

Notes on the Online Data/ Interactive Mapping: Population health profiles of the Divisions of General Practice; and Statistical Local Area data

These notes are based on the data presented in the *Population health profiles for Divisions of General Practice (release 1: November 2005)* and *Population health profiles for Divisions of General Practice: supplement (release 2: March 2007)*, available from www.publichealth.gov.au. The **Data and Interactive Mapping** web links provide data (in Excel spreadsheet)/ maps for Division of General Practice (DGP) areas, and also present the data/ maps at the Statistical Local Area (SLA), where available.

Data sources and limitations

Data sources and geographic area

Table 1: Data sources and geographic area

Data/ Interactive Mapping	Source	Geographic area
Socio-demographic (release 1: November 2005)		
Annual population change; Population by age	Compiled by PHIDU using the Estimated Resident Population, ABS, 30 June for the periods shown	DGP; SLA
IRSD	Compiled by PHIDU using the ABS SEIFA package, Census 2001	DGP; SLA
All other socio-demographic variables	Compiled by PHIDU: data were extracted by postal area from the ABS Population Census 2001 ¹ , except for the following indicators: - <i>Indigenous</i> – Compiled by PHIDU from Experimental estimates of Aboriginal and Torres Strait Islander people, ABS 2001 (unpublished) - <i>Full time secondary education participation at age 16</i> – Compiled by PHIDU from Census 2001 (unpublished) - <i>Unemployment rate / Labour force participation</i> – Compiled by PHIDU: extracted from 'Small Area Labour Markets Australia', June Quarter 2003, Department of Employment and Workplace Relations - <i>Households receiving rent assistance</i> – Compiled by PHIDU from Centrelink, December Quarter 2001 (unpublished)	DGP; SLA DGP; SLA DGP; SLA DGP; SLA
Socio-demographic (release 2: March 2007)		
Annual population change; Population by age	Compiled by PHIDU from Estimated Resident Population, ABS, 30 June for the periods shown	DGP; SLA
Population projections	Compiled by PHIDU from ABS, 30 June 2020 (unpublished)	DGP; SLA
Jobless families	Compiled by PHIDU from ABS, 2001 (unpublished)	DGP; SLA
Private health insurance	Compiled by PHIDU from Hansard, 2001	DGP; SLA
Indigenous socio-demographic (release 1: November 2005)		
Indigenous/ non-Indigenous population by age	Compiled by PHIDU from Experimental estimates of Aboriginal and Torres Strait Islander people, ABS 2001 (unpublished)	select DGPs only
All other Indigenous/ non-Indigenous data	Compiled by PHIDU from ABS Population Census 2001 (unpublished)	select DGPs only
GP services and supply (release 1: November 2005)		
GP services per head of population	<i>DGP data</i> - GP services data: supplied by Department of Health and Ageing, 2003/04; Population data: Estimated Resident Population, ABS, mean of 30 June 2003 and 30 June 2004 populations <i>SLA data</i> - GP services data: supplied by Health Insurance Commission, 2001/02; Population data: Estimated Resident Population, ABS, mean of 30 June 2001 and 30 June 2002 populations	DGP; SLA

Table 2: Data sources and geographic area ...continued

Data/ Interactive Mapping	Source	Geographic area
GP services and supply (release 1: November 2005) ...continued		
GP supply	Compiled by PHIDU from: GP supply data: supplied by Department of Health and Ageing, 2003/04; and Population estimates used in calculating the population per GP rates: - Census count ² , ABS Census 2001, scaled to 2003/04 - Usual Resident Population ³ , ABS Census 2001, scaled to 2003/04 - Day-time population: calculated from journey to work data, ABS Census (URP) 2001 (unpublished); and 2001 Census URP, scaled to 2003/04 - Estimated Resident Population, ABS, mean of 30 June 2003 and 30 June 2004 populations	DGP only
GP services and supply (release 2: March 2007)		
Patient flow; GP catchment	Compiled by PHIDU from Medicare Australia, 2003/04	DGP only
Immunisation (release 1: November 2005)		
Immunisation at age one	Compiled by PHIDU from National Centre for Immunisation Research and Surveillance, 2002	DGP; SLA
Chronic disease estimates and risk factors (release 1: November 2005; release 2: March 2007)		
Chronic disease estimates and risk factor prevalence	Compiled by PHIDU from using data estimated from the 2001 National Health Survey (NHS), ABS (unpublished)	DGP; select SLAs (non-remote not shown)
Avoidable hospitalisations (release 2: March 2007)		
Hospital admissions resulting from ambulatory care-sensitive conditions	National Hospital Morbidity Database at Australian Institute of Health & Welfare, 2001/02; data produced in HealthWIZ by Prometheus Information (not available in public release dataset)	DGP only Please refer to the Atlas of Avoidable Hospitalisations in Australia: ambulatory care-sensitive conditions, available from www.publichealth.gov.au , showing variations by health region
Avoidable mortality (release 2: March 2007)		
Avoidable and amenable mortality	ABS Deaths, 1997 to 2001; data produced in HealthWIZ by Prometheus Information (not available in public release dataset)	DGP only Please refer to the Australian and New Zealand Atlas of Avoidable Mortality, available from www.publichealth.gov.au , showing variations by ABS Statistical Subdivision
Premature mortality (release 2: March 2007)		
Deaths before 75 years of age	Compiled by PHIDU from ABS Deaths, 2000 to 2002	DGP; SLA

¹ All data extracted from Usual Residents Profile, except data variables only released in the Basic Community Profile

² *Census count* - those counted in the Division on Census night, including tourists, business people and other visitors

³ *Usual Resident Population* - those who usually live there and who were in Australia at the time and would have provided details in the Census at the address where they were counted

Chronic diseases and associated risk factors

The data for chronic conditions and risk factors have been estimated from the 2001 National Health Survey (NHS), conducted by the ABS: see note below on synthetic estimates. The NHS sample includes the majority of people living in private households, but excludes the most remote areas of Australia. These areas cover 86.4% of Australia's land mass and comprise just 3% of the total population, however, 28% of Australia's Indigenous population live in these areas. Thus it has not been possible to produce these estimates for Divisions with relatively high proportions of their population in the most remote areas of Australia.

The data for chronic conditions and risk factors are self-reported, reported to interviewers in the 2001 NHS. Table 2 includes notes relevant to this data.

Table 2: Notes on estimates of chronic diseases and associated risk factors

Indicator	Notes on the data
Estimates of chronic disease and injury (release 1: November 2005)	
Long term conditions	- Respondents were asked whether they had been diagnosed with any long term health condition (a condition which has lasted or is expected to last for six months or more), and were also asked whether they had been told by a doctor or nurse that they had asthma, cancer, heart and circulatory conditions, and/or diabetes
Injury event	- Injuries which occurred in the four weeks prior to interview
Estimates of measures of self-reported health (release 1: November 2005)	
Very high psychological distress levels (K10) [18+ years]	- Derived from the Kessler Psychological Distress Scale-10 items (K-10), which is a scale of non-specific psychological distress based on ten questions about negative emotional states in the four weeks prior to interview. 'Very high' distress is the highest level of distress category (of a total of four categories)
Fair or poor self-assessed health status [15+ years]	- Respondent's general assessment of their own health, against a five point scale from excellent through to poor – 'fair' or 'poor' being the two lowest in the scale
Estimates of selected risk factors (release 1: November 2005)	
Overweight (not obese) [15+ years]	- Based on self-reported height and weight; BMI calculated and grouped into categories (to allow reporting against both WHO and NHMRC guidelines) - overweight: 25.0 to less than 30.0
Obese [15+ years]	- Based on self-reported height and weight; BMI calculated and grouped into categories (to allow reporting against both WHO and NHMRC guidelines) – obese: 30.0 and greater
Smokers [18+ years]	- Respondent's undertaking regular (or daily) smoking at the time of interview
Physical inactivity [15+ years]	- Did not exercise in the two weeks prior to interview through sport, recreation or fitness (including walking) – excludes incidental exercise undertaken for other reasons, such as for work or while engaged in domestic duties
High health risk due to alcohol consumed [18+ years]	- Respondents estimated average daily alcohol consumption in the seven days prior to interview (based on number of days and quantity consumed). Alcohol risk levels were grouped according to NHMRC risk levels for harm in the long term, with 'high risk' defined as a daily consumption of more than 75 ml for males and 50 ml for females
Estimates of chronic disease and selected risk factors combined (release 2: March 2007)	
Had asthma and were smokers (18+ years)	- Respondents were asked whether they had been told by a doctor or nurse that they had asthma, and were undertaking regular (or daily) smoking at the time of interview
Had type 2 diabetes and were overweight/ obese (15+ years)	- Respondents were asked whether they had been told by a doctor or nurse that they had type 2 diabetes, and were overweight or obese, based on self-reported height and weight; BMI calculated and grouped into categories (to allow reporting against both WHO and NHMRC guidelines) - overweight: 25.0 to less than 30.0, obese: 30.0 and greater

Note: For a full description, refer to *ABS 2001 National Health Survey, Cat. No. 4364.0* and *ABS 2001 Health Risk Factors, Cat. No. 4812.0*

Methods

Synthetic estimates

The estimates of the prevalence of chronic disease and associated risk factors have been predicted for a majority of SLAs across Australia, using modelled survey data collected in the 2001 ABS National Health Survey (NHS) and known characteristics of the area. A synthetic prediction can be interpreted as the likely value for a 'typical' area with those characteristics: the SLA is the area level of interest for this project (where SLAs had small populations they were grouped to larger areas). This work was undertaken by the Australian Bureau of Statistics, as they hold the NHS unit record files: the small area data were compiled by PHIDU.

The approach used is to undertake an analysis of the survey data for Australia to identify associations in the NHS data between the variables that we wish to predict at the area level (eg. prevalence of chronic conditions and risk factors) and the data we have at the area level (eg. socioeconomic status, use of health services). The relationship between these variables for which we have area level data (the predictors) and the reporting of chronic conditions in the NHS is also a part of the model that is developed by the ABS. For example, such associations might be between the number of people reporting specified chronic conditions in the NHS and:

- the number of hospital admissions (in total, to public and to private hospitals, by age, sex and diagnosis),
- socioeconomic status (as indicated by Census data, or for recipients of government pensions and benefits), and
- the number of visits to a general medical practitioner.

The results of the modelling exercise are then applied to the SLA counts of the predictors. The prediction is, effectively, the likely value for a typical area with those characteristics. The raw numbers were then age-standardised, to control for the effects of differences in the age profiles of areas.

The numbers are estimates for an area, not measured events as are death statistics: they should be used as indicators of likely levels of a condition or risk factor in an area.

Premature deaths

Details of deaths by SLA were purchased from the ABS. The raw numbers were then age-standardised, by the indirect method, to control for the effects of differences in the age profiles of areas.

Data converters and mapping

Conversion to Division of data available by postcode

The allocation of postcodes to Divisions was undertaken using information from the Department of Health and Ageing's web site, which shows the proportion of a postcode in a Division.

Conversion to Division of data available by SLA

Where the data presented in these profiles were only available by SLA they have been converted to Division of General Practice areas using a concordance based on data at the 2001 Census. A copy of the concordance paper is available for download via '[Construction of a concordance from SLAs to DGPs](#)'.

In brief, the concordance splits the data (eg number of deaths) for each SLA across one or more Divisions. The proportion of an SLA's data that is allocated to each Division was calculated from (a) CD level Census 2001 data that splits SLAs across approximations to postcodes (referred to as postal areas) and (b) data on the DoHA website that splits postcodes across Divisions. This concordance can be adjusted to meet any new configuration of Division boundaries based on the 2001 Collection Districts, or combinations thereof.

For general comments, data issues or enquiries re information on the web site, please contact PHIDU - Phone: 08-8303 6236 or e-mail: PHIDU@publichealth.gov.au