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NATIONAL HEALTH SURVEY: USERS' GUIDE - ELECTRONIC

AUSTRALIA

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C O N T E N T S

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I N Q U I R I E S

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070.

NOTES

ABOUT THIS PUBLICATION

This publication contains details about the 2007–08 National Health Survey (NHS). It includes information about survey objectives, the development process, content of the survey, and the concepts, methods and procedures used in the collection of data and derivation of estimates. Also included is information about the products and services available from the 2007–8 NHS and other ABS health-related surveys. Classifications and other relevant material are provided as Appendices.

The purpose of the Users' Guide is to provide information about the survey which will assist users of the data to better understand the nature of the survey and its ability to meet their data needs.

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ARA	any responsible adult
ASCED	Australian Standard Classification of Education
ASCL	Australian Standard Classification of Languages
ASCO	Australian Standard Classification of Occupations
ASGC	Australian Standard Geographical Classification
BMI	body mass index
CAC	computer assisted coding
CAI	computer assisted interviewing
CD	collection district
DoHA	Australian Government Department of Health and Ageing
DTP	diphtheria, tetanus and pertussis vaccine
DVA	Australian Government Department of Veterans Affairs
GISCA	National Centre for Social Applications of GIS, University of Adelaide
GP	General Medical Practitioner
HRT	hormone replacement therapy
HSL	high sugar level in blood and/or urine
ICD-10	International Classification of Diseases 10th Revision
K10	Kessler Psychological Distress Scale
LGA	local government area
NHDD	National Health Data Dictionary
NHMRC	National Health and Medical Research Council
NHPA	National Health Priority Area
NHS	National Health Survey
NNS	National Nutrition Survey
OHP	Other health professional
PAL	primary approach letter
RADL	Remote Access Data Laboratory
RSE	relative standard error
SACC	Standard Australian Classification of Countries
SAS	software package for preparing and executing computerised data analysis
SE	standard error
SEIFA	Socio-Economic Indexes for Areas
SLA	statistical local area
WHO	World Health Organization

CHAPTER 1 INTRODUCTION

INTRODUCTION

This publication presents information about the National Health Survey (NHS) conducted by the Australian Bureau of Statistics (ABS) in 2007–08. It includes information about the NHS objectives, the way the survey was developed, the survey concepts and methods, procedures used in the collection of data and derivation of estimates, and the quality, interpretation and availability of survey results.

The aim of this publication is to provide information to assist users of the data in better understanding both the nature of the survey, and its potential and shortcomings in meeting their data needs. Further information about the survey is available from the ABS web site (www.abs.gov.au), including:

- the questionnaire and associated prompt cards used to collect the data;
- a list of output data items available from the survey; and
- an Information Paper detailing the availability of microdata from the survey.

Other information may be added to the web site over time as it becomes available. Summary level results of the 2007–08 NHS are contained in the publication *National Health Survey: Summary of Results, 2007–08 (Reissue)* (cat. no. 4364.0). Similar data for the States and the Australian Capital Territory are contained in the publication *National Health Survey: Summary of Results; State Tables (Reissue)* (cat. no. 4362.0). Both publications were released in May 2009 and re-issued in August 2009.

Background to the survey

The 2007–08 NHS was conducted during the 11 month period August 2007 to July 2008. It is the fifth in a series of regular population surveys designed to obtain national benchmark information on a range of health related issues and to enable the monitoring of trends in health over time.

Previous surveys in the series were conducted in 1989–90, 1995, 2001 and 2004–05. Commencing with the 2001 survey, the survey is now conducted 3 yearly. Health surveys conducted by the ABS in 1977–78 and 1983, while not part of the NHS series, also collected similar information. In addition, a range of other ABS surveys on health and related issues have been conducted at the national level and for individual States and Territories. Indigenous health issues are specifically covered in the *National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), 2004-05*, (cat. no. 4715.0).

The 2007–08 NHS was conducted in 15,792 private dwellings selected throughout non-very remote areas of Australia. The sample design ensured that within each State or Territory, each person had an equal chance of selection. Information was obtained about one adult and one child aged 0 to 17 years in each selected household. A total of 20,788 persons participated in the survey.

Trained ABS interviewers personally interviewed the selected adult member of the household. While parental consent to interview persons aged 15 to 17 years was not specifically sought, some parents preferred to answer the survey questions on their behalf. A parent or guardian was asked to answer questions on behalf of all children aged less than 15 years. This person is referred to as the child proxy throughout this publication, and in other outputs from the survey.

Although the survey was conducted over 11 months, selected households were interviewed only once in that period.

Background to the survey continued

The survey focused on the health status of Australians and health-related aspects of their lifestyle. Information was collected about respondents' long-term medical conditions, consultations with health professionals, and other actions recently taken in regard to their health (e.g. taken days away from work, used medication). Information was also collected on lifestyle factors which may affect health, such as smoking, alcohol consumption, diet and exercise. Respondents' physical measurements were taken for the first time in the 2007–08 NHS. Medical records were not required, and no medical tests were taken as part of the survey.

The survey design enables information for all topics to be analysed in relation to other topics, and in relation to a range of demographic and socio-economic characteristics.

The Health Statistic Advisory Group (HSAG), comprising representatives of DoHA, the Australian Institute of Health and Welfare, State and Territory health authorities, and academic and research centres, was established to assist the ABS in the ongoing consultation process, and advise on prioritised data requirements. Reports on the development and testing process were prepared for consideration by the group, and distributed to other interested organisations and individuals on request.

The range of topics and items within topics identified for possible inclusion in the survey by the HSAG exceeded the capacity of the survey. With the assistance of the HSAG, all topics identified were assessed, and relative priorities were established. Topics ultimately selected for inclusion in the survey were those identified as being of highest priority, and which could be appropriately addressed in an ABS household survey of this type.

New topics proposed for inclusion in the 2007–08 NHS underwent cognitive testing to ensure the concepts were understood by respondents, and to enable questions and associated procedures to be refined. A pilot test of the survey was conducted in Western Australia and South Australia in November/December 2006, and a dress rehearsal was conducted in Victoria and South Australia in April/May 2007.

The 2007–08 NHS was conducted under the authority of the Census and Statistics Act 1905. The ABS sought the willing cooperation of households in the survey. The confidentiality of all information provided by respondents is guaranteed. Under its legislation the ABS cannot release identifiable information about households or individuals. All aspects of NHS implementation were designed to conform to the Information Privacy Principles set out in the Privacy Act 1988, and the Privacy Commissioner was informed of the details of the proposed survey.

The success of the 2007–08 NHS was dependent on the high level of cooperation received from the community. Their continued cooperation is very much appreciated; without it, the range of health and other statistics published by the ABS would not be possible.

CHAPTER 2 SURVEY DESIGN AND OPERATION

CONTENTS

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CHAPTER 2 SURVEY DESIGN AND OPERATION *continued*

SCOPE

The 2007–08 NHS collects information by personal interview from usual residents of private dwellings in urban and rural areas of Australia, covering about 97% of the people living in Australia. Persons in scope of the survey were those identified by an adult within each sampled private dwelling as a usual resident of that dwelling. Private dwellings are houses, flats, home units, caravans, garages, tents and other structures being used as a place of residence at the time of the survey.

The survey excludes residents of:

- non-private dwellings such as hotels and motels, hostels, boarding schools and boarding houses, hospitals, nursing and convalescent homes, prisons, reformatories and single quarters of military establishments;
- households which contain members of non-Australian defence forces stationed in Australia;
- households which contain diplomatic personnel of overseas governments; and
- households in collection districts defined as very remote. This has only a minor impact on aggregate estimates, except in the Northern Territory where such households account for approximately 22% of the population.

Overseas visitors staying or intending to stay in Australia for 12 months or more were in scope, as were non-Australians (other than those above) who were working or studying in Australia, and their dependants.

SAMPLE DESIGN AND SELECTION

Sample design

The 2007–08 NHS was conducted using a stratified multistage area sample of private dwellings. Decisions on the appropriate sample size, distribution and method of selection rested on consideration of the aims of the survey, the topics it contained, the level of disaggregation and accuracy at which the survey estimates were required, and the costs and operational constraints of conducting the survey. The sample was designed to provide:

- relatively detailed estimates for each State, ACT and Australia. (NT records contribute appropriately to national estimates but are insufficient to support most estimates for the NT);
- relatively detailed estimates for capital city/balance of State areas within each State;
- broad level estimates for regions within the larger States; and
- estimates for those characteristics which are relatively common, and sub-populations which are relatively large and spread fairly evenly geographically.

To achieve these design objectives, the State and Territory sampling fractions were set as shown in the following table, which also depicts the corresponding expected number of fully responding households. The sample selection procedures described below result in every dwelling in the same State or Territory having a known probability of selection, equal to the State or Territory sample fraction.

STATE/TERRITORY SAMPLE

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT
Approximate sampling fraction	1/621	1/525	1/470	1/216	1/326	1/115	1/525	1/60
Expected fully responding households	2 977	2 607	2 366	2 479	1 720	1 491	99	1 831

Sample design continued

Actual numbers of fully responding households are available in the Response Rates section of this chapter.

Within selected dwellings, a random sub-sample of residents was selected as follows:

- one adult (aged 18 years and older); and
- one child aged 0 to 17 years (where applicable).

The exclusion of persons living in non-private dwellings (approximately 3% of the population) is unlikely to impact on the estimates included in this publication.

The exclusion of the Australian population living in very remote areas (approximately 1%) has little impact on national estimates, and has only a minor impact on any aggregate estimates that are produced for individual States and Territories, except for the Northern Territory where the excluded population accounts for over 24% of persons.

Sample selection

The area-based selection ensures that all sections of the population living in private dwellings within the geographic scope of the survey were represented by the sample. Each State and Territory was divided into geographically contiguous areas called strata. Strata are formed by initially dividing Australia into regions, which are formed within State/Territory boundaries, and which basically correspond to the Statistical Division or Subdivision levels of the Australian Standard Geographical Classification (ASGC)(cat. no. 1216.0). Each stratum contains a number of Population Census Collection Districts (CDs) containing on average about 250 dwellings.

In capital cities and other major urban or high population density areas, the dwelling sample was selected in three stages:

- a systematic sample of CDs was selected from each stratum with probability proportional to the number of dwellings in each CD;
- each selected CD was divided into groups of dwellings or blocks of similar size, and one block was selected from each CD, with probability proportional to the number of dwellings in the block; and
- within each selected block a list of all private dwellings was prepared and a systematic random sample of dwellings was selected.

In Hobart, parts of Darwin and some strata of high population growth, the CD stage of selection is omitted leaving only two stages of selection.

In strata with low population density each stratum was initially divided into units, usually corresponding to towns or Statistical Local Areas (SLAs), or combinations of both, and one or two units were selected from each stratum. Within selected units, the sample of dwellings was arrived at in the same manner as outlined for high population density areas.

In total a sample of approximately 20,000 households was selected which, taking account of an expected rate of sample loss (e.g. vacant dwellings, dwellings under construction etc.) of 14% and non-response of 10%, was designed to achieve the desired sample of about 15,570 fully responding households.

Sample selection continued

To take account of possible seasonal effects on health characteristics, the sample was enumerated over a 11 month period from August 2007 to June 2008. Collection Districts were allocated randomly over four sub-periods - August 2007 to September 2007, October 2007 to December 2007, January 2008 to March 2008, and April 2008 to June 2008.

DATA COLLECTION

Information was obtained in the 2007–08 NHS by trained ABS interviewers, through a personal Computer Assisted Interview (CAI) with adult members of selected households in scope of the survey. For the purposes of this survey, a household was defined as one or more persons, at least one of whom is aged 15 years and over, usually resident in the same private dwelling. Aspects of data collection are discussed below under the headings: interviews, interviewers and questionnaire.

Interviews

In the 2007–08 NHS, selected households were initially approached by mail informing them of their selection in the survey and advising them that an interviewer would call to arrange a suitable time to conduct the survey interview. (This was not possible for a small number of households where the ABS did not have an adequate postal address.) A brochure providing some background to the survey, information concerning the interview process, and a guarantee of confidentiality were included with the initial approach letter.

General characteristics of the household were obtained from a responsible adult member of the household (ARA). This information included the number and basic demographic characteristics of usual residents of the dwelling, and the relationships between those people (e.g. spouse, son/daughter, not related). The ARA was also asked to nominate the person in the household who was best able to provide information about children in the household and household income.

From the information provided by the ARA about the household composition, the survey instrument established those persons in scope of the survey, and, on a random basis, selected one adult and one child (where applicable) to be included in the survey. If the dwelling contained only usual residents aged 15-17 years, two people were randomly selected.

A personal interview was conducted with the selected adult (where possible), and an adult was asked to respond on behalf of selected children under 15 years of age. In some instances, adult respondents were unable to answer for themselves because of old age, illness, intellectual disability or difficulty with the English language. In these cases, a person responsible for them was interviewed on their behalf, provided the interviewer was assured that this was acceptable to the subject person. Where there were language difficulties, other persons in the household may have acted as an interpreter if this was suggested by the respondent. If not, arrangements were made where possible for the interview to be conducted either by an ABS interviewer fluent in the respondent's own language, or with an ABS interpreter.

In contrast to previous NHSs, it was assumed that children aged 15 to 17 years would be interviewed in person, however, should a parent or guardian request it, an adult was interviewed on their behalf. This adult, who may or may not have been the selected adult respondent in the household, is referred to as the Child Proxy.

Interviews continued

In order to obtain a personal interview with appropriate respondents, interviewers made appointments to call back as necessary to the household. In some cases appointments for call backs were made by telephone, however all interviews were conducted face-to-face. Interviews may have been conducted in private or in the presence of other household members according to the wishes of the respondent.

Interviews were only conducted on Sundays at specific respondent request. Although it is desirable to spread interviews across all days of the week, interviews were conducted on days that suited respondents.

In cases where a respondent initially refused to participate in the survey, a follow-up letter was sent and a second visit was made to the respondent, usually by an office supervisor, to explain the aims and importance of the survey, and to answer any particular concerns the respondent may have had. No further contact was made with the respondent if they refused at the second approach to participate. Persons missed from the survey through non-contact or refusal were not replaced in the sample.

Interviewers

Interviewers for the 2007–08 NHS were recruited from a pool of trained interviewers with previous experience on ABS household surveys. Those selected to work on this survey underwent further classroom training and were required to satisfactorily complete home study exercises. All phases of the training emphasised understanding of the survey concepts, definitions and procedures in order to ensure that a standard approach was employed by all interviewers concerned.

Each interviewer was supervised in the field in the early stages of the survey and periodically thereafter to ensure consistent standards of interviewing procedures were maintained. In addition, regular communication between field staff and survey managers was maintained throughout the survey via database systems set up for the survey.

Interviewers were allocated a number of dwellings (a workload) at which to conduct interviews. The size of the workload was dependent upon the geographical area involved and whether or not the interviewer was required to live away from home to collect the data. Interviewers living close to their workload area in urban areas usually had larger workloads. Overall, workloads averaged 25-30 dwellings, to be enumerated over a two-week period.

Questionnaire

The Computer Assisted Interview (CAI) instrument that was used for the 2007–08 NHS was based on the 2004-05 NHS, modified as appropriate to incorporate new and changed survey content. Information collected included:

- Household information - basic demographic data about usual residents of the household (e.g. sex, age, date of birth, birthplace, Indigenous status, marital status) and details of the relationship between individuals in each household. This information was obtained from the ARA. The data was also used to enable the selection of respondents for the dwelling. Information was also recorded by interviewers of their calls made to the dwelling and the subsequent response status of the household in the survey (e.g. fully responding, refusal, vacant dwelling, etc.);

Questionnaire continued

- Personal Adult Interview - information was collected from the selected adult about demographic, socio-economic and health characteristics (including physical measurements, information on long-term medical conditions, selected lifestyle behaviours, and health-related actions they had taken); and
- Personal (or proxy) Child Interview - information was collected on selected demographic and health characteristics. Questions on socio-economic characteristics and lifestyle behaviours were not asked of children under 15 years, and questions on levels of psychological distress were not asked of persons under 18 years. Physical measurements were taken for children 5 years and older.

The questionnaire was designed to be administered using standard ABS procedures for conducting population interview surveys, with regard to the particular aims of the survey and the individual topics within it, and the methodological issues associated with those topics. Other factors considered in designing the questionnaire included the length of individual questions, the use of easily understood words and concepts, the number of subjects and overall length of the questionnaire, and the sensitivity of topics. Where appropriate, previous ABS questions on the topics covered were adopted.

The CAI instrument allows the following:

- data to be captured electronically at the point of interview, which removes all the added cost, logistical, timing and quality issues around the transport, storage and security of paper forms, and the transcription/data entry of information from forms into a computerised format;
- the ability to use complex sequencing to define specific populations for questions, and ensure word substitutes used in the questions were appropriate to each respondent's characteristics and prior responses;
- the ability, through data validation (edits), to check the responses entered against previous responses, reduce data entry errors by interviewers, and enable seemingly inconsistent responses to be clarified with respondents at the time of the interview. The audit trail recorded in the instrument also provides valuable information about the operation of particular questions, and associated data quality issues;
- some derivations to occur in the instrument itself, assisting in later processing;
- auto-coding systems to be incorporated, reducing interview and processing time; and
- data to be delivered in an electronic format compatible with ABS data processing facilities.

The questionnaire was fully field tested to ensure:

- it obtained the data required for the survey in the most effective and efficient way;
- there was minimum respondent concern about the sensitivity or privacy aspects of the information sought;
- there was effective respondent/interviewer interaction and acceptable levels of respondent load; and
- the operational aspects of the survey were satisfactory; e.g. arrangement of topics, sequencing of questions, adequacy and relevance of coding frames, etc.

The questionnaire employed a number of different approaches to recording information at the interview:

Questionnaire continued

- questions where responses were classified by interviewers to one or more of a set of predetermined response categories. This approach was used for recording answers to the more straightforward questions, where logically a limited range of responses was expected or where the focus of interest was on a particular type or group of responses (which were listed in the questionnaire, with the remainder being grouped together under 'other');
- questions where responses were recorded by interviewers as reported, for subsequent classification and coding by office staff during processing. This style of question was used for the potentially more complex topics such as type of illness condition, type of medication used, type and quantity of alcohol consumed, etc;
- questions asked in the form of a running prompt; i.e. predetermined response categories were read out to the respondent one at a time until the respondent indicated agreement to one or more of the categories (as appropriate to the topic) or until all the predetermined categories were exhausted;
- questions asked in association with prompt cards. Printed lists of possible answers to the question were handed to the respondent who was asked to select the most relevant responses. Listing a set of possible responses (either in the form of a prompt card or a running prompt question) served to clarify the question or to present various alternatives, to refresh the respondent's memory and at the same time assist the respondent to select an appropriate response; and
- questions to capture the measured height and weight, and waist and hip circumference of respondents. Interviewers took the physical measurements using a variety of techniques (see Chapter 4: Health risk behaviours) and entered each result into the instrument.

To ensure consistency of approach, interviewers were instructed to ask the interview questions exactly as written. In certain areas of the questionnaire however, interviewers were asked to use indirect and neutral prompts at their discretion, where the response given was, for example, inappropriate to the question asked or lacked sufficient detail necessary for classification and coding. This occurred particularly in relation to type of medical condition where interviewers were asked to prompt for a condition if a treatment or symptom was initially reported.

The NHS 2007–08 questionnaire and related prompt cards are available from the ABS website under the 'Downloads' tabs of this Users' Guide and the National Health Survey: Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

MEASURES TO MAXIMISE RESPONSE

In any sample survey, responses should ideally be obtained from all selected units, however there will always be some non-response, when people refuse to cooperate, cannot be contacted, or are contacted but cannot be interviewed. It is important that response be maximised in order to reduce sampling variability and avoid biases. Sampling variability is increased when the sample size decreases, and biases can arise if the people who fail to respond to the survey have different characteristics from those who did respond.

The ABS sought the willing cooperation of selected households. Measures taken to encourage respondent cooperation and maximise response included:

MEASURES TO MAXIMISE RESPONSE *continued*

- advance notice of a household's selection in the 2007–08 NHS by letter, explaining the purposes of the survey, its official nature and the confidentiality of the information collected. The letter stated that an ABS interviewer would call, and provided an ABS contact number for more information if required. An information brochure on the survey was also provided. (This procedure could not be followed for a small number of households for which the ABS did not have an adequate postal address);
- stressing the importance of participation in the survey by selected households and residents, explaining that they represented a number of other households, both geographically and demographically; i.e that their household represented other households that were similar in size, composition and location, and that they themselves represented other people with similar occupations, lifestyles and health characteristics. The cooperation of those selected was important to ensure all households/persons were properly represented in the survey and properly reflected in survey results;
- stressing the importance of the survey to the planning and provision of health services and facilities to meet Australia's health needs; and
- stressing the confidentiality of all information collected. The confidentiality of data is guaranteed by the *Census and Statistics Act 1905*. Under the provisions of this Act, the ABS is prevented from releasing any identifiable information about individuals or households to any person, organisation or government authority.

Through call-backs and follow-up at selected dwellings, every effort was made to contact the occupants of each selected dwelling and to conduct the survey in those dwellings. Interviewers made five call-backs before a dwelling was classified as a 'non-contact' (three call-backs in non-metropolitan areas). Call-backs occurred at different times during the day to increase the chance of contact. Once contact had been made at a dwelling, the interviewer completed all necessary questionnaires where possible. If any persons who were selected to be included in the survey were absent from the dwelling when the interviewer called, arrangements were made to return and interview them. Interviewers made return visits as necessary in order to complete questionnaires for selected persons in scope of the survey. In some cases, a selected respondent within a dwelling could not be contacted or interviewed, and these were classified as individual non-contacts.

As noted above in the Data Collection: Interviews section of this chapter, respondents who refused to participate were usually followed-up by letter and a subsequent visit by an office supervisor.

RESPONSE RATES

A total of 19,979 private dwellings were selected in the sample for the 2007–08 NHS, reducing to an active sample of 17,426 dwellings after sample loss in the field stage. A fully responding household is one in which all parts of the interview were completed for all persons in on scope and coverage. An adequately responding household is the same as a fully responding household, with the addition of legitimate 'don't know' or refusal options. Adequately responding households for the 2007–08 NHS also included respondents who did not answer all or any of the income questions and those that refused to provide their height or weight, or be measured.

Full response details are provided below:

CHAPTER 2 SURVEY DESIGN AND OPERATION *continued*

RESPONSE RATES

continued

FINAL RESPONSE DETAILS

<i>Sample/response status</i>	<i>Number of households</i>	<i>% of households</i>
Selected Households	19979	100
Sample loss		
Vacant dwelling	1565	7.8
All persons out of scope/coverage	334	1.7
Other sample loss(a)	654	3.3
Total sample loss	2553	12.8
Selected household after sample loss	17426	87.2
Selected household after sample loss	17426	100
Fully/adequately responding households	15792	90.6
Not adequately responding households		
Full/part refusal	394	2.3
Full/part non-contact	753	4.3
Language problem	120	.7
Death or illness	282	1.6
Other	85	.5
Total not adequately responding	1634	9.4

(a) Includes situations such as selected person away for enumeration period, no adult in household, derelict dwelling, dwelling converted to non-dwelling, holiday home.

Completed questionnaires were obtained for 20,788 persons in fully/adequately responding dwellings, as shown below:

COMPLETED QUESTIONNAIRE, number of records

	AGE GROUP (YEARS)						ALL AGES		
	0-17			18 and over			Capital city	Balance of State	Total
	Capital city	Balance of State	Total	Capital city	Balance of State	Total			
no.	no.	no.	no.	no.	no.	no.	no.	no.	
New South Wales	662	344	1 006	1 938	1 088	3 026	2 600	1 432	4 032
Victoria	605	231	836	1 841	748	2 589	2 446	979	3 425
Queensland	347	385	732	1 106	1 296	2 402	1 453	1 681	3 134
South Australia	546	162	708	1 946	517	2 463	2 492	679	3 171
Western Australia	460	144	604	1 412	432	1 844	1 872	576	2 448
Tasmania	176	288	464	619	903	1 522	795	1 191	1 986
Northern Territory	28	9	37	75	25	100	103	34	137
Australian Capital Territory	622	—	622	1 833	—	1 833	2 455	—	2 455
Australia	3 446	1 563	5 009	10 770	5 009	15 779	14 216	6 572	20 788

— nil or rounded to zero (including null cells)

INPUT CODING

Input coding refers to the categorisation of country of birth, main language spoken at home, occupation, industry and industry sector, educational qualification and relationship within a household. This coding was performed by ABS Regional offices. Coding of alcohol consumption, type of long-term medical conditions and medication type was undertaken later in the ABS central office (see Coding of health items below). A brief outline of the input coding undertaken follows:

- Country of birth coding. The survey questionnaire listed the 10 most frequently reported countries. Interviewers were instructed to mark the appropriate box, or if the reported country was not among those listed to record the name of the country for subsequent office coding. Text responses were classified to the Standard Australian Classification of Countries (SACC), Revision 2.03, 2007 (cat. no. 1269.0). More detail regarding this classification is contained in Appendix 4: ABS Standard Classifications.
- Coding of language. The survey questionnaire listed 10 frequently reported languages spoken at home. Interviewers were instructed to mark the appropriate box, or if the reported language was not among those listed, to record the name of the language for subsequent office coding. Language was coded to the Australian Standard Classification of Languages (ASCL), 2005–06 (cat. no. 1267.0). More detail regarding this classification is contained in Appendix 4: ABS Standard Classifications.
- Coding of occupation. In the 2007–08 NHS, occupation relates to the main job held by employed respondents at the time of their interview. Occupation was office coded, based on a description of the kind of work performed, as reported by respondents and recorded by interviewers. Occupation was coded to the Australian Standard Classification of Occupations (cat. no. 1220.0) and the Australian and New Zealand Standard Classification of Occupations (ANZSCO), 2007 (cat. no. 1220.0). More detail regarding these classifications is contained in Appendix 4: ABS Standard Classifications.
- Coding of industry and industry sector. In the 2007–08 NHS, industry and industry sector relates to the main job held by employed respondents at the time of their interview. These were office coded based on the name of employer and the respondent's description of the business or service carried out at the respondent's workplace. Industry was coded to the Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (cat. no. 1292.0). More detail regarding this classification is contained in Appendix 4: ABS Standard Classifications.
- Coding of educational qualification. Level of highest non-school educational qualification and field of study of that qualification were coded to the Australian Standard Classification of Education (ASCED), 2001 (cat. no. 1272.0). More detail regarding this classification is contained in Appendix 4: ABS Standard Classifications.

