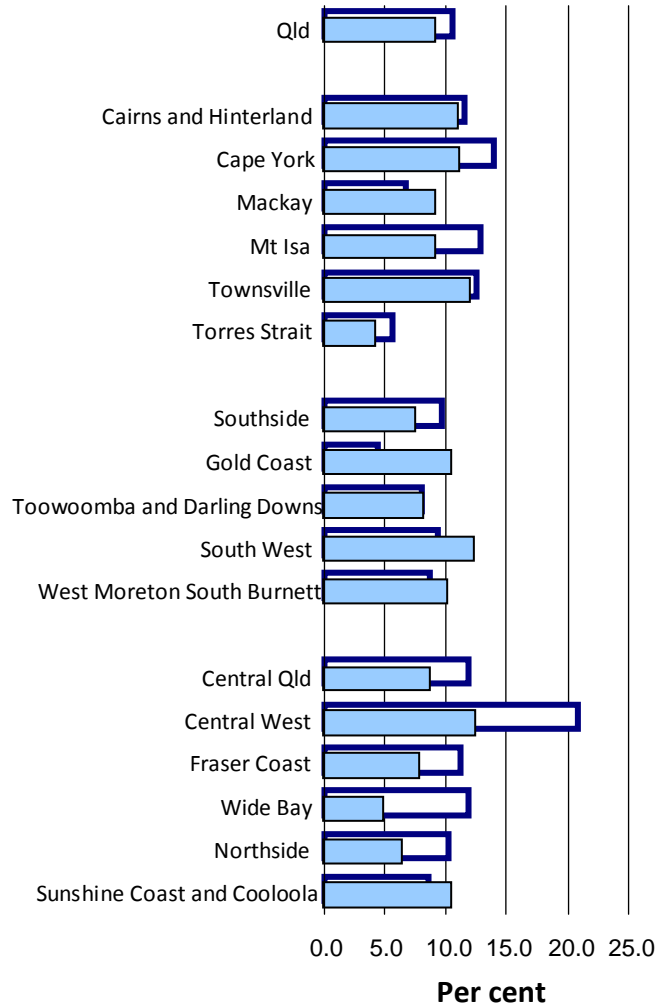
Percentage of Indigenous mothers who smoked during pregnancy July 2005 to December 2006



Births to mothers in Queensland - Percentage of babies less than 2,500 grams, 2003-2006 (Singleton live births only)

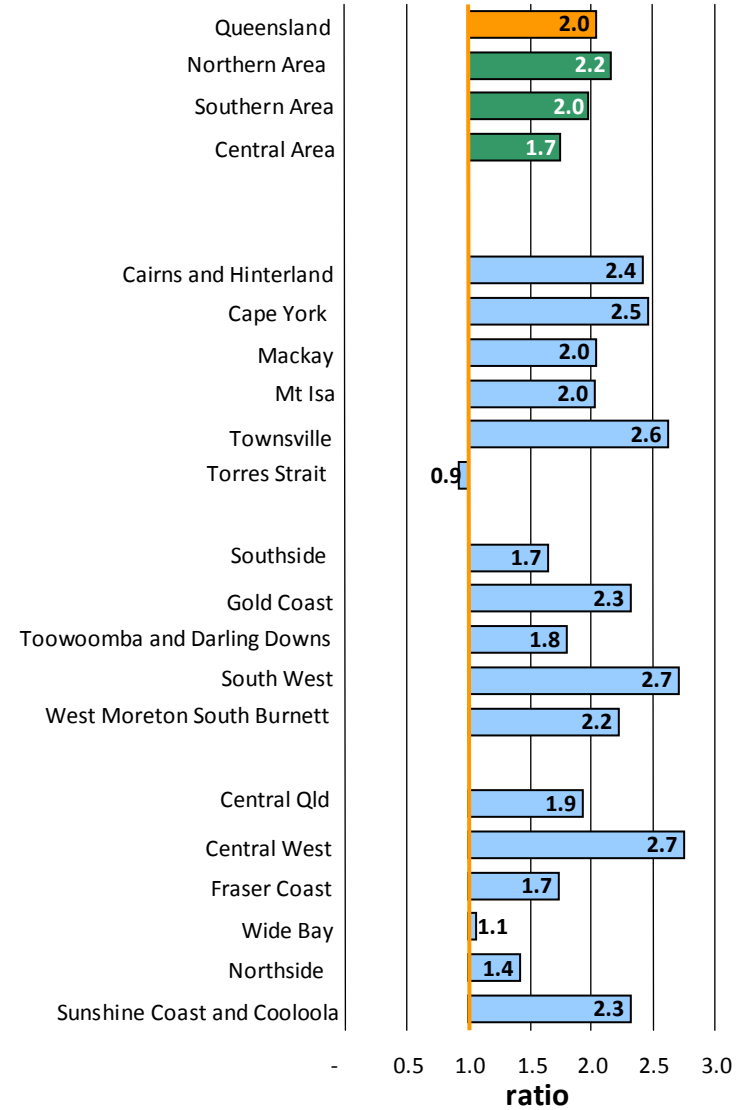


Percentage of Indigenous babies less than 2500 gms at birth, by district of mother, 2003-05-2006

