2 Methods

2.1 Selection of ACS conditions

The approach to selecting the conditions involved the following steps:

- A review of international and national literature was undertaken and informed the early stages of the project.
- Initial discussions were held with various agencies, including the Victorian Department of Human Services (Vic DHS); Australian Institute of Health and Welfare (AIHW); and New South Wales Department of Health (NSW Health).
- A draft list of conditions was sent to the National Public Health Information Working Group (now Population Health Information Development Group) for comment.
- Following changes in code sets used by some agencies, PHIDU collaborated with NSW Health to produce an agreed set of conditions. In addition, PHIDU adopted the method of using procedure blocks, rather than procedure codes, for the exclusions for specific conditions (developed by NSW Health – see *Section 1.5* above).

The final condition list is included in Table A1 in Appendix 1.1.

2.2 Data sources

Estimated resident population data were purchased from the Australian Bureau of Statistics (ABS).

Hospitalisations data for the State and Territories were supplied from the National Hospital Morbidity Database at AIHW. The data included admissions by age, sex, condition and area.

Measures of remoteness (using the ASGC remoteness classification[4]) and disadvantage (using the ABS Index of Relative Socio-Economic Disadvantage (IRSD)[5]) were added subsequently by matching these measures at the Statistical Local Area (SLA) level to the address of the patient as recorded in patient records.

[4] The ASGC remoteness classification allocates areas (e.g. SLAs) to one of five classes, based on road distances to service centres (towns).

[5] The IRSD is an area-based, summary measure of socioeconomic disadvantage and is calculated from variables relating to education, labour force status, occupation, Indigenous status, etc of individuals and families.

2.3 Data methods and analysis

Calculation of rates and mapping

Admission rates were age standardised to the Australian population by the indirect method.

The data were set up in HealthWIZ[6] to allow for production of counts and admission rates by age, sex, condition and area.

The results were then exported as required from HealthWIZ to HealthMap (a proprietary mapping package developed by PHIDU) for production of maps.

The rates were mapped by health region of usual residence of the person admitted to hospital. For further information, refer to the 'Introduction to map and text pages', page 23.

Data analysis: general

Rate ratios

'Rate ratios' show the differential between the standardised rate for two groups – for example between males and females and between the most disadvantaged areas (Quintile 5) and the least disadvantaged areas (Quintile 1). The statistical significance of rate ratios is shown with an asterisk(s). A single asterisk indicates that the ratio is statistically significant at the 5% confidence level, that is, that the likelihood of the observed ratio being due to change or random error is less than 5%. A double asterisk indicates that the observed ratio is statistically significant at the 1% confidence level.

ASGC remoteness classification

The ASGC remoteness classification has five remoteness classes to which SLAs can be allocated: Major Cities of Australia, Inner Regional, Outer Regional, Remote and Very Remote.

Socioeconomic status

The IRSD was used to allocate admissions to five groups (quintiles) of similar socioeconomic status (referred to as quintiles of socioeconomic disadvantage of area).

SLAs were ranked by their IRSD score and then allocated to one of five groups, each with

[6] HealthWIZ is a publicly available database for exploring statistical data. It is produced by Prometheus Information Pty Ltd for the Australian Government Department of Health and Ageing. This project, and the data on which it is based, is not available on the public release version.

approximately 20% of the population of the area under analysis (Australia, or State/Territory). Rates were then calculated by quintile for each condition.