CODING OF HEALTH ITEMS

In addition to the general coding of population characteristics outlined above, the following items were office coded:

- long-term medical conditions;
- type of medication; and
- alcohol consumption.

This coding was undertaken by coding staff specifically recruited and trained for the task; all coding was centralised in the Canberra office of the ABS.

CODING OF HEALTH ITEMS *continued*

Initially all records were run through an automatic coder for each of these items. The auto-coders sought exact matches between text recorded in the questionnaires, and text entries in the coders. Cases which could not be coded by the auto-coders were coded manually using the Computer Assisted Coding (CAC) systems. Rigorous quality control processes were applied throughout to ensure that the coding process met agreed standards.

A brief outline of the coding is provided below. Further information about the CAC and auto-coder systems and how they were applied in the survey can be provided on request.

Coding of medical conditions

All reported long-term medical conditions were coded to a list of approximately 1000 conditions, which was built into both the auto-coder and the CAC system. Conceptually the coding process involved locating the reported condition in the coder, and recording the corresponding 3 digit ABS input code. In practice it was a more complex task and a query data base was established where coders could register any problems they came across, and where a solution could be posted. This provided coders with both a response to specific coding issues, and a resource for dealing with future problem cases.

The code list used for the 2007–08 NHS was that initially compiled for use in the 2001 NHS by the Family Medicine Research Centre, University of Sydney, in association with the ABS. This was also used for the 2004–05 NHS. Conditions classified at the full level of detail are not generally available for output from the survey; however, they can be regrouped in various ways for output. The standard output classification, developed for the NHS, is based on the INTERNATIONAL CLASSIFICATION OF DISEASES: 10TH REVISION (ICD-10).

A copy of the NHS output classification is provided in Appendix 2: Classification of Medical Conditions.

Coding of type of medication

The 2007–08 survey collected information on medications used by respondents in the two weeks prior to the survey for mental health and wellbeing, asthma, heart and other circulatory conditions, arthritis, osteoporosis and diabetes.

The questionnaire provided space to record the names of up to three medications used in the reference period for asthma, arthritis, osteoporosis, mental health conditions and diabetes; up to five medications used for mental wellbeing; and up to 12 medications used for heart and circulatory conditions (up to three medications for up to four conditions). The coding process involved assigning a 4 digit generic type of medication code to each medication name recorded.

An auto-coder and a CAC system were developed incorporating the names of medications readily available in Australia and commonly used for the nominated conditions. The lists of medication names were based on the lists prepared for the 2001 and 2004–05 NHS, updated as appropriate with reference to the WORLD HEALTH ORGANISATION'S ANATOMICAL THERAPEUTIC CHEMICAL (ATC) CLASSIFICATION and the *Australian Medicines Handbook*. Respondents were encouraged to refer to the medication packet, bottle, etc., when reporting, but may have reported from memory, and may have reported medications by their brand, trade or generic names. Some allowance was made in the coding process for the nature of the information reported; e.g. respondents not sure of the medication name, mispronounced medication name, interviewer misspelling of names, etc.

CHAPTER 2 SURVEY DESIGN AND OPERATION *continued*

Coding of type of medication continued

The classification of generic type of medication used in the 2007–08 NHS is based on the WORLD HEALTH ORGANISATION'S ANATOMICAL THERAPEUTIC CHEMICAL (ATC) CLASSIFICATION (and associated coding indexes) and the *Australian Medicines Handbook*. Details of the classification used are provided in Appendix 3. Brand name information is not available for output from this survey.

Coding of alcohol consumption

In the 2007–08 NHS, information about alcohol consumption was recorded against ten general categories of alcoholic drinks: beer, wine, champagne/sparkling wine, ready-to-drink spirits and liqueurs, spirits, liqueurs, fortified wine, cider, cocktails and other alcoholic beverages. Beer was further categorised to light, medium or full strength, and wine was categorised to white, red or low alcohol. Details of the type, brand and quantity (number and size of drinks) of each drink consumed on (up to) the last three days in the week prior to the day of interview were recorded, with up to 15 entries possible for each type of alcohol consumed. Quantities were recorded in terms of standard measures where possible; otherwise a description of the quantity consumed was recorded by interviewers. Interviewers recorded details about the brand or name of the drink to assist in coding.

The autocoding and CAC systems were used to calculate in millilitres the amount of pure alcohol contained in the drinks reported. This system, which has been used since the 2001 NHS, took information about the type of alcoholic drinks consumed (including brand name for common drinks), and the size and number of drinks consumed, and applied a conversion factor to obtain the amount of pure alcohol consumed. Conversion factors tailored to specific drinks/drink types were included in the system, and default factors for each of the eight broad types of alcoholic drinks used in the survey were included for cases where more detailed information had not been recorded at interview.

EDIT CHECKS

During office processing of the data, checks were performed on records to ensure that specific values lay within valid ranges and that relationships between items were within limits deemed acceptable for the purposes of the survey. These checks were also designed to detect errors which may have occurred during processing and to identify cases which although not necessarily errors, were sufficiently unusual or close to agreed limits to warrant examination.

Data available from the survey are essentially 'as reported' by respondents. In some cases it was possible to correct errors or inconsistencies in the data which were originally recorded through reference to other data in the record; in other cases this was not possible and some errors and inconsistencies remain on the data file.

OUTPUT DATA FILE

Information from the survey was stored on the computer output file in the form of data items. In some cases, items were formed directly from information recorded in individual survey questions, in others, data items have been derived from answers to several questions (e.g. the item 'self-reported body mass' is derived from reported height and weight). Some items have been derived from the reported information in conjunction with information obtained from other sources (e.g. in deriving the health risk associated with the reported level of alcohol consumption as defined by the National Health and Medical Research Council (2001)).

OUTPUT DATA FILE *continued*

In designing the output data file, the aim was to create a file which was similar to the 2004–05 data file, but simplified where possible. The result is a 7 level hierarchical data output file, down from 9 levels in 2004–05. The structure of the file is as follows:

- Household level, containing information about the household size and structure, dwelling characteristics including geographic classifications and related items, and household income details;
- Persons in household level, containing basic demographic and relationship information about all members of households, including those members selected in the survey;
- Person level, which is the main level, containing all demographic and socio-economic characteristics of the survey respondents, and most of the health and related information they provided;
- Alcohol level, containing detailed information about the 3 most recent days in the previous week on which the respondents reported consuming alcohol, and the types and quantities consumed on those days;
- Condition group level, containing information common to each condition group;
- Condition level, containing detailed information about the conditions reported in the survey; and
- Medications level, containing information about the types of medications used, the conditions those medications were used for, and the frequency and duration of use of selected medications.

A hierarchical data file is an efficient means of storing and retrieving information which describes one to many, or many to many, relationships; e.g. a person may report multiple conditions, and may report use of multiple medications for all/some of these.

Data about households and families are contained as individual characteristics on person records. While estimates are also available at the household level, estimates at the family level are not available from this survey. A full listing of output data items available from the survey can be accessed on the ABS web site, under the Downloads tab of this Users' Guide.

Once processing and validation of the data were complete, person and household weights were derived and inserted into each responding person's record to enable the data provided by these persons to be expanded to obtain estimates relating to the whole population within scope of the survey (see below). To enable standard error values for the estimates to be produced, 60 replicate weights were included (see Technical Note).

WEIGHTING, BENCHMARKING AND ESTIMATION PROCEDURES *Weighting*

Weighting is the process of adjusting results from a sample survey to infer results for the total in-scope population. To do this, a 'weight' is allocated to each sample unit, i.e; a person or a household. The weight is a value which indicates how many population units are represented by the sample unit. For the 2007–08 National Health Survey, separate person and household weights were calculated, as only one adult and one child per household were enumerated. The steps used to derive person and household weights are described below.

Weighting continued

INITIAL HOUSEHOLD WEIGHT

The first step of the weighting procedure was to assign an initial household weight to fully responding dwellings. The initial household weight was calculated as the inverse of the probability of the household's selection in the sample. For example, if the probability of a household being selected in the survey was 1 in 600, then the household would have an initial weight of 600 (that is, it represents 600 households).

The initial household weight was then adjusted as described below.

ADJUSTMENT FOR PERIOD

Clusters of households were randomly assigned to one of four sub-periods that divided up the 11 month reference period, to ensure that possible seasonal differences for health variables would be minimised. The four sub-periods were:

- Sub-period 1: Aug 2007 to Sept 2007
- Sub-period 2: Oct 2007 to Dec 2007
- Sub-period 3: Jan 2008 to Mar 2008
- Sub-period 4: Apr 2008 to June 2008

Note that the lengths of the sub-periods are 2 months, 3 months, 3 months, and 3 months respectively. To ensure that each calendar quarter contributed equally to yearly estimates, the initial household weights were adjusted for sub-period length.

INITIAL PERSON WEIGHTS

After obtaining adjusted initial household weights, initial weights were assigned to fully-responding persons based on the sub-sampling scheme deployed within households. Initial person weights were calculated by inflating the person's adjusted household weight by the probability of the person being selected. For persons 18 years and over, the household weight was multiplied by the number of adults aged 18 years and over in the household, and for persons 0–17 years old, the household weight was multiplied by the number of children aged 0 to 17 years in the household.

NON-RESPONSE ADJUSTMENT

In developing the survey weights, information available for responding and non-responding households was used by the ABS to conduct quantitative investigations into explicit non-response adjustments. No explicit non-response adjustment was made to the weighting for the 2007–08 NHS, however, as the effect of the investigated non-response adjustments to the estimates was negligible.

Benchmarks

Person and household weights adjusted to quarter are calibrated to independent estimates of the population of interest, referred to as 'benchmarks'. Weights calibrated against population benchmarks ensure that the survey estimates conform to independently estimated distributions of the population rather than to the distribution within the sample itself. Calibration to benchmarks helps to compensate for over- or under-enumeration of particular categories of persons and households, which may occur due to the random nature of sampling or non-response.

Benchmarks continued

CALIBRATION TO HOUSEHOLD LEVEL BENCHMARKS

The household benchmarks used in the 2007–08 NHS weighting were preliminary household estimates for December 2007 based on the 2006 Census of Population and Housing, scoped to the NHS.

The calibration levels used for benchmarking were State by part of State by household composition (numbers of persons 0–14 years old, numbers of persons 15 years and over).

CALIBRATION TO PERSON LEVEL BENCHMARKS

The person benchmarks used in the 2007–08 NHS were preliminary population estimates for December 2007 based on the 2006 Census of Population and Housing, scoped to the NHS.

The calibration levels used for benchmarking were State by part of State by (typically 5 year) age groups by sex.

CHAPTER 3 HEALTH STATUS INDICATORS

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INTRODUCTION

The 2007–08 NHS collected information to describe various aspects of the health status of the Australian population, with a particular focus on asthma, cancer, heart and circulatory conditions, diabetes, mental health, arthritis and osteoporosis.

To enable the prevalence of current long-term conditions to be established, supplementary information was collected as part of the process of determining whether a reported condition was current and long-term.

Current long-term conditions are defined as medical conditions (illnesses, injuries or disabilities) which were current at the time of the survey and which had lasted at least six months, or which the respondent expected to last for six months or more, including:

- long-term conditions from which only infrequent attacks may occur;
- long-term conditions which may be under control, for example, through the continuing use of medication;
- conditions which, although present, may not be generally considered 'illness' because they are not necessarily debilitating, e.g. reduced sight; and
- long-term or permanent impairments or disabilities.

In addition to information about the medical conditions they had, respondents were asked to rate their overall health, and provide information about their disability status, selected personal stressors and levels of bodily pain.

The focus on long-term conditions in the 2007–08 survey is consistent with the 2001 and 2004–05 surveys. In 2007–08, more detailed information was collected on mental health. For each of the long-term conditions collected, a condition 'status' item has been derived. These items bring together the concepts of whether ever told (by a doctor or nurse) that they have the condition, whether the condition was current at the time of the interview, and whether the condition had lasted, or was expected to last, for six months or more, regardless of how and where in the questionnaire the condition was reported. Condition status classifies the condition for each respondent into the following categories:

1. Ever told has condition, still current and long-term
2. Ever told has condition, still current but not long-term
3. Ever told has condition, not current
4. Not known if ever told, but condition current and long-term
5. Never told, not current or long-term

Counts of persons with a particular long-term condition will tally with the sum of current and long-term status categories (status categories 1 and 4) above. Some conditions are assumed to be current and/or long-term. This is discussed in more detail in the individual condition sections later in this chapter.

In some cases persons with a condition may not have reported the conditions in response to the specific questions for that condition, but may instead have reported the condition in response to subsequent, more general questions covering all conditions. Where this occurred, the condition was recorded and is counted in survey results as a current and long-term condition, but the supplementary information about actions taken or medication used is not available. Where these cases were identified by the survey instrument at the time of the interview, the respondent was asked whether they had ever been told by a doctor or nurse that they had the condition. This enabled most of these

INTRODUCTION *continued*

cases to be appropriately classified in condition status items which are derived for all conditions. Some conditions were not able to be identified in the instrument, therefore further information was not collected. The small number of cases not identified at the time of interview were allocated to condition status 4: Not known if ever told, but condition current and long-term.

The approach of screening respondents through 'ever told' questions for some conditions was adopted because people who were previously diagnosed with a condition, but no longer consider they have the condition, may be at special risk of developing chronic conditions, and were therefore a key group of interest to users of the data.

Conceptually, cases of mis-diagnosis are excluded. Where interviewers became aware of a condition which the respondent had been told they had/have, but that diagnosis later proved incorrect, the respondent was recorded as not ever told they have the condition. This approach retains the conceptual alignment between the 'ever told' and 'whether current' populations. However, respondents may not have made this known to interviewers, with the result those cases will appear in survey results as 'ever told' but 'not current'.

Although the overall approach was similar for most conditions, there are some differences in the conceptual basis of the conditions data available. These are summarised in the table below. As noted above, regardless of these differences, the scope of published results about long-term conditions is those conditions identified (by the respondent or assumed under the survey methodology) as current and long-term.

LONG-TERM CONDITIONS

Type of condition	Ever told by a		Currently has condition	Condition lasted or expected to last for 6 months or more
	Ever had condition	doctor or nurse has condition		
Asthma		X	(a)X	Assumed
Cancer		X	X	Assumed
Heart and circulatory condition		X	X	Assumed and X
Diabetes/high sugar levels		X	X	(b)Assumed and X
Arthritis	X	X	X	Assumed
Osteoporosis		X	X	Assumed
Mental health(c)	X		X	X
All other conditions(c)			X	X

- (a) Must have had symptoms of asthma or taken treatment for asthma in the last 12 months.
- (b) Assumed for diabetes mellitus, asked for high sugar levels.
- (c) In contrast to the other specified conditions, respondents must volunteer that they have a condition.

Despite the different methodologies used for obtaining information about medical conditions, all condition data from the survey are ultimately 'as reported' by respondents. While the survey questionnaire was designed to prompt respondents and give them an opportunity to report all long-term conditions they had, whether or not they chose to report a condition to the ABS interviewer, and how they chose to identify or describe that condition, was at the respondent's discretion.

INTRODUCTION *continued*

The conditions recorded and classified in the survey were those currently experienced by the respondent at the time of the interview. The condition may not necessarily have been manifest in terms of current symptoms; for example, a person may suffer from hayfever or sinusitis but experience infrequent attacks.

The 2007–08 NHS questionnaire design enabled a theoretical maximum of almost 100 conditions per person to be reported.

As the NHS is a household survey, residents of hospitals, nursing or convalescent homes or similar accommodation were outside the scope of the survey, therefore prevalence data for conditions such as cancer are likely to be affected.

INFORMATION ABOUT MEDICAL CONDITIONS

Classification of conditions

Provision was made on the survey questionnaire for interviewers to record condition information in two ways;

- record responses against predefined and specified condition type/name response categories, and
- write in responses as reported by respondents for later office coding.

Information from both sources was combined and classified to a single list of approximately 1000 specific condition and condition group categories (referred to as the "1000 input code list" in this publication). This list covered the more common types of long-term conditions experienced in the Australian community. The list was initially developed by the Family Medicine Research Centre at the University of Sydney, in consultation with the ABS, for the 2001 NHS. A computer-based coding system was developed by the ABS based on this list, and all 'write in' condition information was office coded using this system. Predefined response categories in the questionnaire were allocated unique codes within the 1000 input code list.

An automated coding system was used to code medical conditions. The system allocated codes on the basis of an exact match between the condition description recorded by the interviewer, and the description contained in the auto-coder. The coder was successful in coding around 20% of conditions. Cases which were not auto-coded were manually coded using the computer-assisted system.

Results from the survey are generally not available classified to the most detailed condition level. As the data are from a sample survey, there are not enough observations to support reliable estimates at that level of detail. While some data at this level may be made available on request for more commonly occurring conditions, for general output purposes, long-term conditions are classified based on the 10TH REVISION OF THE INTERNATIONAL CLASSIFICATION OF DISEASES (ICD10).

The output classification was developed by the ABS based on mappings between the 1000 input code list and ICD10 provided by the Family Medicine Research Centre. The classification takes into account

- the types of long-term conditions more commonly reported in a population based survey and for which reliable estimates could be produced;
- the types of conditions or groups of conditions known to be of particular interest to data users; and
- the variability of the descriptions of conditions provided by respondents.

Classification of conditions continued

Efforts were made to ensure that the description of each condition which was recorded at interview was as precise and informative as possible, to enable detailed, accurate and consistent coding of conditions. Copies of the standard classifications of medical conditions available from this survey are contained in Appendix 2 of this Users' Guide. The process of mapping the 1000 input codes to the ICD10 output classifications was complex, and in some cases the classification of the input codes was based on 'best fit' rather than 'exact match'.

Interpretation of conditions data

Any interpretation of conditions data should consider the fact that all data is self-reported, and the way that respondents report a condition may differ according to the type and form of the questions asked. Conditions which are specifically mentioned in questions or in prompt cards or other aids are expected to be better reported than conditions which are not. As it is not possible (or appropriate) to mention every condition in the survey interview, the relativity between conditions shown in survey results may in part reflect different methodologies used to collect the information. In the 2007–08 survey, respondents were specifically asked about key long-term conditions, eye and sight problems, and ear and hearing problems.

Other conditions specifically shown in prompt cards (in the order in which they were shown) were:

- Astigmatism
- Short-sightedness/Myopia/difficulty seeing objects in the distance
- Macular degeneration
- Other age related sight problems/Presbyopia
- Long sightedness/Hyperopia/difficulty seeing objects close up
- Hayfever
- Sinusitis or sinus allergy
- Other allergy
- Anaemia
- Bronchitis
- Emphysema
- Epilepsy
- Fluid problems, fluid retention or oedema (exclude those due to a heart or circulatory condition)
- Hernias
- Kidney stones
- Migraine
- Psoriasis
- Stomach ulcers or other gastrointestinal ulcers
- Thyroid trouble or goitre
- Depression
- Feeling depressed
- Back - slipped disc or other disc problem
- Back pain or other back problems
- Amputation or loss of limb (for example: arm, foot, finger)
- Behavioural or emotional disorders
- Deformity or disfigurement from birth (for example: club foot, cleft palate)
- Other deformity or disfigurement (for example: effects of burns)

Interpretation of conditions data continued

- Dependence on drugs or alcohol
- Difficulties in learning or understanding
- Feeling anxious or nervous
- Gallstones
- Incontinence
- Paraplegia or other paralysis
- Speech impediment

The survey estimates show the reported prevalence of the condition (as a long-term condition) at any point of time during the survey period. The data do not refer to the incidence of conditions occurring in the survey period.

As noted previously, only those conditions which were current at the time of interview and which were long-term (i.e. of six months or more duration in the respondent's view) are included in estimates of the prevalence of persons with that long-term condition. However, for some conditions and purposes, estimates relating to whether persons have ever been told they have the condition may be considered a useful measure of the condition. This is particularly the case for conditions that can be successfully managed, such as diabetes mellitus. Respondents with successfully managed conditions may not feel they have a current condition, therefore would not report their condition as current, and the measure of prevalence consequently excludes them.

Results of the survey show numbers of people with particular conditions or combinations of conditions, as well as number of conditions per person. Some caution should be used in interpreting counts of the number of conditions per person, however, as this can be affected by the classification system used to compile the data. At those levels of the classifications which are fairly broad, the effect may be to undercount conditions (because several different conditions may be classified to a single category and appear in output as a single condition), while at more detailed classification levels the effect would be reduced. For example, a person could have 3 conditions at the detailed level (angina, oedema and hypertensive disease), but only one condition at the broad level (circulatory condition).

ASTHMA

Definition

This topic refers to those ever told by a doctor or a nurse that they have asthma, whose asthma may be considered as a current condition. For asthma to be identified as current, the respondent must have been told by a doctor or nurse that they have asthma, and have had symptoms or taken treatment for asthma in the 12 months prior to interview.

Methodology

All respondents were asked whether they had ever been told by a doctor or nurse that they have asthma, whether symptoms were present or they had taken treatment in the 12 months prior to interview, and whether they still had asthma. Those who answered yes to these questions were asked questions about written asthma action plans, use of medications for asthma in the two weeks prior to interview, frequency of medication use, visits to general practitioners, specialists or other health professionals (see list, below), hospital visits, change in severity of asthma, and whether stayed away from work/study because of asthma.

Other health professionals include the following:

- Accredited counsellor

Methodology continued

- Acupuncturist
- Chemist (for advice only)
- Chiropodist/Podiatrist
- Chiropractor
- Dietician/Nutritionist
- Naturopath
- Nurse
- Occupational therapist
- Optician/Optommetrist
- Osteopath
- Physiotherapist/Hydrotherapist
- Psychologist
- Social worker/Welfare officer
- Other

Persons sequenced around the asthma questions may have reported current long-term asthma in response to later general questions about medical conditions. These are included in and contribute to estimates of the prevalence of asthma, but the information about written action plans, medication use, consultations, hospital visits and days away was not collected in these cases.

Respondents were encouraged to refer to their medication packets, bottles, etc when answering questions about medications used for asthma. The brand or generic names of the medications reported by respondents as used for asthma in the last two weeks were recorded by interviewers, and office coded during processing (refer to Chapter 2: Survey Design and Operation.) Provision was made to record the names of up to three medications. If more than three medications were reported, only the three which the respondent considered were their main asthma medications were recorded.

Population

Information was obtained for all persons.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting data for this topic include the following:

- Almost all current asthma cases identified are those which the respondent reported as being medically diagnosed, however cases are essentially self-reported, and hence may not agree with data from other sources using different approaches to the definition of asthma and the collection of data.

Interpretation continued

- Medications recorded were those reported by respondents as used for asthma. In some cases respondents may have failed to report a medication, because they forgot they used the medication in the previous two weeks, were not aware the medication was for asthma, or did not wish to report they used it. As a result, the use of medications for asthma may be undercounted. Also, to the extent that asthma medication may be used for other conditions for which medications data were not recorded in the survey (e.g. hayfever, sinusitis), the data do not represent total use of asthma medication.
- Respondents may have mistakenly reported other medications they were using as medications for asthma. All medications reported were coded, and data can be refined for use on the basis of medication type.

Comparability with 2004–05

The methodology used in the 2007–08 NHS was similar to that used in the 2004–05 survey. The 2007–08 NHS used additional criteria to determine whether the reported asthma was current, using symptoms and medications data. Remaining data for this topic which are common to both surveys are considered comparable. (see Chapter 7: Data quality and interpretation of results).

CANCER
Definition

This topic refers primarily to those ever told by a doctor or nurse they have cancer, who consider they currently have cancer (including cancer in remission).

For the purposes of this survey, all cancer reported as current was regarded as being a long-term condition. Given the potential sensitivity of the topic, this was considered the most appropriate approach, although it was recognised that some cases of cancer may not meet the six months threshold (e.g. a person diagnosed for skin cancer who has had surgery to remove it, all within a six month period).

Methodology

Respondents were asked if they had ever been told by a doctor or nurse that they had cancer, and the type of cancer (including type of skin cancer) they had.

