
Infectious disease episodes in Queensland hospitals: Who are the patients?

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The risk of hospitalisation for infectious diseases* differs substantially between different patient groups. In analysing admission data from New Zealand hospitals between 1989 and 2008, Baker et al.¹ showed that the most vulnerable populations at risk for hospital admissions for infectious diseases in New Zealand are the youngest and oldest, the most economically deprived, and Maori (Indigenous New Zealanders) and Pacific people. A previous Queensland Health analysis² also found significant disparities in overall health outcomes of the young, old and economically disadvantaged, as well as Indigenous Queenslanders and people living in remote areas.

Between 2004–05 and 2013–14, infectious disease rates have substantially increased in Queensland hospitals³, particularly in public hospitals.⁴ This StatBite investigates which patients are most susceptible to being admitted for acute care to a Queensland hospital with a principal diagnosis of an infectious disease.

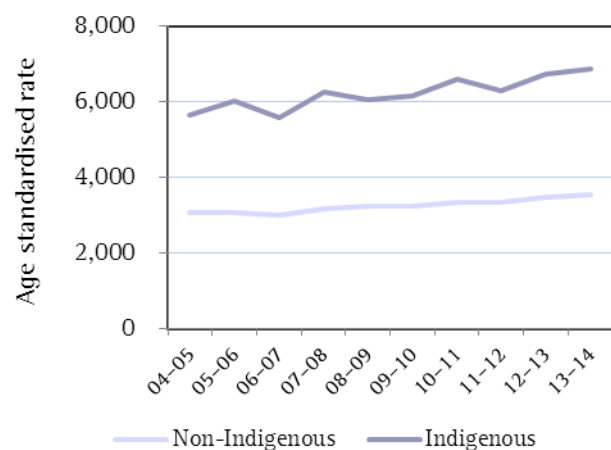
Analysis showed that in 2013–14 the most vulnerable age groups to be admitted to a Queensland hospital for an infectious disease were the 0–4 age group and the older age groups. Rates for the older age groups started to rise substantially from 65–69 years of age and continued to increase in older age groups. Infectious diseases made the greatest contribution to all separations for children under 5, accounting for 34% of all separations, compared to 9% for all age groups combined. Analysis also showed that females had slightly (3%) higher separation rates than males.

Figure 1 shows that separation rates for infectious diseases were substantially higher for Indigenous Queenslanders compared to non-Indigenous Queenslanders. In 2013–14, Indigenous people were 1.9 times more likely to be separated from a Queensland hospital for an infectious disease compared to non-Indigenous people. This gap between the two population groups has widened over the 10 year study period from 1.8 times in 2004–05.

Figure 2 shows age-standardised separation rates for infectious diseases by remoteness and socioeconomic status over a 9 year period.

In 2013–14, the infectious disease separation rate for people living in very remote and remote areas was 1.6 times higher than the rate for people living in major cities. This gap has substantially narrowed since 2005–06, when the rate was 2.3 times higher than the rate for major cities.

Figure 1. Aged-standardised separation rates for infectious disease by Indigenous status, public and private hospitals, Queensland, 2004–05 to 2013–14^a



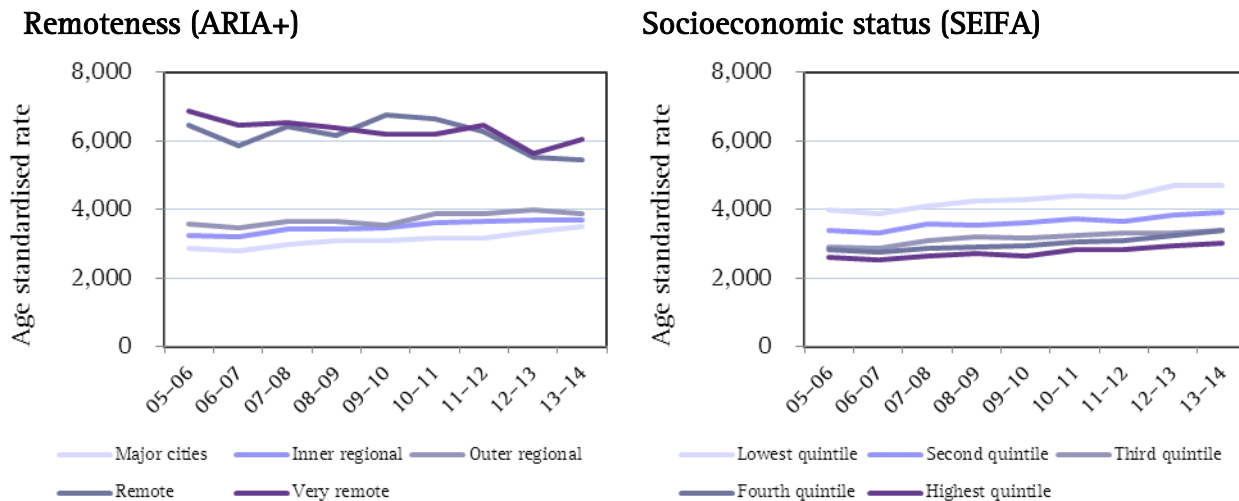
Source: Queensland Hospital Admitted Patient Data Collection.

Rate per 100,000 population; Standardised to the 2001 Australian population.

* Infectious diseases were defined by Baker et al.'s¹ definition. See [Technical Appendix](#) for further details.

Separation rates also differed by socioeconomic status, with the largest difference being between the most economically deprived (lowest quintile) and the most advantaged (highest quintile). In 2013–14, the infectious disease separation rate for people within the lowest socioeconomic quintile was 1.6 times higher than the rate for people in the highest socioeconomic quintile, slightly greater than in 2005–06 (1.5 times higher).

Figure 2. Aged-standardised separation rates for infectious disease by remoteness and socioeconomic status, public and private hospitals, Queensland, 2005–06 to 2013–14^a



Source: Queensland Hospital Admitted Patient Data Collection.

Rate per 100,000 population; Standardised to the 2001 Australian population.

ARIA+ and population-weighted SEIFA are only available from 2005–06 onwards. Hence, graphs by remoteness and socioeconomic status cover the years 2005–06 to 2013–14. ARIA+ and SEIFA geographies are based on 2006 census from 2005–06 to 2011–12 and based on 2011 census in 2013–14.

For socioeconomic status, the lowest SEIFA quintile is the most disadvantaged and the highest quintile is the most advantaged.

In summary, infectious disease separation rates are highest in older age groups, but are also high among children under 5. Separations for infectious diseases are disproportionately high for Indigenous people, people living in remote/very remote areas and people with low socioeconomic status. Future analysis will identify the specific infectious diseases responsible for the high rates of hospitalisation. Initiatives targeted at potentially preventable infections might assist in reducing the burden of infectious diseases on the population.

References

- 1 Baker MG, Barnard LT, Kvalsvig A, Verrall A, Zhang J, Keall M, Wilson N, Wall T & Howden-Chapman P. Increasing incidence of serious infectious diseases and inequalities in New Zealand: a national epidemiology study. *Lancet* 2012; 379:1112-1119. *MJA* 2012; 196(5):293-294.
- 2 Queensland Health. Measuring health inequalities in Queensland: Current picture and trends since 2001. Population Epidemiology Unit, Queensland Health: Brisbane; 2010.
- 3 Webster R, Queensland Health. (2013). Trends in infectious disease admissions in Queensland public hospitals. Statbite #55. <http://www.health.qld.gov.au/hsu/pdf/statbite/statbite55.pdf>
- 4 Queensland Health. Infectious disease: What is the burden on the hospital system? Health Statistics Branch, Queensland Health: Brisbane; 2015. StatBite #65. <http://www.health.qld.gov.au/hsu/pdf/statbite/statbite65.pdf>

^a Includes only episodes with an episode type of 'acute', 'newborn' (where the newborn has spent at least one day in acute care) or 'other care'. Episodes were excluded if the patient was not a Queensland resident or if the record was a transfer from another hospital.