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Health inequalities in Australia: morbidity, health behaviours, risk factors and health service use

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Any enquiries about or comments on this publication should be directed to:

Dr Gavin Turrell
School of Public Health
Queensland University of Technology
Victoria Park Rd
Brisbane QLD 4059
Phone: (07) 3864 8285
E-mail: g.turrell@qut.edu.au

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Australian Bureau of Statistics

Josie Barac

Australian Institute of Health and Welfare

Ching Choi

Paul Magnus

Mark Cooper-Stanbury

Australian Department of Health and Ageing

Kate Brown, Infrastructure and Workforce Section, Population Health Division

Queensland Institute of Medical Research

David Purdie

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Steering committee members

Carol Kee	Australian Bureau of Statistics
Marelle Rawson	Australian Bureau of Statistics
Jean Douglass	Australian Department of Health and Ageing
Joy Eshpeter	Australian Department of Health and Ageing
Teressa Ward	Australian Department of Health and Ageing
Paul Jelfs	Australian Institute of Health and Welfare
Jane Dixon	National Centre for Epidemiology and Population Health
Moira Clay	National Heart Foundation
Traven Lea	National Heart Foundation
Margaret Bright	Queensland Health
Magnolia Cardona	Queensland Health
Jackie Steele	Queensland Health

International collaborators

George Kaplan	University of Michigan
John Lynch	University of Michigan
Johan Mackenbach	Erasmus University the Netherlands
Tony Blakely	University of Otago

Technical advisor

David Purdie	Queensland Institute of Medical Research
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Abbreviations

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
ASCO	Australian Standard Classification of Occupations
CALO	Classification and Classified List of Occupations
DoHA	Department of Health and Ageing
DHAC	Department of Health and Aged Care
CURF	Confidentialised Unit Record File
ICD-9	International Classification of Diseases: 9th revision
ICD-10	International Classification of Diseases: 10th revision
IRSD	Index of Relative Socioeconomic Disadvantage
n.a.	Not applicable
NCCH	National Centre for Classification in Health
NHMRC	National Health and Medical Research Council
NHPA	National Health Priority Area
NHS	National Health Survey
NNS	National Nutrition Survey
PHERP	Public Health Education Research Program
QUT	Queensland University of Technology
SEIFA	Socio-economic Indexes for Areas
SEP	Socioeconomic Position
SLA	Statistical Local Area

Summary of findings

The health of the Australian population improved markedly during the twentieth century. The toll of infectious disease was reduced sharply; life expectancy at birth continued to increase; death rates from coronary heart disease and stroke have declined sharply since the late 1960s; and in more recent years we have witnessed a downward trend in deaths from lung, colorectal and breast cancer. Despite this, health gains have not been equally shared across all sections of the population. At the beginning of the twenty-first century there were considerable health-related inequalities between population subgroups in Australia.

This report examines some of these health-related inequalities by area-level socioeconomic disadvantage, equivalised household income, education and occupation among, where applicable, infants and children (0–14 years), young adults (15–24 years), working-age adults (25–64 years), and older persons (65 years or more) for the periods 1989–90, 1995, and 2001. Socioeconomic inequalities were examined on the basis of four self-reported health-related indicators: morbidity, health behaviours, risk factors, and health service use.

The primary data sources used in this report are the three latest Australian Bureau of Statistics (ABS) National Health Surveys (NHS): 1989–90, 1995 and 2001. The ABS 1995 National Nutrition Survey (NNS) was also used for dietary-related behaviour data for 1995 to allow comparison with the relevant 2001 NHS items.

Socioeconomically disadvantaged groups experienced more ill health, and were more likely to engage in behaviours or have a risk factor profile consistent with their poorer health status. Their use of health care services suggested that they were less likely to act to prevent disease or detect it at an asymptomatic stage. Socioeconomic inequalities for many of the health-related indicators were found for both males and females and for each age group, and they were evident irrespective of how socioeconomic position was measured.

The health burden in the Australian population attributable to socioeconomic disadvantage is large; and much of this burden is potentially avoidable.

Health inequalities by area-level socioeconomic disadvantage

This report used an area-based measure of socioeconomic status known as the Index of Relative Socioeconomic Disadvantage (IRSD). The IRSD was developed by the Australian Bureau of Statistics using population census data, and it reflects the overall level of socioeconomic disadvantage of an area measured on the basis of attributes such as low income, low educational attainment, high levels of public sector housing, high unemployment, and jobs in relatively unskilled occupations. Survey respondents were classified into quintiles (fifths) of socioeconomic disadvantage according to the value of the IRSD for their usual residence, with quintile 1 corresponding to the highest socioeconomic area and quintile 5 the lowest. This summary reports on health inequalities between quintiles 1 and 5 only. Quintile 1 contained the least disadvantaged areas, and quintile 5 the most disadvantaged. The health profile of all IRSD quintiles is presented in the main text.

Within each of the three survey periods, compared with persons living in the least disadvantaged areas of Australia, those living in the most disadvantaged areas had significantly *higher* rates (√) for various health-related factors as shown in the table below:

Age group		Males			Females		
		1989–90	1995	2001	1989–90	1995	2001
0–14 years	Asthma	•	√	√	•	√	•
	Bronchitis/emphysema	•	•	√	•	√	•
	Discretionary salt use	n.a.	√	•	n.a.	•	•
	Doctor consultations	•	•	•	√	√	•
15–24 years	Self-assessed health as fair or poor	n.a.	√	•	n.a.	√	•
	Bronchitis/emphysema	•	•	•	•	•	√
	Discretionary salt use	n.a.	•	•	n.a.	√	√
	Smoking	√	√	•	√	√	√
	Obesity	√	•	√	•	√	•
	Alcohol risk	•	√	•	•	√	•
	Food insecurity	n.a.	√	√	n.a.	√	√
25–64 years	Self-assessed health as fair or poor	n.a.	√	√	n.a.	√	√
	Days away from study or work	√	√	√	•	•	•
	Arthritis	√	√	√	•	√	√
	Asthma	•	•	•	•	•	√
	Bronchitis/emphysema	•	√	√	√	√	•
	Diabetes	•	√	•	•	√	√
	Alcohol risk	√	√	√	#	#	#
	Insufficient physical activity	√	•	√	•	•	√
	Smoking	√	√	√	√	√	√
	Discretionary salt use	n.a.	√	√	n.a.	√	√
	Food insecurity	n.a.	√	√	n.a.	√	√
	Obesity	√	√	√	√	√	√
	Hypertension	•	√	√	√	√	√
	Doctor consultation	√	√	√	•	•	√
	GP consultation	n.a.	√	√	n.a.	√	√
	Never having had a Pap smear	n.a.	n.a.	n.a.	√	√	•
	Not having had a Pap smear in the two years preceding survey	n.a.	n.a.	n.a.	n.a.	√	√
65 years & over	Self-assessed health as fair or poor	n.a.	•	√	n.a.	√	•
	Arthritis	•	•	√	•	•	•
	Bronchitis/emphysema	•	•	√	•	•	•
	Diabetes	•	•	•	•	√	√
	Smoking	√	√	√	•	√	√
	Obesity	•	√	√	√	√	√
	Hypertension	•	•	•	•	√	√

√ Difference between most and least disadvantaged areas statistically significant, with a higher rate among the most disadvantaged areas.

• Difference between most and least disadvantaged areas not statistically significant.

Difference between most and least disadvantaged areas statistically significant, with a higher rate among the most advantaged areas.

n.a. Question was either sex-specific, not asked in survey, or not comparable with other years, and therefore excluded from this report.

Compared with persons living in the least disadvantaged areas of Australia, those living in the most disadvantaged areas had significantly *lower* rates (√) for the factors shown in the table below:

Age group		Males			Females		
		1989–90	1995	2001	1989–90	1995	2001
0–14 years	Having ever been breastfed	n.a.	√	√	n.a.	√	√
	Recommended duration of breastfeeding	n.a.	•	•	n.a.	√	√
	Specialist consultations	n.a.	•	•	n.a.	•	√
	Dental consultations	•	√	√	√	•	•
15–24 years	Dental consultations	•	√	•	•	•	√
25–64 years	Dental consultation	•	•	√	•	√	√
	Specialist consultation	n.a.	•	•	n.a.	•	√
65 years & over	Dental consultation	•	•	•	•	√	√

- √ Difference between most and least disadvantaged areas statistically significant, with a lower rate among the most disadvantaged areas.
 • Difference between most and least disadvantaged areas not statistically significant.
 n.a. Question was either sex-specific, not asked in survey, or not comparable with other years, and therefore excluded from this report.

Health inequalities by equivalised income

This report examines income-based socioeconomic health inequalities using an indicator known as ‘equivalised income’. This is an adjusted measure that takes into account the composition and requirements of a family, or income unit. Because equivalised income was not calculated the same way in all three surveys, in this report no intersurvey comparisons are made for equivalised income, and we present results only for the 2001 NHS. The equivalised income information available from the 2001 NHS is in deciles (tenths): for the purpose of this report deciles were collapsed into quintiles. This summary reports on health inequalities between quintiles 1 and 5 only. Quintile 1 contained the most affluent households, and quintile 5 the least affluent. The health profile of all equivalised income quintiles is presented in the main text.

Compared with persons living in the highest income households in 2001, those in the poorest income households had significantly *higher* rates (√) for the health-related factors shown in the table below:

Age group		Males	Females	
0–14 years	Asthma	√	•	
	Bronchitis/emphysema	√	•	
	Discretionary salt use	√	•	
15–24 years	Self-assessed health as fair or poor	•	√	
	Bronchitis/emphysema	•	√	
	Discretionary salt use	√	•	
	Food insecurity	√	√	
	Smoking	•	√	
25–64 years	Self-assessed health as fair or poor	√	√	
	Days away from study or work	√	√	
	Arthritis	√	√	
	Asthma	•	√	
	Bronchitis/emphysema	√	√	
	Diabetes	•	√	
	Insufficient physical activity	√	√	
	Smoking	√	√	
	Discretionary salt use	√	√	
	Food insecurity	√	√	
	Obesity	√	√	
	Hypertension	•	√	
	Doctor consultation	√	√	
	GP consultation	√	√	
	Never having had a mammogram	n.a.	√	
	Never having had a Pap smear	n.a.	√	
	Having had a Pap smear in the two years preceding the survey	n.a.	√	
	65 years & over	Self-assessed health as fair or poor	√	√
		Bronchitis/emphysema	√	•
		Diabetes	√	•
Smoking		√	•	
Hypertension		•	√	

√ Difference between highest and lowest income quintiles statistically significant, with a higher rate in the poorest income households.

• Difference between highest and lowest income quintiles not statistically significant.

n.a. Question was either sex-specific, not asked in survey, or not comparable with other years, and therefore excluded from this report.

Compared with persons living in the highest income households in 2001, those in the poorest income households had significantly *lower* rates (√) for the factors shown in the table below:

Age group		Males	Females
0–14 years	Having ever been breastfed	√	√
	Receipt or application of sun protection measures	√	√
	Dental consultations	√	•
15–24 years	Receipt or application of sun protection measures	√	•
	Dental consultations	√	•
25–64 years	High-risk alcohol consumption	√	•
65 years & over	High-risk alcohol consumption	√	√

√ Difference between highest and lowest income quintiles statistically significant, with a lower rate in the poorest income households.

• Difference between highest and lowest income quintiles not statistically significant.

Health inequalities by education level

Numerous state/territory and national surveys collect information on education and health. In this report, we examine health inequalities among males and females aged 25–64 years, and 65 years and over, according to their reported levels of education in the 1989–90, 1995 and 2001 ABS National Health Surveys. Categorisation of education varied somewhat across the three surveys, so for comparisons the highest reported level of education has been reclassified into three groups – bachelor degree or higher (group 1), diploma/vocational qualification (group 2), and no post-school qualification (group 3). This summary reports on health inequalities between groups 1 and 3 only. The health profile of all education groups is presented in the main text.

Compared with persons with a Bachelor degree or higher, those with no post-school qualifications had significantly *higher* rates (√) for the health-related factors shown in the table below:

Age group		Males			Females		
		1989–90	1995	2001	1989–90	1995	2001
25–64 years	Self-assessed health as fair or poor	n.a.	√	√	n.a.	√	√
	Arthritis	√	√	√	√	√	√
	Bronchitis/emphysema	√	√	•	•	√	•
	Diabetes	•	•	•	•	•	√
	Alcohol risk	√	√	√	#	#	#
	Insufficient physical activity	√	√	√	√	√	√
	Smoking	√	√	√	√	√	√
	Discretionary salt use	n.a.	√	√	n.a.	√	√
	Food insecurity	n.a.	√	√	n.a.	•	√
	Obesity	√	√	√	√	√	√
	Hypertension	•	•	•	√	√	√
	Doctor consultation	√	√	√	•	√	•
	GP consultation	n.a.	√	√	n.a.	•	√

(continued)

Continued:

Age group		Males			Females		
		1989–90	1995	2001	1989–90	1995	2001
25–64 years cont.	Never having had a Pap smear	n.a.	n.a.	n.a.	√	•	•
	Not having had a Pap smear in the two years preceding survey	n.a.	n.a.	n.a.	n.a.	√	√
65 years & over	Self-assessed health as fair or poor	n.a.	√	√	n.a.	•	•
	Bronchitis/emphysema	•	•	√	#	•	•
	High-risk alcohol consumption	•	•	√	•	#	•
	Smoking	•	•	√	•	•	•
	Discretionary salt use	n.a.	•	√	n.a.	√	•
	Obesity	√	•	√	•	√	•
	Doctor consultation	•	•	√	•	•	•
GP consultation	n.a.	•	√	n.a.	•	•	

- √ Difference between most and least educated statistically significant, with a higher rate among those with no post-school qualifications.
 • Difference between most and least educated not statistically significant.
 # Difference between most and least educated statistically significant, with a higher rate among those with post-school qualifications.
 n.a. Question was either sex-specific, not asked in survey, or not comparable with other years, and therefore excluded from this report.

Compared with persons with a Bachelor degree or higher, those with no post-school qualifications had significantly *lower* rates (√) for the factors shown in the table below:

Age group		Males			Females		
		1989–90	1995	2001	1989–90	1995	2001
25–64 years	Dental consultations	√	√	√	√	•	√
	Specialist consultation	n.a.	•	•	n.a.	•	√
65 years & over	Dental consultation	√	√	•	•	•	√

- √ Difference between most and least educated statistically significant, with a lower rate among those with no post-school qualifications.
 • Difference between most and least educated not statistically significant.
 n.a. Question was either sex-specific, not asked in survey, or not comparable with other years, and therefore excluded from this report.

Health inequalities by occupation

Occupation is a widely used measure of an individual's socioeconomic status. This report compares the health profiles of different occupational categories using the Australian Standard Classification of Occupations (ASCO). ASCO is a skill-based measure that groups together occupations requiring similar levels of education, knowledge, responsibility, on-the-job training and experience. These occupational groupings are hierarchically ordered based on their relative skill levels, with those occupations having the most extensive skill requirements located at the top of the hierarchy. For this analysis, occupations were grouped into three categories: managers, administrators and professionals (comprising managers, administrators, professionals and paraprofessionals); white-collar employees (comprising clerks, salespeople and personal service workers); and blue-collar employees (comprising tradespeople, plant and machine operators and drivers, and labourers and related workers). People not active in the labour force were excluded (for example, the unemployed, the retired). This summary reports on health inequalities between managers, administrators and professionals on the one hand and blue-collar workers on the other; the health profile of all three occupational categories is presented in the main text.

Compared with managers, administrators and professions, those in blue collar occupations had significantly *higher* rates (√) for the health-related factors shown in the table below:

Age group		Males			Females		
		1989–90	1995	2001	1989–90	1995	2001
25–64 years	Self-assessed health as fair or poor	n.a.	√	√	n.a.	√	√
	Days away from study or work	•	√	•	•	•	#
	Arthritis	√	√	•	•	•	√
	Bronchitis/emphysema	√	√	•	•	•	•
	Diabetes	•	•	•	•	√	•
	Alcohol risk	√	√	√	#	#	•
	Insufficient physical activity	√	√	√	√	√	√
	Smoking	√	√	√	√	√	√
	Discretionary salt use	n.a.	√	√	n.a.	√	√
	Food insecurity	n.a.	√	√	n.a.	√	√
	Overweight (but not obese)	•	•	•	√	√	•
	Obesity	√	√	√	√	•	√
	Doctor consultation	•	•	√	•	•	•
	GP consultation	n.a.	√	√	n.a.	•	√
	Never having had a Pap smear	n.a.	n.a.	n.a.	√	√	√
	Not having had a Pap smear in the two years preceding survey	n.a.	n.a.	n.a.	n.a.	•	√

- √ Difference between managers administrators professionals and blue-collar groups statistically significant, with a higher rate among those in blue-collar occupations.
- Difference between managers administrators professionals and blue-collar groups not statistically significant.
- n.a. Question was either sex-specific, not asked in survey, or not comparable with other years, and therefore excluded from this report.
- # Difference between managers administrators professionals and blue-collar groups statistically significant, with a higher rate among those in manager administrators professionals occupations.

Compared with managers, administrators and professions, those in blue-collar occupations had significantly *lower* rates (√) for the factors shown in the table below:

Age group		Males			Females		
		1989–90	1995	2001	1989–90	1995	2001
25–64 years	Asthma	√	√	•	•	√	•
	Hypertension	•	•	√	•	•	•
	Specialist consultation	n.a.	√	•	n.a.	√	•
	Dental consultations	√	√	√	√	√	•

- √ Difference between managers administrators professionals and blue-collar groups statistically significant, with a lower rate among those in blue-collar occupations.
- Difference between managers administrators professionals and blue-collar groups not statistically significant.
- n.a. Question was either sex-specific, not asked in survey, or not comparable with other years, and therefore excluded from this report.