Predefined 'type of cancer' categories were included on the questionnaire, with provision for interviewers to record one additional type of cancer if required. The categories used were:

- Skin (including melanoma, basal cell carcinoma, squamous cell carcinoma)
- Colon/rectum/bowel
- Breast
- Prostate
- Lung (including trachea, pleura, bronchus)
- Cervical cancer
- Other female reproductive organs (including, uterus, ovary)
- Bladder/Kidney
- Stomach
- Leukaemia
- Non-Hodgkin lymphoma
- Other type of lymphoma
- Cancer of unknown primary site
- Other (specified)

Methodology continued

The use of these types in the questionnaire effectively established this list as the most detailed level of information on type of cancer available from the survey, although very limited further detail may also be available for types of cancer recorded in the 'Other - specify' category.

Respondents were then asked if they currently had cancer and the type of cancer (including type of skin cancer). For the purposes of this survey, persons in remission were regarded as still having cancer, irrespective of the period of remission. This was specifically mentioned in the question regarding currency (i.e. "including cancer which is in remission, do you currently have cancer?").

Those who answered yes to these questions were asked questions about use of natural or herbal medications or vitamin/mineral supplements for cancer in the two weeks prior to interview, frequency of visits to general practitioners, specialists or other health professionals, and whether stayed away from work/study because of asthma.

As noted in the introduction to this chapter, persons sequenced around these questions may have reported current long-term cancer in response to later general questions about medical conditions. These are included in and contribute to estimates of the prevalence of cancer.

Population

Information was obtained for all persons.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting data for this topic include the following:

- Cases of cancer reported through the general questions about long-term conditions (rather than the specific cancer questions) have not necessarily been medically diagnosed, and may instead be other conditions. In particular, self-diagnosed skin cancer may be subject to misreporting.
- As noted above, current cancers were assumed to be long-term (of six months or more duration), whether or not this was actually the case.
- Because this is a household-based survey, people with cancer who are residents in hospitals, nursing or convalescent homes or similar accommodation are outside the scope of this survey.

Comparability with 2004–05

The methodology used in the 2007–08 NHS was the same as that used in the 2004–05 survey. Additional type of cancer categories were added at the input level so that key cancers (e.g. cervical cancer) can be identified. The categories included in 2007–08 aggregate to 2004–05 categories.

HEART AND CIRCULATORY CONDITIONS

Definition

This topic refers to those persons ever told by a doctor or nurse that they have one or more heart or circulatory conditions, who consider they currently have one or more such conditions.

The scope of this topic differs according to the particular data aspect being considered.

Definition continued

For data collection purposes, and for data output relating to heart and circulatory conditions as a group of conditions, heart and circulatory conditions were defined broadly to include a range of heart, vascular and related conditions.

For output as long-term conditions classified to the standard ICD based classifications, some conditions such as high cholesterol were classified to other (i.e. non-circulatory) disease or condition groups as appropriate.

Some care should be taken in using the data to ensure the scope of the topic is appropriate to the data use intended.

For the purposes of this survey, rheumatic heart disease, heart attack, heart failure, stroke and angina were assumed to be current long-term conditions (i.e. of six months or more duration), if the respondent reported that they have ever been told by a doctor or nurse that they had been diagnosed with the condition. This reflects the likelihood of ongoing effects/consequences of those conditions. Although unlikely, it is possible that other heart and circulatory conditions could have been reported by the respondent as current conditions, but in the respondent's perception not be of six months or more duration, hence not be defined as long-term conditions in this survey.

Methodology

Respondents were asked if they had ever been told by a doctor or nurse that they had a heart or circulatory condition. A prompt card showing examples of conditions was provided to respondents. The following predefined condition categories were included on the questionnaire, with provision for interviewers to record three additional conditions if required:

- Rheumatic heart disease
- Heart attack
- Heart failure
- Stroke (including after effects of stroke)
- Angina
- High blood pressure or hypertension
- Low blood pressure or hypotension
- Hardening of the arteries, atherosclerosis or arteriosclerosis
- Fluid problems, fluid retention or oedema
- High cholesterol
- Rapid or irregular heartbeats, tachycardia or palpitations
- Heart murmur or heart valve disorder
- Haemorrhoids
- Varicose veins
- Other (up to three conditions could be recorded)

The use of these categories in the questionnaire effectively established this as the most detailed level of information on those conditions available from the survey, although very limited further detail may also be available for those conditions recorded in the 'other specify' category.

Methodology continued

Respondents were then asked if they currently had any heart or circulatory conditions, including conditions currently controlled by medications, and whether any/which of these conditions had lasted or were expected to last for six months or more. The list of predefined conditions was again used for these questions, with provision for interviewers to record up to three additional conditions if required.

Respondents who reported their rheumatic heart disease, heart attack, heart failure, stroke or angina as no longer current were sequenced past the following questions until the question related to blood pressure. These respondents were later included among those with a current long-term condition as it was considered the effects of these conditions would be long-term. When analysing the data, respondents with these conditions who were excluded from the following questions are included in the 'not stated' category.

Respondents were asked how often they usually consulted their GP about their condition, and then how often they usually consulted a specialist about their condition. They were then asked if they had consulted any other health professionals in the last 12 months. A list of other health professionals was provided to the respondent to identify particular professionals (see Asthma).

All respondents aged 45 years or over, and respondents aged 18–44 who specified that they had a current heart or circulatory condition, were asked whether their cholesterol had been checked in the last 5 years, and if so, whether their cholesterol had been checked in the last 12 months.

Respondents aged 18 years or over were asked whether their blood pressure had been checked in the last two years, and if so, whether it had been checked in the last 12 months, and who had performed the check (GP, specialist, other health professional, somebody else (e.g. family member), and/or the respondent themselves).

Information was then obtained about medication use for up to three current and long-term heart and circulatory conditions reported. Respondents were asked whether they had taken vitamins/minerals, natural/herbal medicines or other medications (pharmaceuticals) for these heart and circulatory heart conditions in the last two weeks, and if they knew for which condition they were taking each medication. Respondents were encouraged to refer to their medication packets, bottles, etc. when answering questions about medications used for heart and circulatory conditions. The brand or generic names of the medications reported by respondents were recorded by interviewers, and office coded during processing – refer to Chapter 2: Survey Design and Operation. Provision was made to record the names of up to three medications each for up to three heart and circulatory conditions. If more than three medications were reported, only the three which the respondent considered were the main medications they used for each condition were recorded.

Testing had shown that in some cases, people who had several heart and circulatory conditions were unable to link a particular medication they had used with a particular condition. Provision was made to record up to three additional medication names in these cases so that they could be included as being used for a heart or circulatory condition.

Methodology continued

Only those medications specifically used for particular heart or circulatory conditions are conceptually included. Other medications, used, for example, to treat symptoms or side effects of treatment, were excluded where the purpose for use was identified.

Respondents who reported they had taken medication in the last two weeks were also asked whether they took aspirin on a daily basis, and whether this had been on the advice of a doctor. Respondents may or may not have had room to record aspirin as one of their three medications per condition, therefore response rates for aspirin as a medication for circulatory conditions and daily use of aspirin for circulatory conditions do not necessarily tally.

Respondents were then asked if their heart or circulatory condition had caused them to take more than half a day away from work/study/ school in the last 12 months, and if so, the number of days involved.

Persons sequenced around these questions because they reported they had never been told by a doctor or nurse that they had a heart or circulatory condition may have reported a current and long-term heart or circulatory condition in response to later general questions about medical conditions. These cases are included in, and contribute to, estimates of the prevalence of heart and circulatory conditions, but information about associated medication use was not collected.

Population

Information was obtained for all persons, with certain questions only asked of specific groups, as identified above.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting data for this topic include the following:

- As this is a household based survey, people with heart or circulatory conditions who are resident in hospitals, nursing or convalescent homes, or similar accommodation are outside the scope of this survey. As a result, the survey will under-represent those with more severe conditions.
- In this survey, persons who reported they had been told they had rheumatic heart disease, a heart attack, heart failure, angina or stroke are counted as having a current and long-term condition. Even though these conditions are usually short-term events, they often result in some form of residual damage or effects, and have been treated in this survey as current long-term conditions on that basis.
- The conditions recorded are as reported by respondents. In some cases it could be expected that some conditions reported may be symptoms of other heart or circulatory conditions, or other conditions. For example, oedema may be a symptom of a heart valve disorder. Respondents were not asked to associate conditions in this way, such that both symptoms and underlying conditions may have been reported in some cases, or symptom or condition only in other cases. As a result, in looking at the prevalence of certain conditions, data users should consider how related or associated conditions should be treated.

Interpretation continued

- Medications recorded were those reported by respondents as used for heart and circulatory conditions. In some cases respondents may have not reported a medication because they forgot they used the medication in the previous two weeks, were not aware the medication was for a heart or circulatory condition, or did not wish to report they used it. In other cases medications taken for conditions or symptoms associated with a heart or circulatory condition but not for the condition itself may have been reported, when conceptually they were excluded. Also, to the extent that heart or circulatory medications may be used for other conditions for which medications data were not recorded in the survey, the data do not represent total use of these medication types.
- Respondents may have mistakenly reported other medications they were using as medications for a heart or circulatory condition. All medications reported were coded, and data can be refined for use on the basis of medication type.
- As the number of heart and circulatory conditions and medications for which data can be collected is restricted, some conditions and/or medication information may be under-represented.

Comparability with 2004–05

The questions for this survey were the same in 2007–08 as in the 2004–05 NHS, however, the following should be noted:

- Heart failure was added to the prompt card and main condition picklist in the 2007–08 NHS. This may have led to a higher level of reporting of that condition than in previous surveys.
- Due to the change in the methodology of deriving rheumatic heart disease, heart attack, heart failure, stroke and angina as current long-term conditions, the prevalence of these conditions has increased. Consequently the prevalence of ischaemic heart diseases (angina and other ischaemic heart diseases), other heart diseases, and cerebrovascular diseases has also increased.

DIABETES MELLITUS

Definition

This topic refers primarily to those ever told by a doctor or nurse they have diabetes mellitus or high sugar levels in their blood or urine, and who consider they currently have this condition.

All types reported were recorded for the item 'whether ever told by a doctor or nurse'.

- Diabetes; Type 1
- Diabetes; Type 2
- Diabetes; Gestational
- Diabetes; Type unknown
- High sugar levels

Methodology

Respondents were asked if they had ever been told by a doctor or nurse that they had diabetes and/or high sugar levels in blood or urine, and those aged 50 years and over were asked if they had been screened for diabetes in the last three years. Those who reported they had been told they had diabetes or high sugar levels were asked the age at which they were told they had diabetes/high sugar levels, and the type of diabetes they were told they had. Persons were then asked whether the diabetes or high sugar level was still current. Those reporting only diabetes insipidus were sequenced out of further diabetes questions at this point and recorded elsewhere as a current, long-term

Methodology continued

condition. From this point on in the User Guide, any references to diabetes refer to diabetes mellitus.

Where the respondent had reported they currently had Type 1 or Type 2 diabetes those conditions were assumed to be of six months or more duration. If the respondent reported they currently had diabetes but didn't know the type, or currently had high sugar levels, they were asked if their condition had lasted, or was expected to last, for six months or more.

Additional information outlined below was obtained only for those people reporting conditions determined or assumed to be both current and long-term.

Information was obtained about whether the respondent consulted their GP or specialist about their condition, the frequency of the consultations, and whether they had taken place in the last 12 months. Respondents were then asked whether they had consulted other health professionals, including diabetes educators, and whether this had taken place in the last 12 months. They were then asked how often in the last 12 months their blood glucose levels had been tested, and how often their feet had been checked. Respondents were also asked if their diabetes or high sugar levels had caused them to take more than half a day off work, study or school in the last 12 months, and if so, the number of days taken; as well as whether it had interfered with other daily activities in the last 12 months.

Respondents were asked if they had daily insulin, and if so, the age they started. The use of other pharmaceutical medications for diabetes/high sugar levels in the last two weeks was then recorded. Although the question on these other medications specifically excluded insulin, approximately 8% of 'other medication' recorded was insulin.

Respondents were encouraged to gather up and refer to their medication packets, bottles, etc when answering questions about medications used for diabetes. The brand or generic names of the medications reported by respondents were recorded by interviewers, and office coded during processing – see Chapter 2: Survey Design and Operation. Provision was made to record the names of up to three medications. If more than three medications were used, only the three which the respondent considered were the main medications they used for diabetes or high sugar levels were recorded. Use of vitamins/minerals and natural/herbal medications was identified through questions about other recent actions (see below). Only those medications specifically used for diabetes or high sugar levels were conceptually included. Other medications, used, for example, to treat symptoms or side effects of treatment, were excluded where the purpose for use was identified.

Respondents who reported they had current and long-term diabetes or high sugar levels were also asked about changes to their eating pattern or diet. Actions taken to manage their condition in the last two weeks, such as losing weight, exercising most days, taking vitamin/mineral supplements or natural/herbal treatments were also recorded. Further information was obtained about whether these people had a diabetes/high sugar levels-related sight problem, the type of sight problem, and the time since they had last consulted an eye specialist or optometrist.

Methodology continued

Respondents sequenced around these questions because they reported they had never been told by a doctor or nurse that they had diabetes or high sugar levels may have reported these conditions in response to later general questions about long-term medical conditions. These cases are included in and contribute to estimates of the prevalence of diabetes mellitus and high blood sugar as appropriate, but associated information about medication use, recent actions and eye/sight problems was not collected.

Population

Information was obtained for all persons.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting data for this topic include the following:

- Those cases of diabetes or high sugar levels reported through the general questions about long-term conditions (rather than the specific questions about diabetes and high sugar levels) have not necessarily been medically diagnosed.
- Because this is a household-based survey, those people with diabetes resident in hospitals, nursing or convalescent homes, or similar accommodation are outside the scope of this survey. As a result, the survey will under-represent those with more severe complications of the condition.
- Medications recorded were those reported by respondents as used for diabetes or high sugar levels. In some cases respondents may have not reported a medication, because they forgot they used the medication in the previous two weeks, or were not aware the medication was for diabetes or high sugar levels, or did not wish to report they used it. In other cases medications taken for conditions or symptoms associated with diabetes but not for the condition itself may have been reported, when conceptually they were excluded. Also, to the extent that medications for diabetes/high sugar levels may be used for other conditions for which medications data were not recorded in the survey, the data do not represent total use of these medication types.
- Gestational diabetes is not considered a long-term condition.

Comparability with 2004–05

The methodology used in the 2007–08 NHS was similar to that used in the 2004–05 survey, and therefore data for most items are considered directly comparable between surveys.

ARTHRITIS

Definition

This topic refers primarily to those who consider they currently have arthritis (whether or not they had been told by a doctor or nurse that they had the condition - see Interpretation of results for this topic). Information about gout and rheumatism is also covered.

Methodology

Respondents were asked whether they have, or had ever had gout, rheumatism or arthritis. Those who reported arthritis were asked the type of arthritis – osteoarthritis, rheumatoid arthritis, and/or other type (specified). Respondents were then asked whether they currently had any of these conditions, and for gout and rheumatism were asked whether the condition had lasted, or was expected to last, for six months or more. All cases of current arthritis were assumed to be long-term conditions. All respondents who reported they had ever had arthritis (of any type) were asked whether they had been told by a doctor or nurse, and the age they were first told.

Information was then obtained about medications used for arthritis in the last two weeks, including vitamin and mineral supplements, natural and herbal products and pharmaceutical medicines. Respondents were encouraged to refer to their medication packets, bottles, etc when answering questions about medications used for arthritis. The brand or generic names of the pharmaceutical medications reported by respondents were recorded by interviewers, and office coded during processing – see Chapter 2: Survey Design and Operation. Provision was made to record the names of up to three pharmaceutical medications. If more than three were reported, only the three which the respondent considered were the main medications they used for arthritis were recorded. Only those medications specifically used for arthritis were conceptually included. Other medications, used, for example, to treat symptoms or side effects of treatment, were excluded where the purpose for use was identified.

Respondents were also asked about their use of specific dietary supplements such as vitamin D, calcium, glucosamine and various marine-based products, natural or herbal treatments. The names or brands of vitamin D supplements, calcium supplements and other vitamin/mineral supplements or other natural/herbal treatments were recorded.

Information relating to respondents with arthritis who visited GPs, specialists and other health professionals because of their arthritis was collected in conjunction with persons who reported having osteoporosis and osteopenia. They were also asked (as a group) whether they had taken the following actions for their condition in the last two weeks:

- Did weight/strength/resistance training
- Obtained and/or used physical aids (used at home or work)
- Water therapy
- Massage
- Changed eating pattern/diet
- Losing weight
- Exercised most days
- Other action taken

Respondents sequenced around these questions because they reported they had not ever had arthritis may have reported the condition in response to later general questions about long-term medical conditions. These cases are included in and contribute to estimates of the prevalence of arthritis as appropriate, but the associated information about medication use and recent actions was not collected.

Population

Information was obtained for all persons.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting data for this topic include the following:

- Whereas the 2007–08 NHS methodology used for other long-term conditions commenced with the 'ever told' question so that all further questions were asked only of that population medically diagnosed, questions on arthritis commence with 'have or ever had' such that the 'ever told' population is a subset, not the defining population for the topic. This methodology recognises the large numbers of people in the community who consider themselves to have arthritis, but who have not necessarily been diagnosed with the condition. Most of these cases would not be recorded under the methodology used for the other long-term conditions. For output the different approach means that:
 - although 'status' items are derived for arthritis in the same way as for other long-term conditions, the data are conceptually different; and
 - for the purpose of contributing to long-term condition data, it is those cases of current arthritis which are counted (as it is assumed all current cases are long-term), not those cases ever told and current (which is the case for most other long-term conditions).
- The distinction between arthritis, rheumatism and some other joint disorders may not be clear to respondents, particularly those whose condition has not been medically diagnosed. As the data collected in the survey are self-reported by respondents, there is a likelihood of some leakage to and from similar conditions. Unfortunately, information is not available from this survey regarding the extent to which this is likely to have occurred, but users of the data should consider taking account of similar conditions when, for example, looking at the prevalence of arthritis.
- Because this is a household-based survey, those people with arthritis resident in hospitals, nursing or convalescent homes or similar accommodation are outside the scope of this survey. As a result the survey will under-represent those with more severe complications of the condition, and the elderly.
- Medications recorded were those reported by respondents as used for arthritis. In some cases respondents may not have reported a medication, because they forgot they used the medication in the previous two weeks, or were not aware the medication was for arthritis, or did not wish to report they used it. In other cases medications taken for conditions or symptoms associated with arthritis but not for the condition itself may have been reported, when conceptually they were excluded. Also, to the extent that medication for arthritis may be used for other conditions for which medications data were not recorded in the survey, the data do not represent total use of these medication types.

Interpretation continued

- Information relating to respondents with arthritis who visited GPs, specialists and other health professionals, or who undertook specified actions because of their arthritis, was collected in conjunction with persons who reported having osteoporosis or osteopenia. It is not possible to identify whether the respondent made the visits or took the actions because of their arthritis unless the respondents did not report having osteoporosis or osteopenia.

Comparability with 2004–05

Results from the 2007–08 survey are comparable the 2004–05 survey.

OSTEOPOROSIS

Definition

This topic refers primarily to those ever told by a doctor or nurse they have osteoporosis or osteopenia (a mild loss of bone mass density that may progress to osteoporosis). The methodology is similar to that used for most long-term conditions in this survey.

Methodology

Respondents aged 15 years and over, and younger respondents who reported having gout, rheumatism or arthritis, were asked whether they had ever been told by a doctor or nurse that they had osteoporosis, osteopenia or both, and if so, the age they were first told. All cases reported were assumed to be still current and long-term. Information was obtained about medications used for the conditions in the last two weeks, including vitamin and mineral supplements, natural and herbal products and pharmaceutical medicines. Respondents were encouraged to refer to their medication packets, bottles, etc when answering questions about medications used for their osteoporosis or osteopenia.

The brand or generic names of the pharmaceutical medications reported by respondents were recorded by interviewers, and office coded during processing – see Chapter 2: Survey Design and Operation. Provision was made to record the names of up to three pharmaceutical medications. If more than three were reported, only the three which the respondent considered were the main medications they had used for their osteoporosis or osteopenia were recorded. Only those medications specifically used for osteoporosis or osteopenia were conceptually included. Other medications, used, for example, to treat symptoms or side effects of treatment, were excluded where the purpose for use was identified.

Respondents were also asked about their use of specific dietary supplements such as vitamin D, calcium, glucosamine and various marine-based products. The names or brands of vitamin D supplements, calcium supplements and other vitamin/mineral supplements or natural/herbal treatments were recorded.

Information was obtained on whether respondents had visited their GP or specialist about their osteoporosis or osteopenia, the frequency of the visits, and whether they had consulted specific health professionals in the last 12 months. Respondents were asked whether they had taken certain actions for their osteoporosis or osteopenia in the last two weeks, and the types of action taken; as well as whether they had taken more than half a day away from work, study or school in the last 12 months for their osteoporosis or osteopenia, and if so, how many days.

Finally, respondents were asked whether they had ever had their bone density tested, and if so, whether it had been tested in the last 2 years.

Methodology continued

Respondents sequenced around these questions because they reported they had never been told they had osteoporosis or osteopenia may have reported the condition in response to later general questions about long-term medical conditions. These cases are included in and contribute to estimates of the prevalence of the conditions as appropriate, but the associated information about medication use and recent actions was not collected.

Population

Information was obtained for all persons.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting data for this topic include the following:

- The population for this topic was respondents aged 15 years and over, and those aged less than 15 who had gout, rheumatism or arthritis who had also been told by a doctor or nurse that they had the condition. Limiting the population to this group makes virtually no difference to the prevalence of the condition.
- The currency and long-term nature of the condition were assumed. While this is appropriate for the nature of this condition, it differs conceptually from the approach used for most other conditions covered in the survey. Presence of the condition is often not known or even suspected until medical diagnosis. Results from this survey therefore expect to significantly underestimate the true prevalence of the condition throughout the community.
- Because this is a household based survey, those people with osteoporosis or osteopenia resident in hospitals, nursing or convalescent homes or similar accommodation are outside the scope of this survey. As a result, the survey will under-represent those with more severe complications of the condition, and the elderly.
- Medications recorded were those reported by respondents as used for osteoporosis or osteopenia. In some cases respondents may have not reported a medication because they forgot they used the medication in the previous two weeks, or were not aware the medication was for osteoporosis or osteopenia, or did not wish to report they used it. In other cases, medications taken for conditions or symptoms associated with osteoporosis or osteopenia but not for the condition itself may have been reported, when conceptually they were excluded. Also, to the extent that medications for osteoporosis or osteopenia may be used for other conditions for which medications data were not recorded in the survey, the data do not represent total use of these medication types.
- As stated in the section above, information relating to respondents with arthritis who visited GPs, specialists and other health professionals, or who undertook specified actions because of their arthritis, was collected in conjunction with persons who reported having osteoporosis or osteopenia. It is not possible to identify whether the respondent made the visits or took the actions because of their arthritis unless the respondents did not report having osteoporosis or osteopenia.

*Comparability with
2004–05*

Despite the change in the population answering these questions, the prevalence of osteoporosis and medication use is considered to be comparable with 2004–05. Most of the data items collected for this topic in the 2007–08 survey were available for 2004–05.

MENTAL HEALTH AND
WELLBEING

Definition

Mental health and wellbeing relates to emotions, thoughts and behaviours. A person with good mental health is generally able to handle day-to-day events and obstacles, work towards important goals, and function effectively in society. However, even minor mental health problems may affect everyday activities to the extent that individuals cannot function as they would wish, or are expected to, within their family and community. Consultation with a health professional may lead to the diagnosis of a mental disorder.

In the 2007–08 survey, information was collected on mental health and wellbeing via:

- The Kessler Psychological Distress Scale–10 (K10) questionnaire;
- Self-reported long-term mental and behavioural problems; and
- Information on medication use for mental health and wellbeing.

Information collected later in the survey on personal stressors included items related to mental health.

*Kessler Psychological
Distress Scale–10*

The Kessler Psychological Distress Scale–10 (K10) is a scale of non-specific psychological distress. It was developed by Professors Ron Kessler and Dan Mroczek, as a short dimensional measure of non-specific psychological distress in the anxiety-depression spectrum, for use in the US National Health Interview Survey. It was asked of adults aged 18 years and over in the 2007–08 NHS.

The 10 item questionnaire yields a measure of psychological distress based on questions about negative emotional states (with different degrees of severity) experienced in the 4 weeks prior to interview. For each question, there is a five-level response scale based on the amount of time that a respondent experienced the particular problem. The response options are:

- None of the time
- A little of the time
- Some of the time
- Most of the time
- All of the time.

Each of the items are scored from 1 for 'none', to 5 for 'all of the time'. Scores for the ten items are summed, yielding a minimum possible score of 10 and a maximum possible score of 50, with low scores indicating low levels of psychological distress and high scores indicating high levels of psychological distress.

K10 results are commonly grouped for output. Results from the 2007–08 NHS are usually grouped into the following four levels of psychological distress:

- low (scores of 10–15, indicating little or no psychological distress)
- moderate (scores of 16–21)
- high (scores of 22–29)
- very high (scores of 30–50)

*Kessler Psychological
Distress Scale-10
continued*

Based on research from other population studies, a very high level of psychological distress shown by the K10 may indicate a need for professional help.

In Australia, national level information on psychological distress using the K10 was first collected in the Survey of Mental Health and Wellbeing (SMHWB) conducted by the ABS in 1997 and later in 2007. The SMHWB was an initiative of, and funded by, the (then) Commonwealth Department of Health and Family Services as part of the National Mental Health Strategy. The K10 was included in both the 2001, 2004–05 and 2007–08 NHS as it proved to be a better predictor of depression and anxiety disorders than the other short, general measures used in the 1997 SMHWB. For further information about ABS use of the instrument, refer to Use of the Kessler Psychological Distress Scale in ABS surveys (cat. no. 4817.0.55.001).

*Long-term mental and
behavioural problems*

Information on long-term conditions (conditions that had lasted or were expected to last for six months or more) was collected in the 2007–08 NHS for people of all ages. Mental health and behavioural problems were identified through self-reported information on long-term conditions. When respondents reported a long-term mental or behavioural problem, the conditions were treated in a similar manner to other long-term conditions such as diabetes and asthma. Up to six long-term mental and behavioural problems could be recorded.

Conditions such as behavioural or emotional disorders, dependence on drugs or alcohol, feeling anxious or nervous, depression, and feeling depressed were identified on prompt cards with more general questions about long-term conditions. Other mental health conditions were collected when respondents were asked to identify any other long-term conditions they had. These conditions were identified by a mental health conditions coding list in the instrument.

For each mental health and behavioural problem reported, respondents were asked whether a doctor, nurse or other health professional had told them they had the condition, and if so, how old they were when they were told. Data was then collected on the frequency of consultations with a GP and psychiatrist about the condition(s), and consultations with the following health professionals in the last 12 months:

- Psychologist
- Alcohol and drug worker
- Accredited counsellor
- Acupuncturist
- Chemist (for advice only)
- Chiropodist/Podiatrist
- Chiropractor
- Dietitian/Nutritionist
- Naturopath
- Nurse
- Occupational therapist
- Optician/Optommetrist
- Osteopath
- Physiotherapist/Hydrotherapist
- Social worker/Welfare officer
- Other

Long-term mental and behavioural problems continued

After information on medication was collected (see below), respondents were asked whether they had taken more than half a day off work or study in the last 12 months due to their condition, and if so, how many days.

Interpretation

There are issues around whether or not mental health conditions are reported by respondents, impacting on the quality of the data. This is partly to do with the nature of these conditions, which respondents may see as very personal or sensitive, particularly as other household members may be present at the interview.

Type of medication used for mental health and wellbeing

Information was collected on whether respondents had taken any vitamin or mineral supplements and herbal or natural medicines for their condition in the two weeks prior to interview. Respondents were then asked whether they had taken any sleeping tablets or capsules, tablets or capsules for anxiety or nerves, tranquillisers, antidepressants, mood stabilisers or other medications for mental health in the last two weeks. This information was also collected from persons aged 18 years and over with respect to mental wellbeing in conjunction with the K10 questions.

The brand or generic names of the pharmaceutical medications reported by respondents were recorded by interviewers, and office coded during processing – see Chapter 2: Survey Design and Operation. Provision was made to record the names of up to three pharmaceutical medications for long-term mental and behavioural problems. If more than three were reported, only the three which the respondent considered were the main medications they had used for their long-term mental and behavioural problems were recorded. Up to five medications were recorded for mental wellbeing.

For each pharmaceutical medication recorded, information was collected on the duration and frequency of use.

Other mental health related problems

Information was also collected on whether mental illness or drug-related problems had been a problem for the respondent or anyone close to them (see Personal Stressors).

Population

Information was collected for all persons for long-term mental and behavioural problems. This information was provided by a proxy for all persons under 15 years of age, and for some persons aged 15 to 17 years – see Chapter 2: Survey Design and Operation.

Information relating to mental wellbeing (the K10 levels of psychological distress) was collected for persons aged 18 years and over.

Information relating to personal stressors was collected from persons aged 15 years and over.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

*Comparability with
2004–05*

Prevalence information about long-term mental health problems is not considered directly comparable between surveys as additional conditions were added to the prompt cards. Changes in community perceptions of mental illness/problems, together with changes in the identification of illness and the treatment of conditions (e.g. institutional versus community care), may have affected the degree to which certain conditions were identified in the survey.

The K10 was included in the 2001, 2004–05 and 2007–08 NHS, and the data are considered directly comparable. Users should note that the version of K10 used in the NHS is slightly different to that used in the Survey of Mental Health and Wellbeing (see Kessler Psychological Distress Scale, in Other Scales and Measures, National Survey of Mental Health and Wellbeing: Users' Guide, 2007 (cat. no. 4327.0)).

Medications data for mental and behavioural problems was collected for the first time in 2007–08.

SIGHT AND HEARING

Definition

This topic covers detailed information about sight and hearing, including conditions that can be corrected (for instance by glasses) through to total blindness or deafness.

Methodology

Respondents were asked a number of questions relating to eyesight. After ascertaining whether the respondent was colour blind (not conceptually considered to be a long term condition), respondents were asked whether they wore glasses or contact lenses to correct or partially correct their eyesight. Persons who did so were shown the following prompt card listing a number of sight conditions which are currently corrected or partially corrected by glasses or contact lenses, and asked to select any conditions they may have had.

- Astigmatism
- Short sightedness/Myopia/difficulty seeing objects in the distance
- Macular degeneration
- Other age related sight problems/Presbyopia
- Long sightedness/Hyperopia/difficulty seeing objects close up
- Other. (One other eye sight problem could be recorded.)

All persons were then asked whether they had any other sight problems. A list of conditions was provided to interviewers to make it easier to record the information, however this may have led to some conditions being recorded in categories that were not entirely appropriate. The listed categories were:

- Astigmatism
- Short sightedness/Myopia/difficulty seeing objects in the distance
- Macular degeneration
- Other age related sight problems/Presbyopia
- Long sightedness/Hyperopia/difficulty seeing objects close up
- Totally blind in both eyes
- Totally blind in one eye
- Partially blind in both eyes
- Partially blind in on eye
- Glaucoma
- Cataracts
- Trachoma

Methodology continued

- Lazy eye/Strabismus
- Retinopathy
- Other (One other eye sight problem could be recorded.)

Whether any recorded conditions were caused by diabetes or high sugar levels was determined, as well as the time since they consulted an eye specialist or optometrist.

Respondent were asked whether they had any hearing problems or problems with their ears which had lasted, or was expected to last for six months or more. As with eye sight problems, a list of conditions was provided to interviewers to make it easier to record the information. Again, this may have led to some conditions being recorded in categories that were not entirely appropriate. The listed categories were:

- Total deafness
- Deaf in one ear
- Hearing loss/partially deaf
- Tinnitus
- Meniere's Disease
- Otitis Media
- Other (One other hearing or ear problem could be recorded.)

Population

Information was collected in respect of all persons in scope of the survey.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

**LONG-TERM CONDITIONS:
TYPE OF CONDITION**

In the 2007–08 NHS, long-term condition data is drawn from two conceptually different sets of data:

Definition

- conditions that are specifically asked about, including asthma, cancer, heart and circulatory conditions, diabetes mellitus, mental and behavioural problems, arthritis and osteoporosis, and sight and hearing. As noted in previous sections, these data primarily refer to conditions which have been medically diagnosed, and reported as (or assumed to be) current and of six months or more duration; and
- conditions reported in response to the question on whether they had any other long-term health conditions which had lasted, or were expected to last, for six months or more.

Data from these two groups are combined for output relating to long-term conditions or persons with long-term conditions.

Methodology

Information about the collection of data for the specific long-term conditions noted above appears in previous sections of this publication. Initial data for other long-term conditions was collected via a prompt card showing the following conditions:

- Hayfever
- Sinusitis or sinus allergy
- Other allergy
- Anaemia
- Bronchitis

Methodology continued

- Emphysema
- Epilepsy
- Fluid problems/fluid retention/Oedema (excluding those due to heart or circulatory conditions)
- Hernias
- Kidney stones
- Migraine
- Psoriasis
- Stomach/other gastrointestinal ulcers
- Thyroid trouble/goitre
- Depression
- Feeling depressed
- Back - slipped disc or other disc problems
- Back pain or other problems

Respondents were asked to report any conditions they might have from this list, which had lasted, or were expected to last, for six months or more. Additional information was collected about back pain or problems to help determine the long-term nature of the problem. Respondents were then asked to report any long-term conditions they might have that did not appear on that list, including:

- Conditions that recur from time to time;
- Conditions that have lasted for a long time and that may have been adjusted to; and
- Conditions which are under control because of long term treatment or taking medication.

There was capacity to report up to six other conditions.

Finally, respondents were asked whether they had any other long-term conditions such as the following:

- Amputation or loss of limbs, e.g. arm, foot, finger
- Behavioural or emotional disorders
- Deformity or disfigurement from birth, e.g. club foot, cleft palate
- Other deformity or disfigurement, e.g. effects of burns
- Dependence on drugs or alcohol
- Difficulties in learning or understanding
- Feeling anxious or nervous
- Gallstones
- Incontinence
- Paraplegia or other paralysis
- Speech impediment

Information was collected on how long each condition had lasted and whether the respondent was told they had the condition by a doctor or nurse.

Interpretation

Points to be borne in mind in interpreting data from the survey relating to long-term conditions include the following:

Interpretation continued

- As noted previously, the data relate to conditions 'as reported' by respondents and hence do not necessarily represent conditions as medically diagnosed, except in the case of those conditions which respondents reported having been advised that they had by a doctor or nurse. However, as the data relate to conditions which had lasted or were expected to last for six months or more, there is considered to be a reasonable likelihood that medical diagnoses would have been made in most cases. The degree to which conditions have been medically diagnosed is likely to differ across condition types.
- Even where conditions have been medically diagnosed, respondents may have used different terminology when reporting the condition, such that it has been classified to a different group.
- While the methodology was aimed at maximising the identification of long-term conditions, some under-reporting may have occurred, particularly in respect of those conditions which are controlled by treatment (such as epilepsy) or recur infrequently, or those to which respondents have become accustomed and no longer consider an illness.
- Where asthma, cancer, heart and circulatory conditions, diabetes mellitus, mental and behavioural problems, arthritis or osteoporosis are reported later in the survey (rather than the specified section), the prevalence of that condition is still recorded appropriately. However, as the questions asked within the condition module will not have been answered, a 'not known' response will be recorded for condition-related data.
- It is expected that conditions which were specifically mentioned in questions or (to a lesser extent) shown on prompt cards would have been better reported than conditions for which response relied entirely on respondent judgement and willingness to report them. Data are not available from this survey to enable the magnitude of this effect to be quantified, but it is likely to differ across condition types and for different groups in the population.
- Although long-term/permanent disabilities were within the scope of long-term conditions, data from this section on long-term conditions should not be interpreted as indicating the disabled population. In some cases, long-term/permanent impairment/disability could be evident from the condition categories, e.g. blindness (complete or partial), while for others some degree of impairment/disability could be inferred from the nature of the condition, e.g. arthritis, back problems. However, these data should, at best, be considered as proxy indicators of disability only. See Disability, in this Chapter, for more information.

Comparability with 2004–05

- The methodologies used for the majority of long-term conditions are the same or similar to those used in the 2004–05 NHS. Most data should be directly comparable, however readers are advised to note the comments on comparability contained in each of the separate condition sections. There were some small differences (e.g. in the coverage of particular conditions in the survey prompt cards) which may have reduced comparability.
- Information collected about mental health or behavioural problems was collected in more detail in the 2007–08 NHS, so data is not directly comparable.

*Comparability with
2004–05 continued*

- Changes in community perceptions of illness and disability, together with changes in the identification and treatment of conditions (e.g. institutional versus community care) may have affected the degree to which certain conditions were identified in the survey.
- The prevalence of most long-term illness increases with age. In drawing comparisons of prevalence between the surveys, account should be taken of the shift in the age profile of the population during the period between surveys.
- Data classified to the INTERNATIONAL CLASSIFICATION OF PRIMARY CARE (I.C.P.C.) is not available in 2007–08.

CONDITIONS CAUSED BY
INJURY

This topic determines whether any current long-term conditions reported by the respondent resulted from an injury.

Definition

Methodology

Respondents who had reported one or more current long-term conditions (or conditions which were assumed to be current and long-term) were asked whether that/any of the condition(s) was the result of an injury.

Respondents who reported that one or more conditions were due to an injury were asked, in respect of each condition, whether the injury occurred at work, school, study, in a motor vehicle accident, during exercise or sport, at home or somewhere else. For each condition reported to have been caused by injury, respondents were asked how old they were when the injury occurred.

Population

Information was collected in respect of all persons for whom one or more current long-term conditions (or conditions which were assumed to be current and long-term) had been reported.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be borne in mind in interpreting data from the survey relating to the reported cause of long-term conditions include the following:

- The data are self-reported, and reflect the respondent's view of causality and responsibility. Conditions identified as due to an injury at work are not necessarily consistent with those which might be deemed to be work related for workers' compensation purposes.
- The questions were asked only in respect of conditions which had previously been reported during the survey interview. To the extent that respondents had failed to previously report a condition, the origin of the injury could not be established. As a result, some conditions resulting from an injury may not be identified in the survey.
- Injuries that did not cause long-term conditions are not reported in the survey.

*Comparability with
2004–05*

In the 2007–08 NHS, the questions and general methodology for this topic were similar to those of the 2004–05 survey, with the exception of the collection of work-related injuries. As a result, the data are considered broadly comparable between the surveys. However, the following points should be borne in mind in making comparisons:

- This topic is directly dependent on the conditions previously reported in the survey, so that any change in methodology affecting the likelihood of conditions being reported will impact on comparability. While the overall approach to collecting conditions data was the same in both surveys, changes to the approach for some heart and circulatory conditions and mental health and behavioural problems, as well as changes to population groups and condition prompt cards, will have had some impact on data for this topic.
- In the 2004–05 survey, questions on conditions caused by an injury were asked following a question on whether any conditions were work-related. In the 2007–08 survey, the question of whether any conditions were work-related was not asked, but place of injury questions are directly comparable.

SELF-ASSESSED HEALTH
STATUS

This is a single question about how respondents rate their health overall.

Definition

Methodology

Before any more specific health questions are asked, respondents are asked whether in general they feel their health is excellent, very good, good, fair or poor.

Population

Information was obtained for all persons aged 15 years and over.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting this data item include the following:

- This is a subjective data item. Perceptions may be influenced by any number of factors which may be unrelated to health, or which may reflect momentary or short term feelings or circumstances (rather than usual feelings or circumstances). Responses may have been influenced by factors involved in the interview itself such as the presence of another family member.
- Analysis of similar data from previous NHSs showed some correlation between self-assessed health status and health status as indicated by more objective measures such as recent and/or long-term illness. However, self-assessed health status should not be used as an alternative to those measures without analysis of correlations in the particular use of the item proposed.
- Information recorded for persons aged 15 to 17 may have been reported by an adult within the household, usually a parent. Data for this age group, therefore, may not be conceptually 'self-assessed' as responses may have been different if the children had responded for themselves.

*Comparability with
2004–05*

Self-assessed health status is considered directly comparable between the 2004–05 and 2007–08 surveys

HEALTHY LIFESTYLES

Definition

This topic covers check-ups and healthy lifestyle discussions with a GP or other health professional.

Methodology

Respondents were asked if they had check-ups with their GP, and if so, how frequent the check-ups usually were. Response categories for frequency were:

- At least once a month
- Every three months
- Every six months
- Annually
- Less frequently
- Not regularly
- Other

Respondents were then asked if they had discussed any of the following lifestyle issues with their GP in the 12 months prior to interview:

- Reducing or quitting smoking
- Drinking alcohol in moderation
- Reaching a healthy weight
- Increasing physical activity
- Eating healthy food or improving their diet

They were also asked if they had consulted, or discussed their lifestyle issues, with any of the following other health professionals:

- Specialist doctor
- Accredited counsellor
- Acupuncturist
- Chemist (for advice only)
- Chiropodist/Podiatrist
- Chiropractor
- Diabetes educator
- Dietitian/Nutritionist
- Naturopath
- Nurse
- Occupational therapist
- Optician/Optomtrist
- Osteopath
- Physiotherapist/Hydrotherapist
- Psychologist
- Social worker/Welfare officer
- Other

Population

Information was obtained from persons aged 15 years and over.

Data items The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation When interpreting data for this topic, it should be noted that the interpretation of what constituted a 'check-up' was up to the respondent. If a respondent asked for clarification, the definition provided by the Department of Health and Ageing Medicare 'health check' was used. This indicates that when a GP conducts a 'regular check-up', it may include the following:

- collection of family, medical and lifestyle history;
- physical examinations such as blood pressure, height and weight;
- tests such as pap smears, blood test, urine test and cancer screening; and
- giving advice on how to improve the patient's health, such as actions to take and referrals to other professionals.

Comparability with 2004–05 This topic was not collected in 2004–05, therefore no comparison can be made.

DISABILITY
Definition

A disability or restrictive long-term health condition exists if a limitation, restriction, impairment, disease or disorder has lasted, or is expected to last for six months or more, which restricts everyday activities.

A disability or restrictive long-term health condition is classified by whether or not a person has a specific limitation or restriction. The specific limitation or restriction is further classified by whether the limitation or restriction is a limitation in core activities, or a schooling/employment restriction only.

There are four levels of core activity limitation (profound, severe, moderate and mild). These are based on whether, and how often, a person needs help, has difficulty, or uses aids or equipment with any core activities (self care, mobility or communication). A person's overall level of core activity limitation is determined by their highest level of limitation in any of these activities.

Methodology Respondents were asked if they had any of the following conditions which had lasted, or were likely to last for six months or more:

- Sight problems not corrected by glasses or contact lenses;
- Hearing problems;
- Speech problems;
- Blackouts, fits or loss of consciousness;
- Difficulty learning or understanding things;
- Limited use of arms or fingers;
- Difficulty gripping things;
- Limited use of legs or feet;
- Any condition that restricts physical activity or physical work (e.g. back problems, migraines);
- Any disfigurement or deformity; or
- Any mental illness for which help or supervision is required.

Methodology continued

They were also asked if their everyday activities were restricted due to:

- Shortness of breath, or difficulty breathing;
- Chronic or recurring pain;
- A nervous or emotional condition;
- Long term effects as a result of a head injury, stroke or other brain damage;
- Any other long-term condition that requires treatment or medication; or
- Any other long-term condition such as arthritis, asthma, heart disease, Alzheimer's disease or dementia.

Respondents were then asked whether they needed help or supervision with, had difficulty with, or used aids or equipment for any core activities, education or employment due to their condition or conditions. If respondents had more than one condition, and had reported that they needed help or supervision with, had difficulty with, or used aids or equipment for any core activities, education or employment, they were asked to nominate which condition caused the most problems.

Population

Information on type of condition, type of restriction, and level of core activity limitation was obtained for all persons. Schooling restriction questions were asked of persons aged 5–64 years, and employment questions were asked of persons aged 15–64 years.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting data for this topic include the following:

- Conditions are 'as reported' by respondents and do not necessarily represent conditions as medically diagnosed. However, as the data relate to conditions which had lasted, or are expected to last, for six months or more there is considered to be a reasonable likelihood that medical diagnoses would have been made in most cases. The degree to which conditions have been medically diagnosed is likely to differ across condition types.
- 'Restricted in everyday activities' means less able, or unable, to engage in the everyday activities that a healthy individual of the same age would be able to. Respondents can perceive themselves to be restricted in everyday activities by causes other than the specific conditions listed.
- Aids needed for any condition lasting less than six months (i.e. broken leg) were not included. Examples of aids are hearing aids, wheelchairs for long-term use, special cutlery and changes to floors/steps/paths.
- Difficulties with education relate to situations such as being unable to attend a particular educational institution, needing time off from regular classes, or requiring special tuition. Only current difficulties with education were collected. Any difficulties a respondent may have previously experienced with education were excluded.

Interpretation continued

- Difficulties with employment relate to respondents who could not work or were restricted in the type of work they could do, regularly needed time off work, were restricted in the number of hours they could work, or required an employer to make special arrangements for them. Only current difficulties with employment were collected. Any difficulties a respondent may have previously experienced with employment were excluded.

Comparability with 2004–05

This topic was not collected in 2004–05, therefore no comparison can be made.

The disability module used in the 2007–08 survey is the same short module used in other ABS household surveys, with an additional question asking the respondent which disability (at the broad level) they consider to be their main disability. For the NHS, the insertion of the term 'restrictive' into the data item description 'disability or long-term health condition' was to identify that the long-term health conditions included did not necessarily include all long-term health conditions reported, only those which restrict activities.

PERSONAL STRESSORS

Definition

Personal stressors were defined as life events that may have been a problem for the respondent or anyone close to them in the 12 months prior to interview. These life events include:

- serious illness
- serious accident
- death of family member or close friend
- mental illness
- serious disability
- divorce or separation
- not able to get a job
- involuntary job loss
- alcohol or drug related problems
- witness to violence
- abuse or violent crime
- trouble with the police
- gambling problem
- other (specified)

Methodology

Respondents were asked whether they or a family member or friend had experienced any of the events listed above, and if so, which ones. If a respondent had experienced a stressful event that was not listed, they were able to specify the event. If more than one unlisted stressful event was experienced, the respondent was asked to indicate the main event.

Population

Information was obtained for persons aged 15 years and over.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting data for this topic include:

- 'Anyone close to you' could refer to a family member, a friend or anyone else the respondent felt was close to them.
- The effects of the event should have been felt by the respondent themselves, either directly or through a family member or friend who was experiencing the problem.
- The effects of the problem must have been felt in the 12 months prior to interview, even if the problem occurred more than 12 months ago.
- The interest was in the respondent's perception of whether the stressors had been a problem for them or not.

Comparability with 2004–05

This topic was not collected in 2004–05, therefore no comparison can be made.

BODILY PAIN

Definition

This topic refers to the severity of bodily or physical pain experienced by the respondent, and the extent to which it interfered with normal work (both outside the home and housework).

Methodology

Based on SF36 questions, respondents were asked how much bodily pain they had experienced in the four weeks prior to interview. Response categories were:

- None
- Very mild
- Mild
- Moderate
- Severe
- Very severe

If the respondent had experienced any bodily pain, they were then asked if pain had interfered with their normal work, including work outside the home and housework.

Response categories were:

- Not at all
- A little bit
- Moderately
- Quite a bit
- Extremely

Population

Information was obtained for all persons aged 15 years and over.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting data for this topic include the following:

- Respondents were asked to indicate the severity of any bodily pain that they had experienced (from any and all causes) during the four weeks prior to interview.
- Interference with normal work includes work or housework activities that the respondent did or would have done during the four weeks prior to interview.

CHAPTER 3 HEALTH STATUS INDICATORS *continued*

*Comparability with
2004–05*

This topic was not collected in 2004–05, therefore no comparison can be made. Data is, however, comparable with that collected in the 1995 NHS.

CHAPTER 4 HEALTH RISK BEHAVIOURS

CONTENTS

Introduction
Tobacco smoking
Alcohol consumption
Exercise
Body mass
Dietary behaviours

INTRODUCTION

A range of genetic, social, economic and environmental factors are recognised as affecting the risk of ill-health, i.e. the chance an individual has of developing a particular illness or injury. Specific lifestyle and related factors which have been identified as positively and/or negatively impacting health include diet and nutrition, use of medicines, being overweight or obese, physical activity, high blood cholesterol, high blood pressure, smoking and alcohol use.

It is clearly not possible, and in some cases inappropriate, in a survey such as the NHS to attempt to address the whole range of factors likely to affect health. The approach taken in this survey was to focus on selected lifestyle-related health risk factors identified through consultations with health professionals, administrators and policy makers as major issues of concern, and considered appropriate for inclusion in an interview survey of this type.

Health risk factor topics included in the 2007–08 NHS were:

- tobacco smoking;
- alcohol consumption;
- exercise;
- body mass; and
- dietary behaviours.

Other health risks may be indicated through information obtained in the survey about other health and related characteristics, such as the presence of particular long term conditions. The collection of information about health risk factors and behaviours in conjunction with other health and population characteristics enables all elements to be analysed together. However, while data from the survey may suggest apparent associations between particular risk factors and certain medical conditions, the data should not be interpreted as indicating causal relationships.

Some caution should be used in drawing together data for the different risk factors covered, as the reference periods used differ, e.g. smoking at time of interview, alcohol consumption in the last week, exercise in the last week and last two weeks. However, when used with care, data from the NHS can describe populations which may be at special risk due to the presence of combinations of risk factor behaviours and characteristics.

Most of the specific risk factors covered have been addressed in previous ABS surveys, either at national or State/ACT levels. Major changes in the coverage of risk factors between the 2007–08 NHS and the 2004–05 NHS are summarised in the table below.

COVERAGE IN 2007–08 AND 2004–05

<i>Topic</i>	<i>Coverage</i>
Smoking	Similar, with additional data items, now from 15 years and over
Alcohol consumption	Similar, now from 15 years and over
Exercise	Similar, with additional data items
Height, weight, BMI	Similar, with additional data items including measured height and weight, and waist and hip circumference
Dietary indicators	Similar, with additional data items
Breastfeeding	Not collected in 2007–08
Adult immunisation	Not collected in 2007–08
Child immunisation	Not collected in 2007–08
Supplementary women's health topics	Not collected in 2007–08

INTRODUCTION *continued*

Where appropriate to the survey vehicle and consistent with the data requirements of users, similar methodologies were employed in the 2007–08 NHS to those used in previous surveys to enhance comparability and enable use of the data for analysing changes over time. Comments regarding comparability between the 2007–08 and 2004–05 NHS are contained in the individual topic descriptions which follow. A more general discussion of time series issues relating to the 1989–90, 1995 and 2001 surveys is contained in Occasional Paper: Health Risk Factors - a Guide to Time Series Comparability from the National Health Survey, Australia (ABS cat. no. 4826.0.55.001).

SMOKING

Definition

This topic refers to the smoking of tobacco, including manufactured (packet) cigarettes, roll-your-own cigarettes, cigars and pipes, but excluding chewing tobacco and smoking of non-tobacco products. The topic focused on 'regular smoking', where 'regular' was defined as one or more cigarettes (or pipes or cigars) per day as reported by the respondent.

The topic primarily describes smoking status at the time of interview; i.e. current smokers (daily, weekly and other), ex-smokers, and those who had never smoked 100 cigarettes, nor pipes, cigars or other tobacco products at least 20 times, in their lifetime.

Methodology

Respondents were asked whether they currently smoke. Respondents who answered yes were asked whether they smoked daily. Those who did not smoke daily were asked whether they smoked at least once a week. Along with respondents who reported that they did not currently smoke, they were then asked whether they had:

- ever smoked regularly (that is, at least once a day),
- smoked at least 100 cigarettes in their life, and
- smoked pipes, cigars or other tobacco products at least 20 times in their life.

If a respondent did not currently smoke, or had never smoked at least 100 cigarettes, nor smoked pipes, cigars or other tobacco products at least 20 times in their life, they were classified as persons who had never smoked, and sequenced to the questions about other people in the household.

Current daily and ex-daily smokers were asked the age they had started smoking. Ex-daily smokers were asked whether they had stopped smoking regularly in the last 12 months, and the age they were when they stopped smoking regularly. Current smokers were asked whether their smoking had increased, decreased or stayed the same in the last 12 months, and whether they usually smoked inside the house.

Methodology continued

Respondents in households other than single person households were asked whether anyone else in the household smoked regularly, and if so, the number of people and whether they usually smoked inside the house.

Population

Information was collected for persons aged 15 years and over. Please note that this differs from previous NHSs where these questions were asked of persons 18 years and over.

Data items

Output categories for the data items used in the 2007–08 survey are available from the list of output data items available for download from the National Health Survey: Users' Guide, 2007–08, (cat. no. 4363.0.55.001) and the National Health Survey: Data Reference Package, 2007–08 (cat no. 4363.0.55.002).

Please note that:

- Although the items 'Numbers of daily smokers in household' and 'Whether any daily smokers smoked at home indoors' are household level characteristics, the items are on each person's record.
- Respondents were asked whether they smoked or had ever smoked 'regularly, that is, at least once a day'. The term 'regular' is replaced by the term 'daily' in the data items.

Interpretation

Points to be considered in interpreting data from this survey include the following:

- Some under-reporting of persons identifying as current smokers is expected to have occurred due to social pressures, particularly in cases where other household members were present at the interview. In the 2007–08 survey, interviewers were given the opportunity to indicate whether a parent was present at the time of the interview for persons aged 15 to 17 years, in order to assist with analysis of some aspects of under-reporting. However, the extent to which under-reporting has occurred and its effect on the accuracy of survey estimates are unknown.
- Concepts such as 'regular' were open to different interpretation by respondents and may not have been consistently applied in reporting information in this survey, despite a prompt to respondents that regular meant 'at least once a day'.
- The selected adult respondent may not have known the smoker status of all other members of the household if, for example, another member only smoked when at work, or children kept their smoking hidden from parents. As a result, some undercounting may have occurred. Estimates of the prevalence of smoking in the population should therefore be based on person level data rather than responses to the 'smokers in household' questions.
- The categories of smoker status, and the concepts on which they are based, align with those in the NATIONAL HEALTH DATA DICTIONARY (NHDD).
- Duration of smoking is derived from reported age commenced daily smoking to current age at the time of the survey (for current smokers), and from age commenced daily smoking to age last ceased daily smoking (for ex-regular smokers). The items are therefore subject to errors around the ages reported by respondents, and the derivation of 'duration' takes no account of periods (potentially long periods) when the respondent may have ceased smoking only to start again.

Interpretation continued

- Whether levels of smoking had increased, decreased or stayed the same since 12 months ago is based on self-perception.

Comparability with 2004–05

Data for most smoking items are directly comparable between the 2004–05 and 2007–08 surveys. New items collected in 2007–08 are:

- smoking level compared to 12 months ago;
- whether stopped smoking daily in the last 12 months; and
- presence of parent during smoking questions.

In both surveys, other smokers in the household could include children.

As noted above, smoking information for the 2007–08 survey was collected for persons aged 15 years and over, whereas in the 2004–05 NHS, it was only collected for persons aged 18 years and over.

ALCOHOL CONSUMPTION

Definition

This topic refers to consumption of alcoholic drinks, and focuses on two aspects of consumption:

- intake of alcohol, derived from information about the types and quantities of alcoholic drinks (including homemade wines and beers) consumed on the three most recent days in the week prior to interview on which alcohol was consumed; and
- the frequency of consuming 'at risk' amounts of alcohol in the previous 12 months. Amounts are defined in terms of 'standard drinks', where an Australian Standard Drink contains 10 grams (equivalent to 12.5 mls) of alcohol.

Intake of alcohol refers to the quantity of alcohol contained in any drinks consumed, not the quantity of the drinks themselves.

Methodology

Respondents aged 15 years and over were asked how long ago they last had an alcoholic drink. Those who reported they had a drink within the previous week were asked the days in that week on which they had consumed alcohol (excluding the day on which the interview was conducted), and for each of the most recent three days in the last week on which they drank, the types and quantities (number and size) of drinks they had consumed. They were also asked whether their consumption in that week was more, about the same, or less than their usual consumption.

Information was collected separately in respect of the following categories of alcoholic drinks:

- Beer
 - light beer
 - mid-strength beer
 - full-strength beer
 - type not known
- Wine
 - red wine
 - white wine
 - low alcohol wine
- Champagne/sparkling wine
- Ready to drink spirits/liqueurs

Methodology continued

- Liqueurs
- Spirits
- Fortified wine
- Cider
- Other alcoholic drinks

Respondents who reported having beer or wine were asked supplementary questions to identify the type (e.g. light beer, white wine), as shown above. If interviewers were unsure in which category a reported drink belonged, details were recorded in 'other alcoholic drinks' for checking/reclassifying as appropriate during office processing.

Respondents were asked to report the number of drinks of each type they had consumed, the size of the drinks, and where possible the brand name(s) of the drink(s) consumed on each of the most recent three days in the last week on which they had consumed alcohol.

The collection of accurate data on quantity of alcohol consumed is difficult, particularly where recall is concerned, given the nature and possible circumstances of consumption. Interviewers were provided with extensive documentation and training to assist with recording of amounts consumed. Where possible, information was collected in terms of standard containers or measures; i.e. 10 oz glass, stubbie, nip, etc. Where the size of the drink did not readily fit into the list provided to interviewers, they were asked to record as much information as necessary to clearly indicate quantity.

Reported quantities of drinks consumed were converted to millilitres of alcohol present in those drinks, and then summed to the drink type, day, and week level as required. The methodology to convert drinks to mls of alcohol consumed is as follows:

$$\text{Alcohol content of the drink consumed (\%)} \times \text{number of drinks (of that type) consumed} \times \text{vessel size (in mls)}.$$

This conversion was performed electronically, supported by clerical coding for cases which could not be coded automatically.

Where precise brand x type of drink information was not recorded, default alcohol content values based on drink type were applied. These values are shown below:

Light beer	0.027
Mid-strength beer	0.035
Full-strength beer	0.049
Stout	0.058
Wine coolers	0.035
Low alcohol wines	0.090
Fortified wines	0.178
White wine	0.124
Red wine	0.133
Sparkling wine/champagne	0.133
Spirits	0.400
Liqueurs	0.200
Pre-mixed spirits (e.g. UDL)	0.050
Alcoholic cider	0.047
Extra-strong cider	0.075
Cocktails	0.315
Other alcoholic beverage	0.274

Methodology continued

It is recognised that particular types or brands of beverage within each of these categories may contain more or less alcohol than indicated by the conversion factor, e.g. full-strength beers are usually in the range 4% to 6% alcohol by volume. The factors are considered to be sufficiently representative of each category as a whole for the purposes of indicating relative health risk as appropriate to the aims of this survey. However, it should be noted that these categories, defined by the conversion factors used, may not reflect legal definitions.

In addition to information about alcohol consumed in the previous week, respondents who reported they had drunk alcohol in the previous 12 months were asked about the number of times (days) in that period on which they had consumed:

- 7–10 standard drinks or 11 or more standard drinks in a day if male; or
- 5–6 standard drinks or 7 or more standard drinks in a day if female.

Respondents who reported that they had drunk alcohol in the last 12 months were also asked about their level of consumption compared to 12 months ago.

Population

Information was collected for persons aged 15 years and over. Please note that this differs from previous NHSs where these questions were only asked of persons 18 years and over.

Data items

Output categories for the data items used in the 2007–08 survey are available from the data item list available for download from the National Health Survey: Users' Guide, 2007–08, (cat. no. 4363.0.55.001) and the National Health Survey: Data Reference Package, 2007–08 (cat no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting data on alcohol consumption from this survey include the following:

- Some under-reporting of consumption, both in terms of persons identifying as having drunk alcohol in the reference week, and in the quantities reported, is expected to have occurred. Investigations in relation to previous NHSs showed possible under-reporting to be as high as 50% for some types of drink. In the 2007–08 survey, interviewers were given the opportunity to indicate whether a parent was present at the time of the interview for persons aged 15 to 17 years, to assist with analysis of some aspects of under-reporting.
- The extent to which under-reporting has occurred and its effect on the accuracy of survey estimates are unknown. Any under-reporting which may have occurred, however, does not invalidate the survey results as indicators of relative consumption levels (current and over time), or the relative health risks of the consumption levels identified.
- Respondents were asked to record all days in the previous week on which they had consumed alcohol, but details of consumption (type and amount of drink) were only collected for the three most recent days on which they had consumed alcohol. Due to the fact that more people were interviewed early in the week, this methodology may have resulted in the possibility that mid-week drinking occasions could be under-represented in the calculation of level of risk, and weekend drinking occasions could be over-represented.

Interpretation continued

- The first column of the table below shows, for each day of the week, the proportion of people who reported drinking on that day in response to the question regarding which days they had consumed alcohol in the last week. The second column shows, for persons who reported drinking on a given day, the proportion who provided consumption details for that day.

<i>Day on which consumed alcohol</i>	<i>% of adults reporting drinking on that day</i>	<i>Of adults who drank on that day, % providing consumption details for that day</i>
Monday	37.7	70.3
Tuesday	37.9	64.1
Wednesday	39.1	55.9
Thursday	39.7	48.4
Friday	55.6	64.4
Saturday	64.0	74.3
Sunday	49.1	78.0

- As shown in the table above, the proportion of persons reporting drinking was highest on weekends, and the proportion of persons providing consumption details was also highest for weekends. ABS analysis has indicated that the 3 day methodology has a small impact on the overall level of health risk at the population level, however, as the effect is considered to be stable over time, analysis of relative risk levels over time should not be affected.
- To assist users of the data, a Weekend Consumption Flag has been derived to indicate whether consumption during the weekend (i.e. Friday, Saturday, Sunday) is fully, partly or not recorded in the data.
- Two indicators of alcohol risk level were derived from the average daily amount of alcohol consumed:
 - average over the 1 to 3 days for which consumption details were recorded; and
 - average over the 7 days of the reference week, i.e. average consumption over 3 days x number of days consumed alcohol / 7.
- Published data are compiled using the 7 day average, which is also the basis for assessing risk level; see point below. Results compiled using the 3 day average are available on request.
- According to average daily intake over the 7 days of the reference week, respondents were grouped into three categories of relative risk level. Risk levels are based on the 2001 National Health and Medical Research Council (NHMRC) risk levels for harm in the long term, and assume the level of alcohol consumption in the week recorded was typical. The average daily consumption of alcohol associated with the 2001 risk levels is as follows:

Interpretation continued

Relative risk level	Relative risk level	
	Male	Female
Low risk	Less than or equal to 50ml	Less than or equal to 25ml
Risky	More than 50–75ml	More than 25–50ml
High risk	More than 75ml	More than 50ml

- It should be noted that whereas the 2001 NHMRC risk levels assume ongoing consumption at the levels reported, indicators derived in the 2007–08 NHS relate to consumption only during the reference week and take no account of whether or not consumption in that week was more than, less than, or similar to usual consumption levels. In addition, this indicator takes no account of other factors related to health status, or other lifestyle behaviours which may influence the absolute level of personal health risk from drinking alcohol. While data may not reflect the usual drinking behaviour of the respondent at the individual level, at the population level this is expected to average out and be representative of the total population.
- As noted previously, reported quantities of alcoholic drinks consumed were converted to quantities of alcohol consumed. While brand/drink specific conversions were used where possible, some conversions were based on factors representing the alcohol content of each type of drink category as a whole. To the extent that individuals consumed particular brands/types of drink within each group with an alcohol content higher or lower than that represented by the default factor, the derived intake may over or under-state actual intake. Again, this effect is considered to even out at the population level.
- Where quantities of alcohol consumed have been converted to standard drinks, a factor of 12.5 mls of pure alcohol per standard drink has been applied (equivalent to 10 grams of alcohol).
- Whether alcohol consumption had increased, decreased or stayed the same since 12 months ago is based on self-perception.

Comparability with 2004–05

The methodology used in the 2007–08 survey for the collection of data about the quantity of alcohol consumed was essentially the same as that used in the 2004–05 survey. Results for the two surveys are therefore considered directly comparable.

There were, however, some changes to the questionnaire and supporting coding systems used in 2007–08 which involved updating and expanding the index lists supporting the system used to derive alcohol intake. These changes were aimed at improving the accuracy with which alcohol intake was derived from reported consumption. As the main sources of error in this topic are reporting errors, these changes should only have a marginal impact on the overall quality of alcohol consumption data.

In drawing comparisons, consideration should also be given to the social factors and general changes in health awareness which have occurred in the period between surveys and which may have influenced the levels of reporting.

New items collected in 2007–08 are:

- how often had an alcoholic drink of any kind in the last 12 months;

*Comparability with
2004–05 continued*

- alcohol consumption level compared to 12 months ago; and
- presence of parent during alcohol questions.

As noted above, alcohol information for the 2007–08 survey was collected for persons aged 15 years and over, while in the 2004–05 NHS it was only collected for persons aged 18 years and over.

EXERCISE

Definition

This topic covers three components of physical activity:

- exercise undertaken for fitness, recreation or sport during the two weeks and week prior to interview;
- walking for transport in the week prior to the interview; and
- time spent sitting during work and when at leisure on a usual day.

Methodology

Current physical activity guidelines for Australian adults include at least 30 minutes of moderate-intensity physical activity on most, preferably all, days. To gauge levels of activity, respondents were asked a series of questions about the exercise they undertook in the last week and last two weeks, expressed in the three categories of walking, moderate exercise and vigorous exercise.

For the purposes of the survey, moderate exercise was defined as exercise undertaken for fitness, recreation or sport that caused a moderate increase in the heart rate or breathing of the respondent. Vigorous exercise was defined as exercise undertaken for fitness, recreation or sport that caused a large increase in the respondent's heart rate or breathing.

The application of these definitions reflected the respondent's perception of moderate or vigorous exercise or walking, and the purpose of that activity. Responses may have varied according to the type of activity performed, the intensity with which it was performed, the level of fitness of the participant, and their general health and other characteristics (e.g. age). For example, some respondents may consider a game of golf to be moderate exercise while others may consider it walking. Information was not recorded in the survey about the type of activities undertaken.

Respondents were asked whether they did any:

- walking for fitness, recreation or sport during the previous two weeks;
- walking for fitness, recreation or sport during the previous week;
- moderate exercise (apart from walking) for fitness, recreation or sport during the previous two weeks:
- moderate exercise (apart from walking) for fitness, recreation or sport during the previous week:
- vigorous exercise for fitness, recreation or sport during the previous two weeks; and
- vigorous exercise for fitness, recreation or sport during the previous week.

For each of these categories of exercise, respondents were asked:

- the number of times they had done that exercise in the previous two weeks;
- the number of days they had done that exercise in the last week;
- the total amount of time spent (hours and minutes) doing that exercise over the previous two weeks; and
- the total amount of time spent (hours and minutes) doing that exercise in the last week.

Methodology continued

The two-week time period was maintained in 2007–08 to allow data to be compared to previous surveys. The move to the one-week reference period allows some comparability over time, as well as aiding the calculation of whether the respondent met physical activity guidelines.

Respondents who answered these questions were also asked about their level of activity compared to 12 months ago.

From the information recorded about the frequency, duration and intensity of exercise undertaken for fitness, recreation or sport, an exercise level was derived for each respondent. The aim was to produce a descriptor of relative overall exercise level, and to indicate the quality of the activities undertaken in terms of maintaining heart, lung and muscle fitness. Whether a person has met physical activity guidelines is calculated using the following formula:

$$\text{No. of times activity undertaken (in last week/two weeks)} \times \text{Average time per session (minutes)} \times \text{Intensity}$$

where intensity, or metabolic equivalent of task (MET), is a measure of the energy expenditure required to carry out the exercise, expressed as a multiple of the resting metabolic rate (RMR). As the survey did not collect details of the types of activities undertaken, an intensity value was estimated for each of the three categories of exercise identified in the survey, as follows:

- 3.5 for walking;
- 5.0 for moderate exercise; and
- 7.5 for vigorous exercise.

A score was derived for each of the three categories of exercise and then summed to provide a total for the respondent for that period. Respondents were grouped into exercise levels according to their score. For the two week period, score ranges were grouped and labelled as follows:

<i>Exercise level</i>	<i>Criteria</i>
Sedentary	Scores less than 100 (includes no exercise)
Low	Scores of 100 to less than 1600
Moderate	Scores of 1600 to 3200, or more than 3200 but less than 2 hours vigorous exercise
High	Scores greater than 3200 and 2 hours or more of vigorous exercise

After the specific exercise questions, all respondents were asked whether they had walked in the previous week for periods of 10 minutes or more, for the purpose of going from place to place (i.e. for transport, not for fitness, recreation or sport). Those who had done so were asked the number of times they had walked for transport in the last week and the total time walked.

Respondents who were employed were asked whether their usual activity at work during a typical work day was mostly sitting, mostly standing, mostly walking, or heavy labour. Full-time employees were asked to report the amount of time (hours and minutes) they spent sitting at work during a usual work day, and the amount of time (hours and

Methodology continued

minutes) they spent sitting watching television and using the computer before and after work.

All other respondents were asked to report the time (hours and minutes) they spent sitting while watching television and using the computer on a usual week day, and all respondents were then asked to report the amount of time (hours and minutes) they spent sitting in other leisure time on a usual work/week day. Data is not available separately for time spent in leisure due to the potential overlap of responses (e.g. persons may have reported the same activity for 'time spent sitting at the computer' and 'time spent sitting in other leisure time'). There may be other activities which were not included by respondents, so this data should be used with caution.

Data from the questions on walking for transport, level of activity at work and time spent sitting do not contribute to the calculations of exercise level.

Population

Information was collected for all persons aged 15 years and over.

Data items

Output categories for the data items used in the 2007–08 survey are available from the data item list available for download from the National Health Survey: Users' Guide, 2007–08, (cat. no. 4363.0.55.001) and the National Health Survey: Data Reference Package, 2007–08 (cat no. 4363.0.55.002).

Interpretation

Points to be considered when interpreting data relating to exercise for fitness, recreation or sport include the following:

- The topic conceptually excludes physical activity undertaken for reasons other than fitness, recreation or sport (e.g. household duties). As a result the data should not be interpreted as necessarily indicative of overall activity levels of persons, or of their fitness.
- Although respondents were only asked to provide details of exercise undertaken for fitness, recreation or sport, some respondents may have reported details of activities at work which may have contributed to some very high levels of exercise reported. However, because information was not available to confirm this had occurred, the data were not amended and so remain as reported. The possibility that this has occurred in some cases should be considered in interpreting the data.
- The information is 'as reported' by respondents and reflects the respondent's perception of the activity undertaken, the intensity of their participation, their level of fitness, etc. Information about exercise undertaken by persons aged 15 to 17 years may have been reported by an adult within the household, usually a parent. The child may or may not have been consulted. As a result, data for this age group should be interpreted with particular care.
- In general, the use of both a two-week and one-week reference period was not considered to pose significant recall problems for respondents. For many people, participation in exercise is regular and/or for a set period each session. However, to the extent that persons undertook exercise in less formal circumstances or that the reference period was atypical of usual exercise patterns, the accuracy of the information provided may have been affected.

Interpretation continued

- Research on exercise or physical activity has recently moved away from the use of MET values in deriving exercise level, placing more emphasis on time exercised as a key indicator. In the 2007–08 NHS, retention of the exercise level approach described above was primarily for the purpose of consistency and comparability with data from previous NHSs. In keeping with the move towards time exercised as a key indicator, an item has been derived to indicate whether or not the respondent had met the recommended guidelines for exercise in the week prior to the interview that uses the total time spent walking for exercise and transport, as well as the total time spent on moderate or vigorous exercise and the number of days the respondent exercised. However, this data should be used with caution due to its reliance on self-reported information and the fact that the derivation does not take into account all types of physical activity.

Points to be considered when interpreting data relating to walking for transport include the following:

- Walking for transport is a difficult concept to measure and define in a way which is meaningful to both respondents and users of the data. Testing before the survey showed significant recall and reporting problems for respondents, however it was not possible within the constraints of the survey to adequately address this issue. The data from this topic, therefore, is considered to be of poor quality, and should be interpreted with caution.
- In this survey, walking for fitness, recreation or sport and walking for transport are conceptually separate activities, and occasions should be recorded as of either type, not both. Respondents may, however, have reported the same occasions of walking in both sections, as, for example, they may have chosen to walk to work for the exercise rather than take the bus. The order of the questionnaire and instructions to interviewers were aimed at giving priority to recording such occasions as 'walking for fitness, recreation or sport', however, the possibility that there may have been some dual reporting of data should be kept in mind.
- Walking for transport conceptually excludes walking done at work. Interviewers were asked to exclude these cases where they became aware that respondents had included walking at work. However, testing indicated the likelihood that some respondents will have reported walking at work in response to this question in the final survey.
- The 10 minute threshold (per occasion) is based on advice that this is the minimum time required before some benefits to health accrue from walking. It also provided a cue to respondents about the occasions of walking they should include. However, it is clear from some responses recorded that this threshold was not consistently applied by respondents, and this has impacted both reporting of occasions of walking for transport and the total time reported.

Comparability with 2004–05

The majority of the data on exercise for fitness, recreation and sport were collected in the 2007–08 NHS with the same methodology and questions used in the 2004–05 survey, and therefore most results are considered directly comparable. The following changes, however, should be noted:

*Comparability with
2004–05 continued*

- the 2007–08 NHS collected information for physical activity in both the two weeks prior and the one week prior to the interview, while the 2004–05 NHS collected this information for the two weeks prior to the interview only. Care should be taken to ensure the correct time frames are used in any comparison of exercise levels between the two surveys;
- the reference period for the 'walking for transport' questions changed from 'yesterday' in the 2004–05 survey to 'the previous week' in the 2007–08 survey. Care should be taken when comparing these items between the two surveys; and
- the question wording for questions on walking was re-ordered from 'sport, recreation or fitness' in 2004–05 to 'fitness, recreation or sport' in 2007–08.

Over recent years there has been an increasing focus by governments and media on health and lifestyle issues around obesity and physical activity. While such attention is likely to influence the levels of activity in the community, it may also have an impact on reporting behaviour; for example, creating a tendency to report what is perceived to be a desirable level of activity rather than actual activity. This should be considered in interpreting changes between results from 2007–08 and 2004–05.

New items for the 2007–08 survey include:

- exercise level in the last week;
- number of days exercised in the last week;
- whether met physical activity guidelines;
- level of activity at work;
- time spent sitting at work; and
- time spent sitting at leisure.

BODY MASS

Definition

This topic refers to:

- the height and weight of respondents as reported and measured during interview;
- the waist and hip measurement of respondents as measured during interview;
- derived self-reported and measured body mass;
- waist circumference; and
- derived waist to hip ratios and related risk categories.

Methodology

SELF-REPORTED HEIGHT AND WEIGHT

Respondents were first asked whether they considered themselves to be underweight, an acceptable weight or overweight. Women who identified that they were pregnant at the time of the interview were sequenced out of the module at this point. Remaining respondents were asked whether their weight had increased, decreased or stayed the same since 12 months ago. They were then asked to report their weight and height without shoes. Answers provided in imperial measurements were recorded by interviewers and converted into metric measurements. If respondents rounded their weight or height (e.g. 'about 6 feet') interviewers prompted for a more exact measure where possible.

Methodology continued

PHYSICAL MEASUREMENTS

Physical measurements were taken towards the end of the survey. All physical measurements were voluntary, and women who had identified they were pregnant were not measured. Interviewers used digital scales to measure weight, a stadiometer to measure height, and a metal tape measure (which avoided the risk of the tape stretching) to measure waist and hip circumference. Thorough interviewer training identified the points at which hips and waists were to be measured (as recommended by Australian government health agencies), as well as how to take the measurements with the least amount of interviewer and respondent discomfort (either holding the end of the tape at the appropriate point and asking the respondent to turn around until the tape met, or asking the respondent to hold the end of the tape and walking around them until the tape met).

Interviewers encouraged respondents to remove their shoes and any heavy clothing, e.g. jumpers, before they took measurements, however, this was voluntary, and may not have occurred in some cases. Interviewers were not required to record if they thought clothing may have impacted significantly on measurements. Weight was recorded in kilos to one decimal point, and height, waist and hip measurements were recorded in centimetres to two decimal points. If a respondent's waist or hip measurement was more than two metres, it was recorded as 200.00.

BODY MASS INDEX SCORES

Body mass index (BMI) scores were derived using Quetelet's metric body mass index which is calculated as weight (kg) divided by height (m)². BMI scores are commonly grouped for output. Although certain ethnic groups, including Asian and Indigenous people, have been shown to have an increased prevalence of disease at much lower BMIs than Europeans (Wood, 2007), the NHS is not able to differentiate for ethnicity, therefore BMI cut-off points are those established for people of European origin. The output classification for adults used for this survey is shown below:

	<i>BMI score</i>
Underweight	
Grade 3 thinness	Less than 16
Grade 2 thinness	16 to less than 17
Grade 1 thinness	17 to less than 18.5
Normal weight	
(ABS time-series cut-off)	18.5 to less than 20
(ABS time series cut-off)	20 to less than 25
Overweight	
Grade 1 overweight	25 to less than 30
Obese	
Grade 2 overweight	30 to less than 40
Grade 3 overweight	40 or more

While the formula to calculate BMI scores is the same for adults and children, the classification of children's BMI is different to that of persons aged 18 years and over, and takes into account individual age and sex. BMI cut-off ranges for children 2 to 17 years of age are included in Appendix 5: Classification of BMI for children. The NHS uses the half-year cut-off points to calculate children's BMI scores for persons aged 5 to 17.

Methodology *continued*

BODY MASS INDEX SCORES *continued*

For more information on this classification please refer to the list of output data items available for download from the National Health Survey: Users' Guide, 2007–08, (cat. no. 4363.0.55.001) and the National Health Survey: Data Reference Package, 2007–08 (cat no. 4363.0.55.002).

WAIST CIRCUMFERENCE

Waist circumference reflects mainly subcutaneous abdominal fat storage, and has been shown to positively correlate to disease risk (NHMRC, updated 12 March 2004). The scale used for determining risky waist circumference in the 2007–08 NHS is that recommended by the World Health Organisation, (See *Obesity: preventing and managing the global epidemic. Report of a WHO Consultation, 2000*). As with BMI, the cut-off points in this scale are best used for people of European origin, however, as ethnicity cannot be determined in the NHS, the same cut-off points are used for all respondents.

WAIST CIRCUMFERENCE RISK INDICATOR - ADULTS

	Not at risk	Increased risk	Substantially increased risk
Males	Less than 94cm	94cm or more	102cm or more
Females	Less than 80cm	80cm or more	88cm or more

WAIST TO HIP RATIO

The waist to hip ratio (WHR) is a simple measure of central obesity. The score from the WHR predicts the risk of developing several conditions associated with excess abdominal fat. Excess abdominal fat distribution is indicated by a WHR greater than 0.8 for women and 0.9 for men.

Population

Self-reported information was collected from persons aged 15 years and over. Physical measures were obtained for persons aged 5 years and over.

Data items

Output categories for the data items used in the 2007–08 survey are available from the data item list available for download from the National Health Survey: Users' Guide, 2007–08, (cat. no. 4363.0.55.001) and the National Health Survey: Data Reference Package, 2007–08 (cat no. 4363.0.55.002).

Waist and hip measurements, and self-reported and measured height, weight and body mass index scores are stored on the data file and can be grouped in output to suit individual user needs.

Interpretation

When interpreting data for this topic, users should bear in mind that:

- Self-reported and/or measured height and/or weight are not available for some respondents, which prevents a BMI score being calculated for them. It cannot be assumed that BMI patterns for these people are the same as those for people who reported their height and weight or were measured.

Interpretation continued

- Separate underweight and normal weight categories for children aged 5–17 years were not able to be incorporated into tables used for the National Health Survey: Summary of Results, 2007–08 (cat. no. 4364.0). This data is now available separately for NHS 2007–08.
- While BMI is a useful tool to assess and monitor changes in body mass at the population level, it may be an inappropriate measure of the body fatness of certain populations and certain individuals; for example, those whose high body mass is due to muscle rather than fat, those with osteoporosis who have lower than usual BMI, or those of non-European background, whose risk levels are not accurately reflected in the BMI cut-off points used.

Comparability with 2004–05

Data collected on self-reported height and weight in the 2007–08 NHS used the same methodology and questions as the 2004–05 survey and are therefore directly comparable with 2004–05 results. There are, however, a number of significant differences for Body Mass items in 2007–08:

- Measured height and weight were collected in 2007–08. Separate measured height, weight and BMI items are included in output. Previous NHSs collected only self-reported height and weight data, therefore care must be exercised in comparison of any data to ensure the correct items are being compared.
- Measured height and weight data was collected for children aged 5 years and over in 2007–08. No data for children was collected in previous National Health Surveys, however measured height and weight data for children aged 2 years and over was collected in the 1995 National Nutrition Survey (NNS). For further information on NNS data, please refer to the National Nutrition Survey: Users' Guide, 1995 (cat. no. 4801.0). Information from the 1995 NNS was used in the BMI time series tables in the National Health Survey: Summary of Results, 2007–08 (cat. no. 4364.0).
- In 2007–08, BMI scores for persons aged 15–17 were based on different cut-off points to those used in the 2004–05 publication (which used the adult cut-off points rather than the children's cut-off points). Comparisons between surveys for self-reported BMI for this age group should be undertaken with caution.

New items for 2007–08 include:

- Measured height and weight;
- Measured BMI;
- Waist circumference;
- Hip measurements; and
- Waist to hip ratio.

DIETARY BEHAVIOURS

Definition

This topic covers selected dietary indicators relating to type of milk consumed and usual daily intake of fruit and vegetables. National dietary guidelines recommend a minimum number of serves of fruit and vegetables according to age.

Methodology

Respondents were asked to report the main type of milk they usually consumed, categorised as follows:

- cow's milk;
- soy milk;
- evaporated or sweetened condensed milk; and
- other type of milk (specify)

Methodology continued

The fat content of milk usually consumed (i.e, whole milk, reduced-fat, skim) was then reported for persons who drank milk. Interviewers were able to access fat content for each milk type on their screens to assist in classification.

Respondents were then asked to report the number of serves of vegetables and of fruit they usually eat each day. For the purposes of this survey:

- A serve of vegetables was defined as a half a cup of cooked vegetables, one medium potato, or one cup of salad vegetables – approximately equivalent to 75 grams. All types of vegetables were included, but legumes were excluded. Tomatoes were included as a vegetable rather than a fruit.
- A serve of fruit was defined as one medium piece or two small pieces of fruit, or one cup of diced fruit, or quarter of a cup of sultanas, or four dried apricot halves - approximately 150 grams of fresh fruit or 50 grams of dried fruits.
- Fruit and vegetable juices were excluded.

Prompt cards were used to assist respondents in understanding the concept of a serve, showing pictorial representations as used by the State of Western Australia, 2007. One prompt card showed three pictorial examples of single serves of different vegetables and another card showed three pictorial examples of single serves of fruit. If respondents had difficulty in reporting, interviewers were encouraged to prompt in terms of asking respondents about their usual consumption of vegetables and fruit at breakfast, lunch and dinner, and for snacks.

Respondents were also asked whether their vegetable and fruit consumption had increased, decreased or stayed the same since this time last year.

Population

Information was collected for persons aged 5 years and over. Please note that this differs from the 2004–05 NHS where these questions were asked of persons 12 years and over.

Data items

Output categories for the data items used in the 2007–08 survey are available from the data item list available for download from the National Health Survey: Users' Guide, 2007–08, (cat. no. 4363.0.55.001) and the National Health Survey: Data Reference Package, 2007–08 (cat no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting data for this topic include the following:

- Data recorded on type of milk usually consumed and the fat content of the main type of milk consumed is based on the information provided by respondents against a defined classification of milk type and fat content categories. The variety of milk products available, and the various terminologies used to label milk products may have led to some misreporting and incorrect classification.
- Questions on intake of fruit and vegetables are based on short questions used in the 1995 National Nutrition Survey (NNS). The questions, however, are complex, as respondents needed to understand and apply the inclusions/exclusions, understand the concept of a serve and assess their consumption levels accordingly, and think about their total consumption in what would constitute a usual day. Interviewers were instructed to prompt/assist respondents in a standard way if necessary.

Interpretation continued

- Inadequate fruit or vegetable consumption was derived in the 2007–08 NHS to assist users to determine whether vegetable and fruit consumption met the recommended guidelines. Respondents who did not meet the recommended guidelines for either fruit or vegetables were considered to have inadequate fruit or vegetable consumption. This item should be used with caution as it is based on self-reported data.
- Overall, it is considered that the indicators of vegetable and fruit intake from the 2007–08 NHS are of a lower quality than most other items from the survey, but are considered sufficiently reliable for the purposes of assessing broad intake levels for population groups, and comparisons between population groups. Use of the data for other purposes should be undertaken with care.
- Data for persons aged 5 to 14 years, and 36% of those aged 15 to 17 years, was provided by a proxy, usually a parent. As a result the data reflects the parent's knowledge of the child's consumption. This is likely to be less accurate for usual consumption of fruit than for type of milk and usual consumption of vegetables.
- A comparison of results from the 2001 NHS with those obtained in the 1995 National Nutrition Survey was published by the ABS in the information paper, *Measuring Dietary Habits in the 2001 National Health Survey, Australia* (ABS cat. no. 4814.0.55.001).

Comparability with 2004–05

Many dietary indicator questions used in the 2007–08 NHS were similar to those used in the 2004–05 NHS and the data are considered broadly comparable. However, as outlined above, information for the 2007–08 survey was collected for persons aged 5 years and over, whereas in the 2004–05 NHS, information was collected for persons aged 12 years and over.

There were significant differences between the prompt cards used in the two surveys to assist respondents in determining the size of a serve of fruit or vegetables. This may have had some impact on the comparability of the data.

Items collected in 2004–05 that were not collected in 2007–08:

- food security in the last 12 months; and
- whether went without meals.

New items for 2007–08 include:

- fat content of milk usually consumed;
- vegetable consumption level compared to 12 months ago; and
- fruit consumption level compared to 12 months ago.

CHAPTER 5 HEALTH RELATED ACTIONS

CONTENTS

Introduction

Healthy lifestyles

Actions for specific conditions

 Consultations with GP or specialist

 Consultations with other health professionals

 Use of medications

 Days away from work, school or study

 Other actions for selected conditions

Private health insurance

INTRODUCTION

The 2007–08 NHS obtained information about general actions relating to a healthy lifestyle, particular actions (including use of medications) for selected conditions, and private health insurance.

Information on actions relating to a healthy lifestyle included:

- check-ups with general practitioner (GP) in the last 12 months;
- consultations with specialists and other health professionals in the last 12 months; and
- discussion of lifestyle issues with health professionals in the last 12 months.

Data on particular actions for selected conditions was collected via:

- questions on actions common to the majority of selected conditions, including:
 - medication used in the last 2 weeks;
 - frequency of visits to GP/specialist;
 - consultation with health professional other than GP or specialist in the last 12 months;
 - discussion on self-management of condition with GP or specialist (ever, and in the last 12 months); and
 - days away from work/study/school in the last 12 months.
- questions on actions pertinent to selected conditions only.

The selected conditions for which actions data is collected are asthma, cancer, heart and circulatory conditions, diabetes, arthritis, osteoporosis and mental health conditions.

The data items available from this section of the survey are listed under the particular topic to which they relate. Data items which combine various actions taken, enabling analysis of action levels and patterns in respect of population groups, etc., can also be produced on request.

For practical reasons (i.e. limited interview time and the difficulties in defining every possible type of action a person may have taken in relation to his/her health), the survey covered only the limited range of actions listed above. These actions reflect the areas known to be of interest to data users and cover the more common actions people take in relation to their health. However, care should be taken not to interpret the data as comprehensive of all actions taken.

In the 2007–08 NHS, information was collected about medication used for selected conditions (asthma, heart and circulatory conditions, diabetes, arthritis and osteoporosis, mental health conditions and mental wellbeing). Details of medication used are available separately for each of these conditions.

Twelve month reference periods ensured sufficient observations were recorded in the survey to support reliable results. The two week period is applied for medication use as respondents' recall is considered to be more accurate in this timeframe.

HEALTHY LIFESTYLES

Definition

This topic provides data on frequency and some aspects of the nature of visits to GPs and other health professionals for general health. A GP 'check-up' may include the following:

- collection of family, medical and lifestyle history
- physical examinations such as blood pressure, height and weight
- tests such as pap smears, blood tests, urine tests and cancer screening
- giving advice on how to improve the patient's health, such as actions to take and referrals to other professionals

Respondents may have check-ups when they see their doctor for other reasons, or may specifically visit their doctor for a check-up.

Methodology

Respondents were asked whether they have check-ups with a GP, and if so, how frequently. Respondents were then asked whether they had discussed any of the following lifestyle issues with their GP:

1. Reducing or quitting smoking;
2. Drinking alcohol in moderation;
3. Reaching a healthy weight;
4. Increasing physical activity; and
5. Eating healthy food or improving their diet.

Respondents who answered yes to one or more of these points were considered to have discussed healthy lifestyle issues with their GP.

Respondents were then asked whether they had visited any of the following health professionals for their own health or discussed any of the lifestyle issues above with them, in the last 12 months, and if so, which health professional they had consulted.

- Specialist doctor
- Accredited counsellor
- Acupuncturist
- Chemist (for advice only)
- Chiropodist/Podiatrist
- Chiropractor
- Diabetes educator
- Dietitian/Nutritionist
- Naturopath
- Nurse
- Occupational therapist
- Optician/Optommetrist
- Osteopath
- Physiotherapist/Hydrotherapist
- Psychologist
- Social worker/Welfare officer
- Other

Population

All persons aged 15 years and over.

Data items The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation Points to be considered when interpreting data from the survey on healthy lifestyles include the following:

- Respondents may have interpreted 'check-ups' in different ways, although interviewers were provided with the definition of check-up shown above.
- Reporting 'usual' activity does not mean that this has happened recently.
- Interpretation of 'discussed lifestyle issues' may have ranged from a specific discussion on this topic, including an action plan, to a passing comment made when discovering a condition.

Comparison with 2004–05 No items from 2007–08 are directly comparable with NHS 2004–05, as both the questions and the collection periods differ. The reference period for GP and specialist consultations in 2004–05 was the previous two weeks, while in 2007–08 it was ever, or within the last 12 months. Respondents who had not seen a GP or specialist in the last two weeks in 2004–05 were asked how long it had been since they last consulted a doctor for their own health. This question was not asked in 2007–08.

New items in 2007–08 included whether discussed healthy lifestyle with GP or other health professional in last 12 months.

**ACTIONS FOR SPECIFIC
CONDITIONS:
CONSULTATIONS WITH A
GP OR SPECIALIST**

Definition

This topic refers to the frequency of occasions on which a respondent saw a general practitioner or specialist for a selected condition, and whether respondents discussed self-management of that condition with their GP or specialist. The topic excludes:

- consultations during a visit to casualty or an emergency ward or an outpatient section at a hospital, a stay in hospital, or a visit to a day clinic; and
- visits to a GP or specialist to deliver a sample or collect a prescription only, without seeing the GP or specialist.

The topic includes all consultations with a GP or specialist, regardless of the type of treatment/service provided. For example, a consultation with a GP at which acupuncture or physiotherapy was performed would be included, where identified, in this item.

Methodology

Respondents with asthma, cancer, heart and circulatory conditions, diabetes, arthritis, osteoporosis or mental health conditions were asked how often they usually consult a GP or specialist for that condition.

Methodology continued

Persons with asthma, diabetes, arthritis and osteoporosis were asked whether they had ever discussed any of the following with their GP or specialist in relation to that condition:

1. The illness, its symptoms and possible effects;
2. Developing a treatment plan;
3. How to actively share with their doctor in making decisions about how to manage their condition;
4. Changes to lifestyle which may improve health;
5. How to monitor and manage the signs and symptoms of their condition; and
6. How to manage the impact of their condition on their physical, emotional and social life.

Respondents who answered yes to one or more of these points were considered to have discussed self-management with their GP or specialist.

Population

Information was obtained for all persons with the selected conditions listed above.

Data items

Data items for this topic are linked to specific conditions. The data items and related output categories for each condition are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

When interpreting data from the survey relating to GP and specialist consultations, the following should be considered:

- Consultation information is essentially 'as reported' by respondents. In some cases respondents may have reported consultations with health practitioners other than GPs or specialists because they considered them to be GPs or specialists. Conversely, some consultations reported as being with other health professionals (see below) should have been reported for this item, where the practitioner consulted was a GP or specialist (regardless of the type of treatment/service provided at the consultation).
- While the wording and ordering of the questions deterred respondents from reporting consultations with a GP or specialist during a visit to, or stay in, hospital or visit to a day clinic, some cases of misreporting may have occurred.

Comparability with 2004–05

Data items for this topic were new in 2007–08, therefore no comparisons can be made.

CONSULTATIONS WITH OTHER HEALTH PROFESSIONALS

Definition

This topic refers to occasions in the 12 months prior to interview on which respondents with selected health conditions consulted one or more of the following health professionals:

- Accredited counsellor
- Acupuncturist
- Audiologist/Audiometrist
- Chiropractor
- Chemist (for advice only)
- Chiropodist/Podiatrist

Definition continued

- Diabetes educator
- Dietician/Nutritionist
- Naturopath
- Nurse
- Occupational therapist
- Optician/Optomtrist
- Osteopath
- Physiotherapist/Hydrotherapist
- Psychologist
- Social Worker/Welfare officer
- Other

The topic refers to consultations at which some discussion and/or treatment of a health-related matter or medical condition took place, or was arranged. It excludes:

- occasions on which respondents may have visited the professional only to obtain medical supplies, aids, etc. For example, consulting a chemist about a medication would be included, while visiting a chemist simply to fill a prescription would not; consulting an optometrist about a sight problem would be included but going to an optometrist to have a pair of glasses made to prescription would not;
- consultations during a visit to casualty or an emergency ward or an outpatient section at a hospital, a stay in hospital, or a visit to a day clinic;
- consultations with nurses as part of a doctor consultation. These occurrences are recorded as doctor consultations;
- consultations with a doctor at which any of the services provided by the health professionals listed above (e.g. acupuncture, counselling, etc.) were received. These occurrences are recorded as doctor consultations.

Consultations were recorded against the type of other health professional (OHP) involved, not the type of treatment provided at a particular consultation. For example, if a chiropractor performed physiotherapy, the consultation was recorded under chiropractor. If a practitioner was considered by the respondent to fit more than one of the types listed above, the visit has been recorded against that type of OHP most closely associated with the most recent consultation in the 12 month period.

Methodology

Using a prompt card, respondents with asthma, cancer, heart and circulatory conditons, diabetes, arthritis, osteoporosis or mental health conditons were asked whether they had consulted any of the listed OHPs in the 12 months prior to interview. If they had, the respondent was asked to identify which types of OHP had been consulted. More than one OHP could be identified.

Population

Information was obtained for all persons with the selected conditions above.

Data items

Data items for this topic are linked to specific conditions. The data items and related output categories for each condition are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered when interpreting data on OHP consultations from this survey include the following.

- While it was recognised that all respondents may not understand the functions of all the OHPs listed, it was considered that in most cases they could accurately identify the type of OHP they had consulted. Interviewers were provided with a list defining the main activities of each of the OHPs covered to assist respondents if queried. However, it is possible that some misreporting of type of OHP may have occurred. For example, in cases where the distinction between types of OHP was unclear in the respondent's mind and/or the professional practised more than one form of treatment (e.g. chiropractor/osteopath).
- Conceptually, consultations were only to be recorded where some treatment and/or discussion of a health-related matter took place. However, it is recognised that this distinction may be difficult to make in some cases and interpretation may differ between respondents. In particular, the possibility that reported consultations with opticians/optometrists or chemists were not consultations as defined should be considered (i.e; they may have been visits to pick up glasses or a script only).

Comparability with 2004–05

Data items for this topic were new in 2007–08, therefore no comparisons can be made.

USE OF MEDICATIONS

Definition

This topic refers to the consumption or other use of any medications, pills or ointments for selected conditions or mental wellbeing during the two weeks prior to interview, including vitamins, mineral supplements and herbal or natural medications, and both prescribed and non-prescribed medications.

In survey output, the following terms are used to describe particular groups of products:

- 'Medications', referring to all reported medications, including pharmaceutical medications, vitamin and mineral supplements and natural and herbal medicines; and
- 'Pharmaceutical medications', referring to reported medications excluding those reported by respondents as vitamin or mineral supplements, and those reported as natural or herbal medicines.

It should be noted that this terminology has been adopted for the purposes of describing different groups in the survey, and should not be assumed to be an exact description of the contents of each group. The distinction between pharmaceutical medications, vitamin and mineral supplements and natural and herbal medicines is based primarily on the distinction made by respondents in providing the information.

Methodology

Respondents were asked about medications used for asthma, cancer, heart and circulatory conditions, diabetes, arthritis, osteoporosis, mental health conditions and mental wellbeing. Except in the case of medications used for mental wellbeing, provision was made to record up to a maximum of 3 separate medication names for each of the reported conditions specified above. In cases where 4 or more medications were reported, only the 3 medications regarded by the respondent as the 'main' medications they used for that condition were recorded. Provision was made for interviewers to record the fact that the respondent identified more than 3 medications used.

Methodology continued

In responding to questions on medication use, interviewers encouraged respondents to collect and refer to medication bottles, packets, etc. This served to assist respondents in reporting all medications used for a particular condition, and assist interviewers in accurately recording the medication name. The name recorded may have been a brand or generic name.

The names of the medications reported were office coded to a classification of the generic type of medication based on the WHO Anatomical Therapeutic Chemical Classification (ATCC) (See Appendix 3: Classification of Medications). New medications listed in the latest Australian Medicines Handbook were added to the medication coder.

Occasionally, where respondents have several conditions, medications are misreported. These medications are linked to the condition reported but are classified under the medication level as stated in the ATCC.

The methodology used to obtain this information was similar throughout the survey, but there were some differences for individual conditions/reasons for use. Each of the approaches is summarised below. Further information is contained in the individual condition sections in Chapter 3 of this user guide.

ARTHRITIS

Respondents who reported they currently had arthritis (irrespective of whether or not they had been told by a doctor or nurse) were asked:

- whether they had used any medication for their arthritis in the last 2 weeks, and if so, the names of up to 3 medications used; and
- whether they had taken any vitamin, mineral, natural or herbal supplements in the last 2 weeks and the type used as specified on a prompt card, including the name or brand of vitamin D and calcium supplements.

ASTHMA

Respondents who reported they had been told by a doctor or nurse that they had asthma, that it was still a current condition, and that they had had symptoms of or treatment for asthma in the last 12 months, were asked:

- whether they had used any medication (including vitamins, minerals, natural and herbal medicine) for their asthma in the last 2 weeks, and if so, the names of up to 3 medications used (other than vitamins, minerals, natural and herbal medicines); and
- the frequency of using each of the identified medications in the last two weeks.

CANCER

Respondents who reported they had been told by a doctor or nurse that they had cancer and that it was a current condition were asked:

- whether they had used any vitamin or mineral supplements or any herbal or natural medicines for cancer in the previous two weeks.

HEART AND CIRCULATORY CONDITIONS

Respondents who reported they had been told by a doctor or nurse that they had a heart or circulatory condition, and reported that it was a current and long term condition, were asked whether they had taken any medications for any of their heart or circulatory conditions in the previous two weeks, and if so, whether they knew which condition

Methodology continued

HEART AND CIRCULATORY CONDITIONS *continued*

each medication was for. Respondents who knew which condition their medication was for were then asked about specific use of medications for up to three heart and circulatory conditions. If more than three heart or circulatory conditions were reported, the respondent was asked to provide information for the three most severe conditions. The most severe conditions were determined by the respondent. Up to three medications were recorded for each condition.

Respondents were also asked about any vitamin or mineral supplements or any herbal or natural medicines used in the previous 2 weeks.

General information about the use of aspirin was also reported, as follows:

- whether aspirin was taken on a daily basis; and
- whether advised by doctor to take aspirin on a daily basis.

Medication which contains aspirin should have been included in responses to this question, however, some respondents may not be aware that their medication contained aspirin so this data may be under-reported.

In 2007–08 it was decided that people who reported that they had ever had a heart attack, heart failure, a stroke, angina or rheumatic heart disease should be treated as having a current and long-term condition despite what may have been reported. However, as this decision was taken after the development of the questionnaire, respondents who reported that their condition was not current were not asked subsequent questions relating to medication.

Testing had shown that some people with multiple heart and circulatory conditions sometimes did not know the particular condition for which a particular medication was used. People who could not associate all their heart or circulatory medications with a specific condition were asked to report the names of up to three medications used for heart or circulatory conditions.

DIABETES

Respondents who reported they had been told by a doctor or nurse that they had diabetes (other than diabetes insipidus) or high sugar levels in their blood or urine, and reported it was still a current condition, were asked:

- whether they were currently having daily insulin, age started having insulin and the brand name of the insulin taken;
- whether they had used any medications apart from insulin (other than vitamin or mineral supplements or any herbal or natural medicines) for that condition in the previous two weeks;
- the names of up to three medications used; and
- whether they had taken any other action to manage their condition in the previous two weeks, including use of vitamin or mineral supplements or any herbal or natural medicines.

OSTEOPOROSIS/OSTEOPENIA

Respondents who reported they had been told by a doctor or nurse that they had osteoporosis/osteopenia were asked:

Methodology continued

OSTEOPOROSIS/OSTEOPENIA *continued*

- whether they had used any medications (other than vitamin or mineral supplements or any herbal or natural medicines) for that condition in the last two weeks;
- the names of up to three medications used; and
- whether they had taken selected vitamin and mineral supplements in the last two weeks for osteoporosis/osteopenia, and the type of supplement used (as specified on a prompt card), including the name or brand of vitamin D and calcium supplements.

MENTAL HEALTH CONDITIONS

Respondents who reported they had a mental or behavioural problem, and that it was a long-term condition, were asked about medications used in the last two weeks which were directly related to their mental conditions. These questions were similar to those asked for mental wellbeing (see below), however, the number of medications recorded were limited to three. The same medications could be reported for both mental health conditions and mental wellbeing.

Information collected was:

- whether they had used vitamin or mineral supplement for their conditions;
- whether they had used herbal or natural treatments for their conditions;
- whether they had used sleeping tablets or capsules, tablets or capsules for anxiety or nerves, tranquillisers, antidepressants, mood stabilisers or other medications for mental health;
- the brand/product names for up to three types of main medication used;
- the duration of use for each of up to three types of medication reported; and
- the frequency of use in the last two weeks for each of up to three types of medication used.

MENTAL WELLBEING

Adult respondents (aged 18 years and over) were asked about medication used in the last two weeks for mental wellbeing, for example, to improve concentration or reduce stress, as follows:

- whether they had used vitamin or mineral supplements for mental wellbeing,
- whether they had used herbal or natural treatments for mental wellbeing,
- the type of vitamin and/or herbal remedies used,
- whether they had used sleeping tablets or capsules, tablets or capsules for anxiety or nerves, tranquillisers, antidepressants, mood stabilisers or other medications for mental wellbeing,
- the brand/product names for up to five main medications used,
- the duration of use for each of up to five types of medication reported; and
- the frequency of use in the last two weeks for each of up to five types of medication used.

Population

Medications data are available for persons of all ages who had reported arthritis, asthma, heart and circulatory conditions, diabetes, high sugar levels, osteoporosis or mental health conditions. Use of medications for mental wellbeing was collected only for persons aged 18 years and over.

Data items

Medication names are recorded for the purposes of enabling coding of generic type of medication, and are not available for output from the survey.

Data items for this topic are linked to specific conditions. The data items and related output categories are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered when interpreting data from this survey on the use of medications include the following.

- The information is 'as reported' by respondents. This may have implications for the extent to which usage of certain types of medication were reported (e.g. tranquillisers) and the accuracy of some details provided (e.g. name of medication used, frequency of use). As a result, the data on medication use are not directly comparable with data from other sources.
- Although respondents were encouraged to use their medication packets, bottles, etc. to assist them and interviewers in recording complete and correct details, this did not always occur, which may have led to some medications not being reported at all, or being reported incorrectly.
- The methodology relied on respondents knowing that a particular medication was being taken for a particular condition. For respondents with several conditions who used multiple medications, some medications may have been incorrectly reported as used for a particular condition, or not reported at all because the respondent may have understood the medication was for a different condition.
- The data relates only to medications (known and reported by respondents) used for particular types of medical conditions or reasons. Direct questions relating to mental health conditions are not asked; respondents must volunteer that they have these conditions. As a result the data does not indicate the levels of total medication use, nor does it necessarily indicate the total use of a particular medication type, especially in cases where a medication can be used for a range of different conditions.
- Data relating to medication use for mental wellbeing differs from the other medication data because it is not necessarily related to a medically diagnosed condition, and conceptually includes use for preventive or other reasons where no medical condition is present.

Interpretation continued

- Apart from persons with arthritis and osteoporosis, respondents were not asked about the types of product/substance they reported as vitamins/minerals or natural/herbal medicines. As a result, the products reported in these categories were entirely at the discretion of respondents. Some products of this type were reported in response to the questions on other medication use. Where this has occurred and the product could be identified as a vitamin/mineral or natural/herbal medicine, it was classified to a general vitamin/mineral/natural/herbal category within the generic type classification. However, where the product could not be identified as a vitamin/mineral or natural/herbal medicine it was classified to the general 'other medications' group. As a result, combining responses from the separate vitamins/minerals and natural/herbal medicine questions with those classified to this category within the generic type classification provides a more complete picture of the use of these products for the specified condition, but will not necessarily include all medications of these types.
- Because the distinction between vitamins/minerals and natural/herbal medicines was at the discretion of respondents, and because these can be very similar (or identical) products, data for these categories have been combined.
- Counts of medications are compiled separately for each condition type group (e.g. for heart and circulatory conditions, for asthma, for arthritis), and are generally based on the number of 3 digit 'generic type' codes which have been allocated to that group after removing duplicate codes, taking account of the supplementary question that indicates whether more medications were reported than space was allowed in the questionnaire.
- As some respondents did not consider previous heart failure, heart attack, stroke, angina or rheumatic heart disease to be current, they were not asked questions relating to medication. Because these conditions were treated as long-term conditions in the processing of the survey, the lack of medication data for these conditions are recorded as 'not stated'.
- For heart and circulatory conditions, asthma, diabetes, mental health conditions and mental wellbeing, vitamin and mineral supplements and natural and herbal medications are counted only once (per type per condition group) regardless of the number reported. For arthritis and osteoporosis each vitamin/mineral supplement, and each natural/herbal medication identified is counted separately. As a result:
 - The number of medications recorded for arthritis and osteoporosis may appear higher relative to other conditions, and is not comparable with other conditions.
 - The number of medications items should not be summed across condition groups to provide a total count at the person level, because of the different counting methods used and the possibility of duplications between condition groups (i.e. where the same medication is reported as being used for several different conditions).

*Comparability with
2004–05 NHS*

Overall, the methodology for collecting data on medication use in the 2007–08 NHS was similar to that used in the 2004–05 survey. However, while medication output from 2004–05 provided information that a medication known to be used for a condition was taken, in 2007–08, it is possible to determine which medication was taken for a particular condition.

*Comparability with
2004–05 NHS continued*

The classification of medications used was that used in the 2004–05 NHS. The coder used to code medications to this classification was updated to include new medications introduced since the previous survey.

Factors which may need to be taken into consideration when comparing medications data between surveys include: the availability of medications (coming onto or leaving the market); changes affecting accessibility (e.g. prescription requirements); access to/arrangements for pharmaceutical benefits; and evolving practices for the treatment/management of conditions.

DAYS AWAY FROM WORK,
STUDY OR SCHOOL

This topic refers to days, during the 12 months prior to interview, on which respondents stayed away from work, study or school due to a specified condition. For the purposes of this topic, a 'day away' was defined as more than half the work or study day absent. If a person was away from both work and study, details were recorded against each activity.

Definition

Methodology

As appropriate to their age, educational and employment circumstances, respondents with asthma, cancer, heart and circulatory conditions, diabetes, arthritis, osteoporosis or mental health conditions were asked whether they had stayed away from work, study or school for more than half a day in the last 12 months because of the specified condition.

The number of days away was collected for each medical condition involved.

Population

Information was obtained about time away from work, study or school because of a specified condition for the following populations:

- Days away from work due to own illness: employed persons aged 15–64 years
- Days away from study or school due to own illness: persons aged 5–64 years

Data items

Data items for this topic are linked to specific conditions. The data items and related output categories for each condition are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered when interpreting data on days away from work, study or school include the following:

- Sequencing of respondents through this section of the questionnaire relied on previous information recorded about their current employment and/or student status. To the extent that reporting or recording errors may have occurred in this information, the information recorded about days away from work or school/study will also be affected.
- The survey can provide information about both the number of people (and their characteristics) taking time away from work or school/study due to a specific condition, and the number of days away. While efforts were made in the questionnaire to ensure only illness-related days away were included, and only days where more than half a day's absence was involved were counted, some misreporting may have occurred.

Interpretation continued

- The questions about days away from work were not asked in terms of a particular job. For persons with more than one job, therefore, the days away were not necessarily days away from their main job. While the impact of this is expected to be minor, it should be considered when, for example, analysing information on days away from work against reported occupation or industry of main job.
- Respondents may have had days away because of more than one condition at the same time, therefore number of days away for different conditions cannot be added together for total number of days away.

Comparability with 2004–05

Data for whether a person had days away from work, study or school for their own condition are not considered to be comparable between the 2007–08 and 2004–05 surveys. In 2007–08, the reference period was the previous 12 months, whereas in 2004–05 the period was the previous 2 weeks.

The number of days away for a particular condition was not collected in 2004–05. Data for number of days away because of any condition, and days away from work, study or school as a carer were not collected in 2007–08.

OTHER ACTIONS FOR SELECTED CONDITIONS

Definition

This topic refers to condition-specific actions for persons with asthma, cancer, heart or circulatory conditions, diabetes, arthritis and osteoporosis/osteopenia, as well as a question for all persons on checking changes in freckles and moles. It excludes actions previously described in this user guide.

Methodology

Respondents were asked about the following condition-specific actions:

- persons with current asthma - whether has a written asthma plan and number and frequency of visits to hospital;
- persons with heart or circulatory conditions - cholesterol and blood pressure checks;
- persons with diabetes - whether screened for diabetes in last three years, whether had days of reduced activity in the last 12 months, frequency of blood glucose and foot checks, whether currently following changed eating patterns/diet, self-management actions, and time since consulted an eye specialist/optometrist;
- persons with arthritis/osteoporosis/osteopenia - whether bone mineral density tested and other self-management actions taken in the last two weeks; and
- all persons - whether regular checks for changes in freckles and moles are carried out.

Self-management actions taken for diabetes included losing weight, exercising on most days, taking vitamin or mineral supplements, taking natural or herbal medications and other (unspecified) actions. Self-management actions for arthritis, osteoporosis and osteopenia included doing weight/strength/resistance training, obtaining and/or using physical aids for home or work, water therapy, massage, changing eating patterns/diet, losing weight, exercising on most days and other (unspecified) actions.

Persons with diabetes or high sugar levels were asked whether their diabetes or high sugar levels had interfered with any daily activities other than work, school or study over the last 12 months, but were not asked to specify these.

Population

All persons with the conditions noted above.

Data items Data items for this topic are linked to specific conditions. The data items and related output categories for each condition are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation Points to be considered when interpreting data on other actions taken for selected conditions include the following:

- Data has been self-reported, so the accuracy of type of actions reported may depend on the respondent's interpretation.
- Respondents may not accurately remember the timeframe of the actions undertaken.
- Respondents may have felt pressure to report that they had done what was medically advised rather than what they actually did (e.g. frequency of testing blood glucose level).

Comparability with 2004–05 Certain actions in this topic may be comparable to 2004–05 data, however, most items are new to the 2007–08 NHS. Items that are directly comparable are:

- Whether currently following changed eating patterns/diet for diabetes/high sugar levels;
- Actions taken for diabetes/high sugar levels; and
- Time since consulted an eye specialist/optometrist for persons with diabetes.

Two other items that are considered to be comparable between the two surveys are:

- Whether has a written asthma action plan; and
- Self-management actions taken for arthritis/osteoporosis/osteopenia in the last two weeks.

Data for the item 'Whether has a written asthma action plan' may not be directly comparable as question wording differed slightly between the two surveys. In 2004–05, respondents were asked whether they had a written asthma action plan, and if so, whether they got it from a doctor, nurse or chemist, and whether it looked like the asthma action plan shown on a prompt card. In 2007–08, respondents were only asked whether they had a written asthma action plan, and an explanation of this plan was included in the question.

Data for self-management actions taken for arthritis/osteoporosis/osteopenia in the last two weeks may not be directly comparable to 2004–05, as question wording and methodology differed between the two surveys. In 2004–05, respondents were asked to indicate actions taken separately for arthritis and osteoporosis. The actions prompt card also included whether they had seen a GP or specialist. In 2007–08, respondents were asked GP, specialist and actions questions for arthritis and osteoporosis/osteopenia combined.

PRIVATE HEALTH
INSURANCE

Definition

Private health insurance is cover additional to that provided under Medicare, offered by private health organisations registered under the National Health Act to reimburse all or part of the cost of hospital and/or ancillary services.

Definition continued

Information was obtained about the private health insurance arrangements current at the time of the survey. Cover provided or arranged through employers was included. Ambulance only cover, and cover arranged under Veteran's Affairs or other government health benefits cards, was excluded.

Methodology

Respondents were asked if they were currently covered by private health insurance, and if so, the type of cover and type of membership they had, the reasons they had cover, and how long they had been covered. Respondents without current private health insurance were asked the reasons why they did not have cover. As more than one reason was able to be collected in both the 'reasons' questions, interviewers were encouraged to prompt respondents (e.g. 'Are there any other reasons?') to ensure that as much information as possible was recorded.

Type of cover refers to whether persons were covered for hospital expenses, expenses for ancillary services, or both hospital and ancillary expenses.

Private insurance for hospital expenses provides cover for the costs of accommodation in private hospitals and private accommodation in public hospitals. Ancillary cover includes services such as dental, physiotherapy, optical and acupuncture. The range of services and the level of cover provided for each service may vary.

Type of membership refers to whether the respondent was covered under a family, couple, sole parent or single person membership.

Population

All persons aged 15 years and over.

Data items

The data items and related output categories for this topic are available in Excel spreadsheet format from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to consider in interpreting data for this topic include the following:

- While efforts are made to ensure that only legitimate private health insurance was reported, some respondents may have reported life, accident or other forms of insurance.
- Overall results from this survey show average reported insurance levels in 2007–08, and reflect people's perception of their insurance cover which may not correspond to their actual cover. As a result the data from this topic are not directly comparable with statistics on health insurance levels compiled from fund membership information and published quarterly by the Private Health Insurance Administration Council.
- Depending on the person in the household chosen as the selected adult, respondents may have been unaware of their coverage/or lack of coverage under another person's (e.g. a parent's) private health insurance.
- The type of insurance held is only available at the very broad level of hospital only, ancillary only, both hospital and ancillary. Within each of these categories, the actual type and level of cover provided can differ significantly. This needs to be borne in mind when aggregating these data for population groups.

Interpretation continued

- The length of time insured relates to the current episode of insurance. Previous periods of insurance which have lapsed or been terminated are excluded. In addition, the item relates simply to the period insured, and does not necessarily refer to the type of cover or membership currently reported.

*Comparability with
2004–05*

Questions asked in the 2007–8 NHS were identical with those in the 2004–05 NHS except for a slight wording change in the first question (from 'Are you currently covered by private health insurance?' to 'Do you have private health insurance?'), and therefore the data are considered directly comparable.

CHAPTER 6 POPULATION CHARACTERISTICS

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DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS

In addition to the specific health information collected, the 2007–08 NHS obtained a range of information describing the demographic and socio-economic characteristics of the survey population. These characteristics can be linked with the health data obtained in the survey to analyse the health status and other health characteristics of particular groups in the community, e.g. overseas born, the aged, low income earners. For presentation in this publication, the characteristics obtained have been grouped under the following headings:

- Demographics;
- Education;
- Employment;
- Income;
- Health Cards;
- Housing;
- Family/household/income unit; and
- Geographical classifications.

Only the more commonly used output data items available from the survey are outlined below. For a full list of demographic and socio-economic variables available, see the list of output data items available available from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey: Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

In considering demographic and socio-economic characteristics, there are some general points about aspects of the sampling within households, collection methodology, definitions and processing arrangements which need to be borne in mind as they may affect the data:

- Summary characteristics of all usual residents of selected households were recorded from information supplied by any 'responsible adult' resident of the household (the ARA). Characteristics recorded were sex, age, marital status, whether currently attending school/educational institution, country of birth, year of arrival in Australia, Indigenous status and relationship to other household members.
- Those selected as respondents for the survey were asked additional questions regarding their education, language, labour force, housing and income characteristics.
- Within selected households, one adult and one child aged 0–17 years (where applicable) were enumerated in the NHS. If a dwelling contained only usual residents under the age of 18, two people (where applicable) were selected.
- The selected adult was randomly selected by the survey instrument, therefore in households with parents and adult children, the selected adult may have been one of those children.
- In households with children under the age of 15, an adult was nominated by the household to respond about the randomly selected child - this person is referred to as the child proxy. This may have been the selected adult or another adult member of the household. In 2007–08, it was assumed that children aged 15 to 17 years would answer survey questions themselves, but parents who were not comfortable with that were able to answer the questions on their child's behalf. Output items are available to determine if the child or a proxy responded to the questions.

CHAPTER 6 POPULATION CHARACTERISTICS *continued*

Interpretation continued

- The selected adult was asked to provide general income information for each household member aged 15 years and over (total income and reference period), as well as more specific details about their own income.
- Housing information was also obtained from the selected adult. Where appropriate, housing tenure takes into account the tenure of spouse/partner or parent; see the Housing section of this chapter for further details.

As a result of these arrangements, not all the data items described below are available for all adults, child proxies or children enumerated.

Although basic demographic information was collected about all household members in the 2001, 2004–05 and 2007–08 NHSs, processing arrangements in place in 2001 did not allow these details to be retained on the final survey data file. This data was retained for all persons from 2004–05 onwards.

DEMOGRAPHIC CHARACTERISTICS

Age

Age as reported was recorded in single years. Standard output categories differ according to the topic to which the data relates. Age in five or ten year groups is most commonly used in survey output. Other non-standard groupings are available on request.

Sex

Male or female as reported.

Registered marital status

Registered marital status was recorded as reported for persons aged 15 years and over, in the following categories: Never married, Widowed, Divorced, Separated, Married in a registered marriage, Other - de facto, and Other - Single/not married.

Social marital status

Social marital status was derived for persons aged 15 years and over, and was classified as:

- Married - if living with another person in a couple relationship, which was reported as either a registered marriage or a defacto marriage. Included are persons living with a person of the same sex in a couple relationship.
- Not married - if not living with another person in a couple relationship. Includes persons living alone, with other family members, or in shared accommodation. Includes persons in a registered or defacto marriage whose partners are not usually resident in the household.

Country of birth

Classified from reported country of birth to the Standard Australian Classification of Countries (SACC), 2nd edition, 2nd Edition, Revision 2.03 (cat. no. 1269.0), a hierarchical classification based on the concept of geographic proximity. Standard output for this classification is discussed in Appendix 4 of this Users' Guide. Other groupings are available on request.

Year of arrival in Australia

This item refers to the year in which a person, reporting a country of birth other than Australia, first arrived in Australia to live for a period of one year or more. Individual year of arrival was recorded and can be grouped as required for output.

CHAPTER 6 POPULATION CHARACTERISTICS *continued*

Indigenous status Refers to whether the person is of Aboriginal and/or Torres Strait Islander origin, as identified by an adult spokesperson within each household, i.e. not necessarily self-identification. Status is classified as Aboriginal, Torres Strait Islander, both Aboriginal and Torres Strait Islander, and neither Aboriginal nor Torres Strait Islander.

Language mainly spoken at home Obtained for persons 15 and over only, as reported. Language was classified at the finest level of the Australian Standard Classification of Languages 2005–06 (cat no. 1267.0). The abbreviated classification used in most standard output is shown in Appendix 4 of this Users' Guide.

Proficiency in spoken English Persons aged 15 years and over who reported they mainly spoke a language other than English at home were asked how well they spoke English. Responses were recorded as reported by respondents against the categories very well, well, not well, or not at all.

EDUCATION

Children aged 6–14 years were assumed to be attending school. For persons aged 15 years and over, information was obtained about study at school or another educational institution and the highest non-school educational qualification they had obtained.

Current study Obtained for persons aged 15 to 19 years not currently attending school, and for persons 20 years and over.

Information is collected about the type of educational institution at which currently enrolled (secondary school, university/other higher education, TAFE/technical college, business college, industry skills centre, other) and whether the current study is full-time or part-time. The status of these items is determined by the way the respondent's enrolment is classified by the educational institution they are attending; if uncertain, the respondent's reported status was recorded. Apprentices who attend one day per week or on block release are classified as in part-time study.

Enrolment in adult education courses, hobby and recreation courses is excluded.

Highest year of school completed Obtained for persons aged 15 to 19 years not attending school, and for persons 20 years and over. For years up to and including Year 11, the term 'completed' means to attend for the full school year such that progression to the following year of school is enabled. For Year 12, 'completed' requires only attendance for the full year. Further details of the definitions used are available on request.

Output categories are: Year 12, Year 11, Year 10, Year 9, Year 8 or below, Never attended school, Not stated, and Not asked (still at school).

Educational attainment Persons aged 15 to 19 years not attending school, and persons 20 years and over were asked if they had completed a trade certificate, diploma, degree or any other educational qualification. Those who answered 'Yes' were asked to provide details of that qualification, including level and field of study. Several output data items, relating to the level and field of study, are derived from the text descriptions recorded by interviewers. These include:

Educational attainment continued

- Level of highest non-school qualification. This item refers to the qualification level classified to the level of education component of the Australian Standard Classification of Education (ASCED) 2001 (cat no. 1272.0). Highest level of post-school educational attainment. This item refers to the level of the highest post-school qualification reported, classified to the ABS Classification of Qualifications (ABSCQ), 1993 (cat no. 1262.0). Output categories are generally classified as follows:
 - Postgraduate degree;
 - Graduate diploma/Graduate certificate;
 - Bachelor degree;
 - Advanced diploma/Diploma;
 - Certificate III/IV;
 - Certificate I/II;
 - Certificate not further defined;
 - No non-school qualification; and
 - Level not determined.
- Main field of highest non-school qualification. This item refers to the field of study of the highest non-school qualification reported, as classified to the field component of the ASCED. For standard survey output, detailed categories are commonly grouped as follows:
 - Natural and physical sciences;
 - Information technology;
 - Engineering and related technologies;
 - Architecture and building;
 - Agriculture, environmental and related studies;
 - Health;
 - Education;
 - Management and commerce;
 - Society and culture;
 - Creative arts;
 - Food, hospitality and personal services;
 - Mixed field programmes; and
 - Inadequately described.

EMPLOYMENT

Information about employment was obtained about persons aged 15 years and over. The questions used in the 2007–08 NHS are a short-form version of the questions used in the ABS Monthly Labour Force Survey. Use of the reduced set of questions may have resulted in small differences in classification of labour force status and full-time/part-time employment, compared with the results that would have been derived had the full standard question module be used.

Some of the employment items below (e.g. occupation, industry, working arrangements) relate to the respondent's main job. For respondents who had more than one job at the time of the interview, main job was defined as the paid job in which they usually worked the most hours .

Labour force status

Persons were classified as either employed, unemployed or not in the labour force based on criteria relating to whether the person had a job in the week prior to interview, whether those who did not have a job were actively seeking work, and whether those actively seeking work were available to start work.

- Employed persons were those aged 15 years and over who reported that in the preceding week they had worked in a job, business or farm, or who had a job but were absent during that week. Includes people who reported they had a job but who also reported they usually worked no hours.
- Unemployed persons were those aged 15 years and over who were not employed in the reference week, who actively looked for work some time during the previous four weeks and were available to start, or waiting to start within the following four weeks.
- Persons not in the labour force were those aged 15 and over who were not employed or unemployed, as defined.

For the NHS 2007–08, labour force status is categorised as:

- Employed full-time (if usually work 35 hours or more a week (in all jobs);
- Employed part-time (if usually worked less than 35 hours a week (in all jobs);
- Unemployed looking for full-time work (actively seeking full-time work in last 4 weeks);
- Unemployed looking for part-time work (actively seeking part-time work only in last 4 weeks); and
- Not in the labour force.

Status in employment

This item refers to a respondent's position in relation to the main employment (job) in the enterprise in which they work and is determined by the following criteria:

- whether a person operates their own economic enterprise or engages independently in a profession or trade, and hires one or more employees;
- whether a person operates their own economic enterprise or engages independently in a profession or trade and hires no employees;
- whether a person works for a public or private employer and receives remuneration; and
- whether a person works in an economic enterprise operated by a relative without remuneration.

Four output categories are available:

- Employee: A person who works for a public or private employer and receives remuneration in wages, salary, a retainer fee by their employer while working on a commission basis, tips, piece-rates or payment in kind, or a person who operates their own incorporated enterprise with or without hiring employees;
- Employer: A person who operates their own unincorporated economic enterprise or engages independently in a profession or trade, and hires one or more employees;
- Own Account Worker: A person who operates their own unincorporated economic enterprise or engages independently in a profession or trade and hires no employees; and
- Contributing Family Worker: A person who works without pay in an economic enterprise operated by a relative.

Working arrangements

This item refers to the working or payment arrangements of the respondent in their current main job. Data are recorded as reported by respondents against the following categories:

- unpaid voluntary work;
- contractor/sub-contractor;
- own business/partnership;
- commission only;
- commission with retainer;
- family business without pay;
- payment in kind;
- paid by piece/item produced;
- wage/salary earner; and
- other.

Occupation

For this survey, occupations have been classified according to the Australian and New Zealand Standard Classification of Occupations (ANZSCO), First Edition, Revision 1, 2006 (cat. no. 1220.0) and the Australian Standard Classification of Occupations (ASCO), Second Edition, 1997 (cat. no. 1220.0 (past release)). An occupation is a collection of jobs that are sufficiently similar in their title and tasks, skill level and skill specialisation, which have been grouped together for the purposes of classification. An occupation code was assigned based on the description of the type of work performed by the respondent in their main job.

The major groups of occupations according to ANZSCO are managers and administrators; professionals; technicians and trades workers; community and personal service workers; clerical and administrative workers; sales workers; machinery operators; and drivers and labourers. For most output purposes, occupation is classified to these eight major groups or to sub-major group level (see Appendix 4 of this Users' Guide).

Industry of employment

For this survey, industry of main job was office coded to the Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (Revision 1.0) (cat. no.1292.0) based on the description provided by the respondent of the business or activity carried out by their business/employer, and the name of the business/employer. Industry was classified to the 3 digit Group level of the ANZSIC, and details can be made available at this level on request, although for many groups observations in the survey are relatively few, and therefore the reliability of the data will be significantly reduced.

For most output purposes, industry is classified to the following divisions:

- Agriculture, Forestry and Fishing;
- Mining;
- Manufacturing;
- Electricity, Gas and Water Supply;
- Construction;
- Wholesale Trade;
- Retail Trade;
- Accommodation, Cafes and Restaurants;
- Transport and Storage;
- Communication Services;

CHAPTER 6 POPULATION CHARACTERISTICS *continued*

Industry of employment continued

- Finance and Insurance;
- Property and Business Services;
- Government Administration and Defence;
- Education;
- Health and Community Services;
- Cultural and Recreational Services; and
- Personal and Other Services.

For more details on industry classifications, see Appendix 4 of this Users' Guide.

Industry sector

This item was coded for respondents who were wage and salary earners or owners of a limited liability company in their main job, and refers to the sector (public or private) in which their business/employer operates. The public sector includes all government entities including local, state and federal government departments, non-market non-profit institutions that are controlled and mainly financed by government, and corporations and quasi-corporations that are controlled by government.

Hours worked

Refers to reported hours usually worked (in all jobs) per week by persons currently employed. Hours in single units are recorded, but are grouped for standard outputs, as follows: No hours or less than 1 hour; 1–15 hours; 16–24 hours; 25–34 hours; 35–39 hours; 40 hours; 41–48 hours; and 49 hours or more.

Type of shift work

Recorded for employed persons who reported doing any shift work in their main job, in the 4 weeks prior to interview. Categories available are:

- Rotating shift which changes periodically;
- Regular evening, night or graveyard shift;
- Regular morning shift;
- Regular afternoon shift;
- Irregular shift;
- Split shift (2 distinct periods per day);
- On call; and
- Other.

Duration of unemployment

Derived for persons classified as unemployed at the time of the survey. This item refers to the period from the time a person began looking for work or was stood down, to the end of the survey reference week. For persons who began looking for work while still employed, the item refers to the period from the time the person last worked full-time for two weeks or more until the end of the reference week. The item is a continuous variable, measured in completed weeks.

For standard output, periods are grouped as follows: Less than 4 weeks; 4 to less than 8 weeks; 8 to less than 13 weeks; 13 to less than 26 weeks; 26 to less than 52 weeks; and 52 weeks or more. Long-term unemployment is defined as unemployment for a period of 52 weeks or more.

INCOME

In the 2007–08 NHS, income information relates primarily to regular/recurring cash income only.

INCOME *continued*

Information was collected about the personal income of the selected adult in each sampled dwelling. The selected adult within each household was also asked to provide information about the combined income of all other household members aged 15 years and over.

In cases where income was not reported, values were not imputed and missing data appears as 'not stated' or 'not known' values in survey output. If any contributing income item at the person level has a value of 'not stated' or 'not known', then totals derived from these items are also set to 'not stated' or 'not known'.

Gross cash income

Gross cash income refers to total cash income from all sources before tax or anything else (except business expenses) is taken out. Respondents were asked to report:

- the gross cash income they currently received from wages or salary, a government pension or allowance, child support or maintenance, superannuation or annuity, workers' compensation or any other regular source. The period to which that reported income related could be recorded in weeks or months; and
- the gross cash income they expected to receive from profit or loss from their own unincorporated business or share in a partnership; profit or loss from rental property; or dividends or interest in the current financial year. Provision was made to record nil income.

Income from all sources was combined to produce a total personal cash income, which is usually expressed for output in annual or weekly income ranges. Incomes in reported dollar amounts and in deciles are stored on the data file.

Total cash income at the household level is also available, in dollar amounts (reported and equivalised), and deciles. These are further explained in the section of this chapter entitled 'Household, Family and Income Unit level characteristics'.

Comparability with 2004–05

In the 2007–08 NHS, personal income was only collected from persons aged 18 years and over, while in 2004–05, this data was collected from persons aged 15 years and over.

Care must be taken in any comparisons between the two surveys that the same age groups are being used.

Sources of cash income

WAGES AND SALARIES

Respondents aged 18 years and over were asked whether they received income from wages and salaries (including from their own incorporated business), and if so, how much, and the period the amount covered. This topic included wages and salaries from all jobs, whether full-time or part-time; wages and salaries paid to a respondent from their own incorporated business; and commissions paid to sales staff. It excluded dividends received from shares in an incorporated business; and Newstart or Youth Allowance received under the Work for the Dole Scheme.

GOVERNMENT PENSIONS, ALLOWANCES AND BENEFITS

Respondents were then asked whether they currently received a government pension, allowance and benefit, and if so, were sequenced to a series of questions to determine the specific pension, benefit or allowance, as follows:

- Australian Age Pension;

Sources of cash income continued

GOVERNMENT PENSIONS, ALLOWANCES AND BENEFITS *continued*

- Service pension from the Department of Veteran's Affairs (excluding Defence Force Retirement and Death Benefits (DFRDB));
- Disability Support Pension from Centrelink;
- Newstart Allowance;
- Carer Payment;
- Partner Allowance;
- Widow Allowance from Centrelink;
- Wife Pension;
- Mature Age Allowance;
- Sickness Allowance; or
- Special benefit.

Only one of these pensions, benefits or allowances could be selected. If any of the above were selected, the amount received and the period that amount covered were asked.

Respondents were then asked whether they currently received Family Tax Benefit (FTB) as regular payments from the Tax Office, and if so, the amount received and the period that amount covered. FTB is a Australian Government benefit to assist with the cost of raising children that consists of two components: Part A, the basic benefit, which is income assessed; and Part B, which gives assistance to sole parent families and to two parent families with one main income where one parent chooses to stay at home or to balance some paid work with caring for their children. Both Part A and Part B were included in this topic.

FTB can be paid as fortnightly payments from the Family Assistance Office, as a lump sum payment from the Family Assistance Office after the end of the financial year, and as a lump sum through the tax system. Recipients of this last system can anticipate the lump sum by asking their employer to take less tax out of their wages during the year. Recipients can also choose to receive some of their entitlement in fortnightly payments and some as a lump sum after the end of the financial year. For the purposes of this question, only FTB income received as regular fortnightly payments was included.

Then, using a prompt card, respondents were asked whether they currently received any of the following, and if so, the amount received and the period that amount covered:

- Parenting Payment;
- Youth Allowance;
- Carer Allowance;
- War Widow's or Widower's Pension from the Department of Veteran's Affairs, including the Income Support Supplement;
- Disability Pension from the Department of Veteran's Affairs;
- Overseas government pension; or
- Any other government payment.

OTHER SOURCES

Also using a prompt card, respondents were asked whether they currently received any income from the following sources, and if so, the amount received and the period that amount covered:

- Child support or maintenance;

*Sources of cash income
continued*

OTHER SOURCES *continued*

- Superannuation/annuity/private pension; or
- Workers' compensation

Respondents were then asked to report:

- the expected profit or loss for the financial year from their own unincorporated business or share in a partnership (excluding wages/salary drawn from own limited liability company);
- the expected profit or loss for the financial year from rental property;
- expected dividends or interest for the financial year, including dividends from own limited liability business as well as other companies, but excluding bonus share values received with or in lieu of dividends; and
- current income from any other source.

Where the respondent was a registered dealer, income from share trading was recorded as business income. In other cases, income from share trading was recorded as 'other regular income'.

Persons who reported income from their own unincorporated business, share in a partnership, or rental property were asked to report the total amount received from these sources in the last financial year (before tax but after business expenses). 'Don't know' and refusal options were allowed.

OUTPUT CLASSIFICATIONS

For output, sources of income are classified as follows:

- Wage or salary
- Profit or loss from own unincorporated business or share in partnership
- Any government pension or allowance
- Other cash income
 - Profit or loss from rental property
 - Dividends or interest
 - Child support or maintenance
 - Superannuation/annuities
 - Workers' compensation
 - Other cash income nec

Type of pensions received are also available for output. For more details, please refer to the survey data item list available from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey: Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

*Main source of cash
income*

Main source of income is derived for the items above, and is available as a separate output item.

Household income

The selected adult was asked to report the combined income details of all persons aged 15 years and over in their household. Two question were used, asking how much income in total was received from all sources, and the period that total amount covered. Don't know and refusal options were allowed. The approach used in the survey relies on the selected adult's knowledge of the income of other household members, and their

CHAPTER 6 POPULATION CHARACTERISTICS *continued*

Household income continued willingness to report information about other household members which they may see as sensitive.

HEALTH CARDS

Definition

This topic refers to coverage by specific government-issued cards which entitle the card holder, and in some cases their dependents, to a variety of health benefits or concessions (e.g. medical care, hospital treatment/accommodation, and supply of pharmaceuticals, free of charge or at reduced rates). Cards are provided primarily to recipients of Australian government pensions or benefits.

The specific cards covered in the 2007–85 NHS were:

- any treatment entitlement card from the Department of Veterans' Affairs (DVA);
- Health Care Card (including for low income earners and foster carers);
- Pensioner Concession Card; and
- Commonwealth Seniors Health Card.

For details of the persons eligible for these cards (or coverage under these cards) and the range of entitlements available to card holders, please contact the relevant authority.

Methodology

Respondents aged 15 years and over were asked whether they have a DVA Treatment Entitlement Card, and the colour of the card; gold, white, or other. Respondents were also asked if they were covered by any of the other government health concession cards listed above. Multiple cards could be reported. Interviewers were supplied with supplementary information about the cards to assist if queried by respondents.

Data items

Data items and related output categories for this topic are available from the data item list on the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey: Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting data for this topic include the following.

- Although prompt cards were used, some respondents may have incorrectly reported other types of cards in answer to these questions; for example, State Seniors Cards, which provide access to non-health services or entitlements (e.g. transport).
- Depending on the person in the household chosen as the selected adult, they may have been unaware of their coverage under another person's (e.g. a parent's) card.

Comparability with 2004–05

At the broadest level of whether has/covered by a DVA or other Government Health Card, the data are considered directly comparable between surveys. However in making comparisons consideration should be given to changes which may have occurred between 2004–05 and 2007–08 in terms of eligibility for cards, and the levels and types of entitlements they provide.

HOUSING

Definition

This topic refers to the dwelling type and location and number of bedrooms of the dwelling in which respondents were enumerated; in most cases, usual place of residence; and to the respondent's tenure in that dwelling.

Methodology

'Dwelling type' refers to the structure in which the household resides, as recorded by interviewers and based on their observations at the time of the interview. Information was recorded against the following categories;

- Separate house;
- Semi-detached/row or terrace house/town house(one storey; two or more storeys);
- Flat attached to house;
- Other flat or apartment (in 1 or 2 storey block; 3 storey block; 4 or more storey block);
- Caravan, cabin or houseboat;
- Improvised home, tent, camper out; or
- House or flat attached to shop, office, etc.

'Dwelling location' refers to where the dwelling was situated, as recorded by the interviewer. Categories for the item are caravan park; marina; manufactured home estate; self-care accommodation for the retired or aged; or other (including residential dwelling blocks and farms).

The selected adult was asked to report the number of bedrooms in the dwelling. The item refers to the number of rooms on the dwelling plans as bedrooms, even though they may be currently used for other purposes. Information from both these questions was recorded at the household level.

Respondents aged 18 years and over were also asked on behalf of themselves, their spouse/partner, or parent (if the respondent was an adult child living with a parent), whether the dwelling was:

- being paid off;
- owned outright;
- being rented;
- being purchased under a rent/buy or shared equity scheme;
- being occupied under a life tenure scheme; or
- whether they paid board or lived there rent free.

Those who reported they paid rent or board (including those purchasing the dwelling under a rent/buy or shared equity scheme) were also asked who it was paid to (e.g; real estate agent, housing authority, parent).

Data items

Data items and related output categories for this topic are available from the data item list on the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey: Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

Interpretation

Points to be considered in interpreting data for this topic include the following:

- Some respondents may not be aware of the designated usage of rooms specified in building plans, and may report other rooms currently used as bedrooms.
- Some care should be taken in relating the health characteristics of respondents with their housing characteristics, since information is not available from the survey to indicate their length of residence in that dwelling.

CHAPTER 6 POPULATION CHARACTERISTICS *continued*

Comparability with 2004–05

Data for dwelling type and number of bedrooms is considered directly comparable between the 2004–05 and 2007–08 surveys. Information about personal tenure was not collected in 2007–08.

HOUSEHOLD, FAMILY AND INCOME UNIT LEVEL CHARACTERISTICS

In addition to data obtained about individual respondents in the survey, other data are available about the households, families or income units to which they belong. This information enables some understanding of the situation in which people live, which may impact upon their health and related characteristics.

Household characteristics

A household is defined as one or more persons, at least one of whom is aged 15 years and over, usually resident in the same private dwelling.

Household level estimates are available from this survey for household size, type and composition, geographic location, dwelling characteristics, income and SEIFA characteristics of the area in which the dwelling is located. Selected items are discussed below. A full list of output data items is available from the downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey: Data Reference Package, 2007–08 (cat. no. 4363.0.55.002).

In addition to the items describing the characteristics of household units, basic information is available about each member of the selected households. This enables the circumstances of the respondent to be better understood and provides scope to rework some items (e.g. equivalised income) to suit particular needs. Items available for each member of the household are sex, age, Indigenous status, relationship in household, family composition, country of birth, marital status and survey status (selected child or adult, or not selected).

Household composition

Households are allocated to categories of the 'Household composition' classification on the basis of:

- the type of families identified in the household;
- whether unrelated household members are present in a family household; and
- whether the number of household members is greater than one in a non-family household.

The standard 'Household composition' classification comprises the following categories:

- One family household with only family members present
- Two family household with only family members present
- Three or more family household with only family members present
- One family household with non-family members present
- Two family household with non-family members present
- Three or more family household with non-family members present
- Lone person household
- Group household

A definition of 'family' is provided in Characteristics of families, below.

Household structure

This refers to the composition of the household, based on the information about the residents of the household provided by the responsible adult (ARA). Output categories are:

CHAPTER 6 POPULATION CHARACTERISTICS *continued*

Household structure continued

- Person living alone;
- Couple only;
- Couple with unmarried child(ren) aged 15 years and over;
- Couple with child(ren) aged less than 15 years;
- Couple with child(ren) aged less than 15 years and unmarried child(ren) aged 15 years and over;
- Lone parent with unmarried child(ren) aged 15 years and over;
- Lone parent with child(ren) aged less than 15 years;
- Lone parent with child(ren) aged less than 15 years and unmarried child(ren) aged 15 years and over; and
- All other households.

Relationship in household

This item was derived from information supplied by the responsible adult who answered the initial survey questions for each household (the ARA), about all usual residents of the household. It describes the relationship of each person in a household to the ARA (i.e. wife, son, not related). Output categories are:

- Husband, wife or partner;
- Lone parent;
- Child aged less than 15 years;
- Dependent student;
- Non-dependent child;
- Other related person;
- Non-family member; and
- Visitor.

Number of persons in household

This refers to a count of persons who are usual residents of the household dwelling and members of the household to which the respondent belongs.

Number of daily smokers in household

As reported by the selected adult respondent - see Smoking, in Chapter 4, Health Risk Factors.

Household income

As reported by the selected adult respondent - see Income, in this Chapter.

Characteristics of families

A 'family' is defined as two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering; and who are usually resident in the same household. The basis of a family is formed by identifying the presence of a couple relationship, lone parent-child relationship or other blood relationship. Some households, therefore, contain more than one family.

This is a more restrictive definition than the ordinary notion of the term 'family' which generally includes relatives whether they live together or not. This is a reflection of the fact that for survey-based research it is necessary to place some physical bound on the extent of family, for the purposes of being able to collect family data.

Family composition

Family composition is defined as the differentiation of families based on the presence or absence of couple relationships, parent-child relationships, child dependency relationships or other familial relationships, in that order of precedence. The 'family composition' of a particular family is created through the relationships that exist between a single 'responsible adult' and each other member of that family living in the household. Family composition is then allocated on the basis of whether the types of relationships given below are present or not in the family in the following order of precedence:

- Couple relationship - defined as a registered or de facto marriage, including same-sex relationships;
- Parent-child relationship - defined as a relationship between two persons usually resident in the same household. The child is attached to the parent via a natural, adoptive, step, foster or child dependency relationship;
- Child dependency relationship - defined as including all children under the age of 15 (whether related or unrelated to the family reference person) and those natural, step, adopted or foster children who are full-time students 15–24 years of age; and
- Other relationship - defined as including all those persons related by blood or by marriage who are not covered by the above relationships.

Family composition is categorised as follows:

- Couple family with no children under 15
Couple family with no children under 15 and no dependent students
- Couple family with children under 15
Couple family with children under 15 and dependent students
Couple family with children under 15, dependent students and non-dependent children
Couple family with children under 15, dependent students and no non-dependent children
- Couple family with children under 15 and no dependent students
Couple family with children under 15, no dependent students and with non-dependent children
Couple family with children under 15, no dependent students and no non-dependent children
- Couple family with no children under 15
Couple family with no children under 15 and with dependent students
Couple family with no children under 15, and with dependent students and non-dependent children
Couple family with no children under 15, and with dependent students and no non-dependent children
- Couple family with no children under 15 and no dependent students
Couple family with no children under 15, no dependent students and with non-dependent children
- One parent family with children under 15
One parent family with children under 15 and dependent students
One parent family with children under 15, dependent students and non-dependent children
One parent family with children under 15, dependent students and no non-dependent children

*Family composition
continued*

- One parent family with children under 15 and no dependent students
 - One parent family with children under 15, no dependent students and with non-dependent children
 - One parent family with children under 15, no dependent students and no non-dependent children
- One parent family with no children under 15
 - One parent family with no children under 15 and with dependent students
 - One parent family with no children under 15, with dependent students and non-dependent children
 - One parent family with no children under 15, with dependent students and no non-dependent children
 - One parent family with no children under 15 and no dependent students
 - One parent family with no children under 15, no dependent students and with non-dependent children
- Other family

Equivalised income

Differences in household types and compositions, and their requirements relative to income, can be taken into account by the application of equivalence scales. These scales are a set of ratios which, when applied to the income of different household or income unit types, produce standardised estimates of income which reflect the households' relative wellbeing. The NHS 2007–08 uses the modified OECD equivalence scale (1994).

Equivalised income is derived by calculating an equivalence factor and then dividing income by that factor. The equivalence factor is built up by allocating points to each person in the unit (household or income unit) and summing those points. One point is allocated to the first adult in the unit, 0.5 points for each other person aged 15 years and over, and 0.3 points for each person aged less than 15 years. For example:

- a single person household has a factor of one. Equivalised income is therefore the same as reported income.
- a household comprising two adults and a child aged less than 15 years would have a factor of 1.8. Equivalised income for this household is therefore the household income divided by 1.8.

Equivalised income is available in dollar amounts and deciles.

*Income deciles and
quintiles*

Income deciles are groupings that result from ranking either all households or all persons in the population in ascending order according to some characteristic, such as income, and then dividing the population into ten equal groups, each comprising 10% of the estimated population. The first decile contains the bottom 10%, the second decile contains the next 10%, and so on. Quintiles are derived by adding together the first and second decile for the first quintile, third and fourth decile for the second quintile, etc.

To assist in the use and interpretation of income deciles or quintiles at the person or household level, it is necessary to exclude income which is not stated or not known. If one or more of the contributing person records in a household has a value of 'not stated' or 'not known', then household income and derived income deciles are set to '98. Not stated' or '99. Not known' as it is not possible to determine an accurate value. Care should be taken to exclude these codes when categorising higher income values, and when calculating means, medians and other summary statistics.

Income deciles and quintiles continued

For 2007–08, the dollar ranges covered by deciles in all income items can be found at Appendix 6: Income deciles.

Socio-economic Indexes for Areas (SEIFAs)

From information collected in the Census of Population and Housing, the ABS has developed indexes to allow ranking of regions/areas, providing a method of determining the level of social and economic wellbeing in that region. There are four indexes:

- the Index of Relative Socio-economic Advantage\Disadvantage, which is a continuum of advantage (high values) to disadvantage (low values) that takes into account variables like the proportion of families with high incomes, people with a tertiary education, and employees in skilled occupations;
- the Index of Relative Socio-economic Disadvantage, which is derived from variables such as income, educational attainment, unemployment, and dwellings without motor vehicles. Attributes summarised by this index include low income, low educational attainment, high unemployment and jobs in relatively unskilled occupations;
- the Index of Economic Resources, which focuses on variables concerning the income, expenditure and assets of families, such as family income, rent paid, mortgage repayments and dwelling size; and
- the Index of Education and Occupation, which includes variables relating to the educational and occupational characteristics of communities, such as the proportion of people with a higher qualification or those employed in a skilled occupation.

Both the 2001 and 2006 versions of SEIFA are available for use in relation to information collected in the 2007–08 NHS. It is emphasised, however, that these indexes relate to the area in which the survey respondent lived, and are not necessarily indicative of an individual respondent's socio-economic status. The 2001 index scores have been mapped to the NHS sample at both the CD and SLA levels.

For further information about the indexes, see Information Paper: Census of Population and Housing - Socio-Economic Indexes for Areas (SEIFA), 2006 (cat. no. 2039.0).

The Index of Relative Socio-economic Disadvantage is the SEIFA index most frequently used for analysis of health characteristics. In the 2007–08 NHS summary publication, the area-based CD level index deciles for 2001 were used.

SEIFA deciles/quintiles

SEIFAs are commonly used to group populations into deciles or quintiles of a particular index. In the NHS, this enables comparisons to be made between the health characteristics, for example, of people living in less advantaged areas with those in more advantaged areas.

From this survey, SEIFA deciles/quintiles are derived in two ways - area-based and population-based:

- Area-based deciles/quintiles are derived by grouping CDs or SLAs into 10/5 equal groups (equal number of CDs or SLAs in each group) and then allocating these groups to survey records in the same CD or SLA. Because all CDs and SLAs are not equal in size and because the NHS sample is not selected to ensure an equal sample distribution at the CD or SLA level, this method does not result in an equal number of people (either records or weighted estimates) in each decile/quintile.

SEIFA deciles/quintiles continued

- Population-based deciles/quintiles are derived by splitting the Census population into 10/5 equal groups at CD/SLA level for each SEIFA index based on the SEIFA score for that index, and then allocating these groups to the survey records in the same CD or SLA. Although this methodology ensures an equal number of persons in each decile/quintile when the Census population is used, the method does not necessarily result in an equal number of people (either records or weighted estimates) in each decile/quintile in NHS data, as the scope and distribution of the NHS sample population differs from the Census population.

Interpretation

Confusion can arise about the ordering of the deciles/quintiles created from SEIFA indexes. ABS constructs all four indexes so that relatively disadvantaged areas (e.g. areas with many low income recipients) have low index values, and relatively advantaged areas (e.g. areas with many high income recipients) have high index values. Correspondingly, in ABS publications and other outputs, SEIFA deciles are numbered from decile 1 or lowest decile (most disadvantaged), to decile 10 or highest decile (least disadvantaged). Quintiles are labelled similarly.

For consistency, this ordering applies to all indexes, irrespective of whether they are named as indexes of advantage and/or disadvantage. Care needs to be taken in comparing SEIFA analyses undertaken by different agencies, as quintiles or deciles may be labelled in reverse order to the standard ABS order.

SEIFAs were not available for a small number of records obtained in the 2007–08 NHS, because some CDs do not have a SEIFA score calculated for them due to their very small population at the time of the Census. These records were excluded before SEIFA quintiles and deciles were created.

GEOGRAPHIC CLASSIFICATIONS

Several standard classifications of geographic area are available for use in output from this survey, based on Statistical Geography Volume 1 - Australian Standard Geographical Classification (ASGC), Jul 2006 (cat. no.1216.0). Output based on the 2001 edition of the Australian Standard Geographical Classification is also available.

The ASGC is a hierarchical system for the classification of statistical units by geographic areas. The basic spatial unit of the classification is the Census Collector's District (CD). Statistical Local Areas (SLAs) are the next level of the classification, and comprise one or more CDs. Under the hierarchical system of the ASGC, SLAs can be further grouped into larger units called Statistical Sub-Divisions, then still larger Statistical Division units. