Acknowledgements

We acknowledge the Traditional Owners of Country throughout Australia and recognise their continuing connection to land, waters and culture. We pay our respects to Elders past and present.

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This report was prepared by Dr Abbey Diaz, Professor John Condon and Associate Professor Lisa Whop.
**Investigators**

**Coordinating Principal Investigator**
Daniel Williamson  
Manager Performance, Aboriginal and Torres Strait Islander Health Branch

**Menzies Team**
Abbey Diaz  
Senior Research Officer, Menzies School of Health Research
Lisa Whop  
Senior Research Fellow, Menzies School of Health Research
John Condon  
Senior Principal Research Fellow, Menzies School of Health Research
Therese Kearns  
Research Fellow, Menzies School of Health Research
Suzanne Moore  
Senior Research Fellow, Menzies School of Health Research
Boyd Potts  
Data Analyst, Menzies School of Health Research
Ross Andrews  
Senior Principal Research Fellow, Menzies School of Health Research
Gail Garvey  
Senior Principal Research Fellow, Menzies School of Health Research

**Queensland Health Team**
Abdulla Suleman  
Principal Policy & Planning Officer, Aboriginal and Torres Strait Islander Health Branch
Alex Kathage  
Principal Policy & Planning Officer, Aboriginal and Torres Strait Islander Health Branch
Lucy Stanley  
Principal Policy & Planning Officer, Aboriginal and Torres Strait Islander Health Branch
Louise Mitchell  
Principal Policy & Planning Officer, Aboriginal and Torres Strait Islander Health Branch

**ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Term</th>
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<tbody>
<tr>
<td>ABS</td>
<td>Australian Bureau of Statistics</td>
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<tr>
<td>ACHI</td>
<td>Australian classification of health interventions</td>
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<td>ACS</td>
<td>Acute coronary syndrome</td>
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<tr>
<td>ARF</td>
<td>Acute rheumatic fever</td>
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<tr>
<td>AHMAC</td>
<td>Australian Health Ministers’ Advisory Council</td>
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<td>AIHW</td>
<td>Australian Institute of health and Welfare</td>
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<td>ARIA+</td>
<td>Accessibility/Remoteness Index of Australia</td>
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<tr>
<td>CABG</td>
<td>Coronary artery bypass graft</td>
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<td>CHF</td>
<td>Congestive heart failure</td>
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<tr>
<td>CVD</td>
<td>Cardiovascular disease</td>
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<td>DLQ</td>
<td>Data Linkage Queensland</td>
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<tr>
<td>ERP</td>
<td>Estimated resident population</td>
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<td>ICD</td>
<td>International classification of disease</td>
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<td>IHD</td>
<td>Ischaemic heart disease</td>
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<td>MI</td>
<td>Myocardial infarction</td>
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<td>NSTEACS</td>
<td>Non-ST-segment elevation acute coronary syndrome (NSTEMI + UA)</td>
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<tr>
<td>NSTEMI</td>
<td>Non-ST-segment elevation myocardial infarction</td>
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<tr>
<td>PCI</td>
<td>Percutaneous coronary intervention</td>
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<tr>
<td>QHAPDPC</td>
<td>Queensland Hospital Admitted Patients Data Collection</td>
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<tr>
<td>RHD</td>
<td>Rheumatic heart disease</td>
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<tr>
<td>SA</td>
<td>Statistical Area</td>
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<tr>
<td>SEIFA</td>
<td>Socioeconomic Indexes for Areas</td>
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<tr>
<td>SLA</td>
<td>Statistical Local Area</td>
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<tr>
<td>STEMI</td>
<td>ST-segment elevation myocardial infarction</td>
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<tr>
<td>UA</td>
<td>Unstable angina</td>
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Executive summary

This study includes Queenslanders admitted to hospital with Ischaemic heart disease (IHD), congestive heart failure (CHF), stroke, rheumatic heart disease (RHD) and/or acute rheumatic fever (ARF) during 2010-2016. Key findings include:

Survival
Compared to other Queenslanders, Aboriginal and Torres Strait Islander people were:

- 2.0 times as likely to die from IHD during their first IHD admission
- 2.2 times as likely to die from IHD after discharge from their first IHD admission
- 2.1 times as likely to die from CHF during their first CHF admission
- 1.1 times as likely to die from stroke during their first stroke admission
- 1.2 times as likely to die from other cause during their first stroke admission
- 1.4 times as likely to die from stroke after discharge from their first stroke admission
- 3.5 times as likely to die from RHD during their first RHD admission

Procedures
- 68% of Queenslanders aged 25-84 years admitted with a principal diagnosis of ACS received at least one therapeutic procedure for ACS during this admission, diagnostic angiography (63%), percutaneous coronary intervention (32%) and coronary artery bypass graft (8%).
- A lower proportion of Aboriginal and Torres Strait Islander people received ACS procedures during their first ACS admission. People who did not receive a therapeutic procedure for ACS during their first ACS admission had a higher ACS re-admission rate and ACS fatality rate than those who did receive a procedure.

Length of stay
- Generally, Aboriginal and Torres Strait Islander people spent one day longer in hospital than other Queenslanders at their index admission. For CHF, however, Aboriginal and Torres Strait Islander people spend one day less in hospital.
- For stroke, the difference in length of stay between Aboriginal and Torres Strait Islander people and other Queenslanders was larger (relatively) for those living in the most advantaged areas
- For RHD, the difference in length of stay between Aboriginal and Torres Strait Islander people and other Queenslanders was seen for those living in major cities, but not elsewhere

Re-admission rate
- Aboriginal and Torres Strait Islander people had a higher 30-month rate of re-admission than other Queenslanders for IHD, CHF, stroke, and ARF, but it was similar for RHD
- Most re-admissions occurred within the first month after discharge from the first index admission and then declined to plateau
- Generally, Aboriginal and Torres Strait Islander people had a higher one-month re-admission rate than other Queenslanders

Differences across age groups
- The average age at time of index admission was lower for Aboriginal and Torres Strait Islander people than other Queenslanders in all study cohorts.
- The risk of dying from the index condition during the index hospital admission moderately increased with increasing age for the IHD, CHF, stroke, and RHD cohorts.
The risk of dying from index condition in the three years post discharge from the index admission increased with increasing age for the IHD, stroke, and RHD cohorts.

Generally, age was not associated with length of stay or 30-month re-admission rate.

Differences between men and women

- Generally, there were more men than women hospitalised for CVD during the study period, except for RHD and, for Aboriginal and Torres Strait Islander people, CHF and Stroke.
- Women had lower cause-specific death rates in the 36-months after discharge from their index admission, for IHD and RHD, and, for Aboriginal and Torres Strait Islander people, stroke.
- For the IHD cohort, women had a shorter length of stay, on average, compared to men. For other cohorts, sex was not associated with length of stay.
- For the IHD, CHF and stroke cohorts, women had significant lower 30-month re-admission rates compared to men.

Differences across residential and service areas

- Aboriginal and Torres Strait Islander people were more likely to live in poorer and non-urban areas and be admitted to health services in northern Queensland and less likely to be admitted to private hospitals.
- Socioeconomic advantage was associated with:
  - Less deaths due to IHD during the index admission and the three years after discharge from the index admission for the IHD cohort, although the latter was only observed in other Queenslanders.
  - Less deaths due to other causes during the index admission and the three years post discharge for the CHF cohort.
  - Less deaths due to other causes during the index admission for the RHD cohort.
- Residential remoteness was associated with:
  - Increased cause-specific deaths during the index admission for the IHD and RHD cohorts
  - Longer length of stay during the index admission, in general.
  - Increased 30-month re-admission rate for the IHD and Stroke cohorts.
- Compared to Metro North HHS, private hospital patients were:
  - Less likely to die during the index admission from any cause, and the 36-months after discharge for the IHD cohort
  - Less likely to die during the index admission, for any cause, for the Stroke cohort
  - Had shorter length of stay, on average, during their index IHD and stroke admissions
  - Had a reduced 30-month re-admission rate for the Stroke cohort.

Differences by co-morbidity level

- The most common non-cardiac comorbidities were diabetes, renal disease, pulmonary disease, and cancer. Except for cancer, these comorbidities were more common in Aboriginal and Torres Strait Islander people.
- As comorbidity score increased the proportion of the IHD, stroke and RHD cohorts who died during their index admissions increased, more so for other causes of death.
- The 36-month cause-specific death rate after discharge from the index admission increased for IHD, stroke and RHD cohorts, as did the cause-specific death rate for the CHF cohort.
- As comorbidity increased, the average length of stay increased for the IHD and RHD cohorts.
- Generally, those with comorbidity compared to those without, had an increased re-admission over the 30-month follow-up.