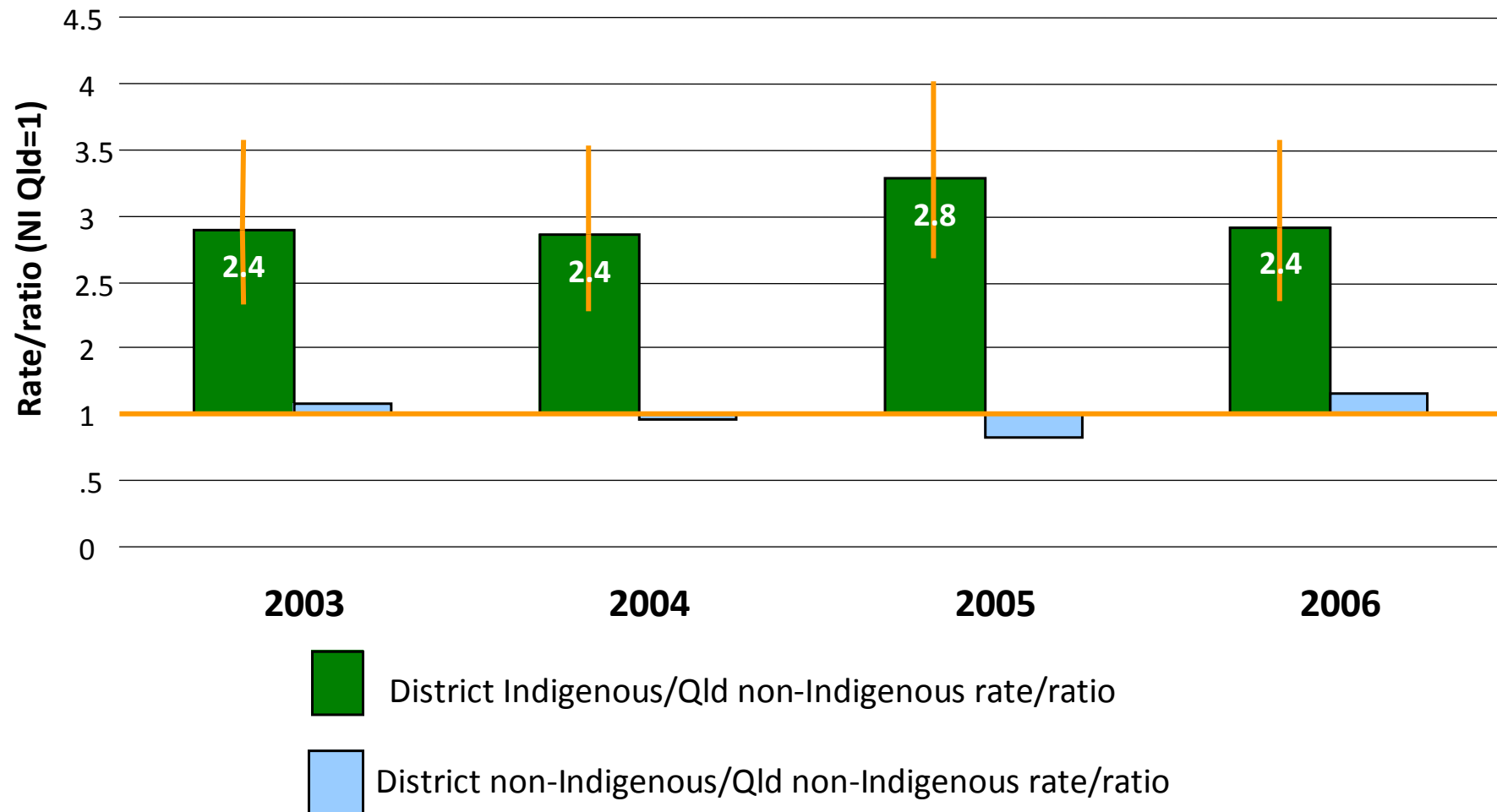


% Babies < 2500 gms, 2006/
 % Babies < 2500 gms, 2003-2005

Indigenous babies less than 2500 gms at birth, by district of mother, 2006 : ratio of expected to actual*



Low birthweight babies – Cairns and Hinterland District Indigenous & non-Indigenous to Qld non-Indigenous rate/ratios, 2003 to 2006

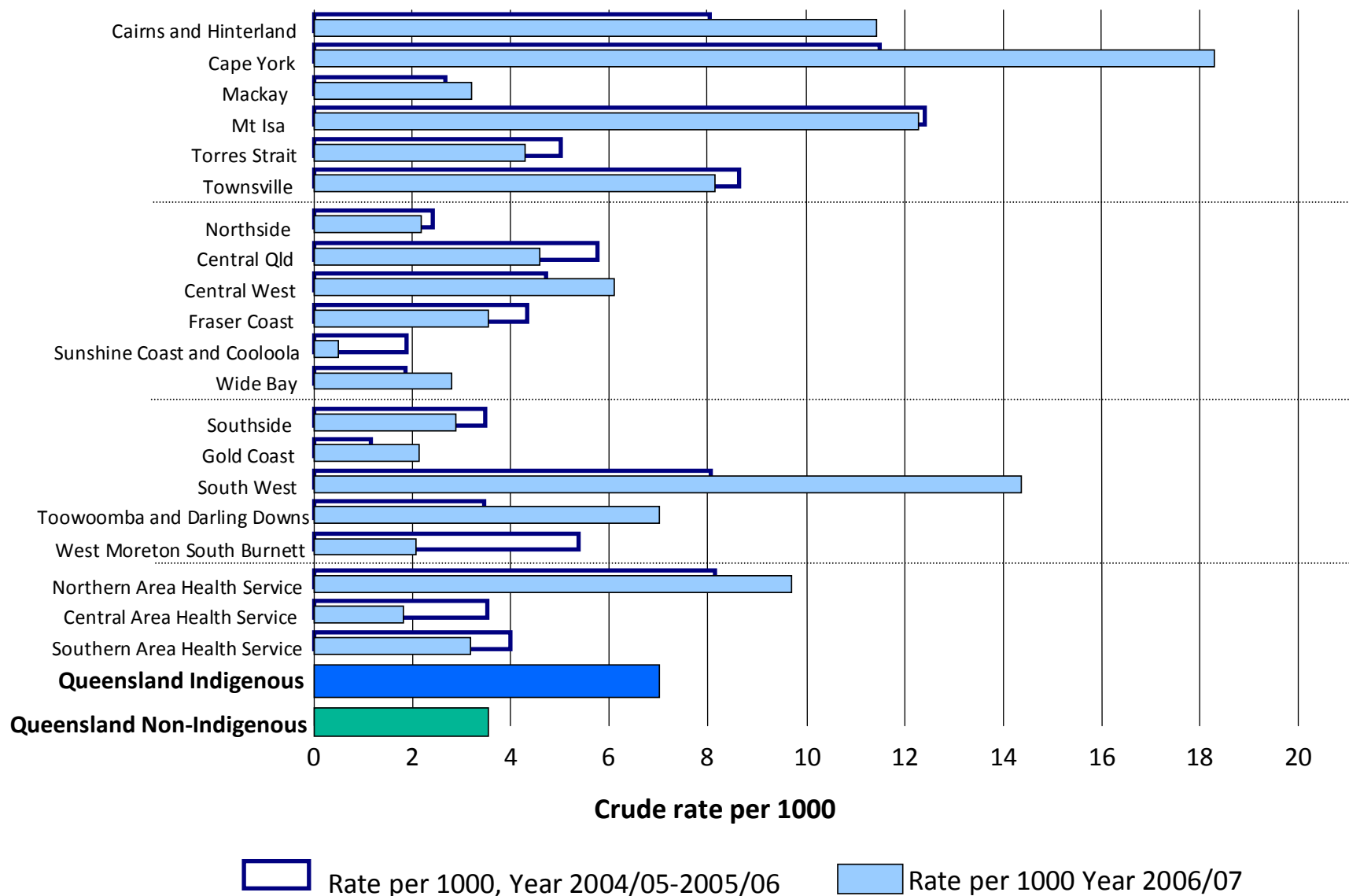


Outcome indicators – Infant and child health

- Hospitalisation 0-14 years
 - Pneumonia and respiratory
 - Injury
- Other conditions which could be included
 - Skin infections
 - Gastro-intestinal infections

Indigenous children aged 0-14 admitted to Queensland hospital for Influenza & Pneumonia (ICD 10 Code J09-J18) 2004/05-2005/06 & 2006/07

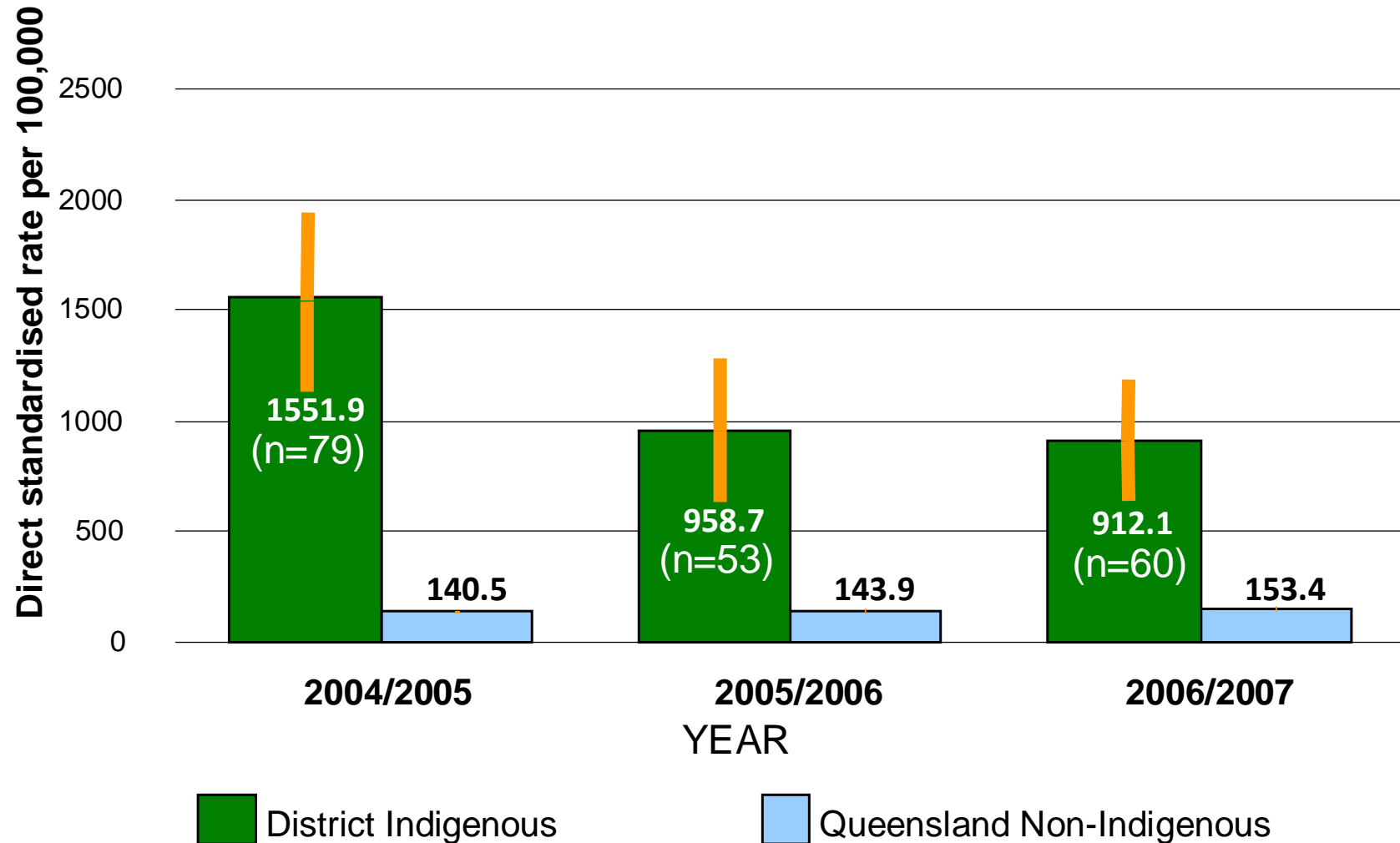
Rate per 1,000 population



Potentially preventable conditions

- Total preventable
- Vaccine preventable (numbers small)
- Chronic disease
 - Heart and circulatory
 - Diabetes complications
 - Other chronic
- Acute
 - Cellulitis
 - Convulsions and epilepsy
 - Dehydration and gastroenteritis
 - Dental conditions
 - Pyelonephritis
 - Other acute

Cape York District - number and rate of Indigenous hospitalisation for cellulitis compared with non-Indigenous Queensland



Where to from here?

- This is the starting point – raises more questions than it answers
 - Why the differentials between districts?
 - Data Quality and data improvement?
 - Can we set district targets?
- Feeding information through to Districts and managers
 - Using QHEPS and Infobank to feed information back to Districts
 - Information roadshows by IIST

Useful websites

- <http://qheps.health.qld.gov.au/hic/infobank>
- <http://www.healthinfonet.ecu.edu.au/>
- <http://datahub.govnet.qld.gov.au/>
- <http://www.atsip.qld.gov.au/>
- www.aihw.gov.au
- www.anu.edu.au/caepr
- <http://www.pc.gov.au>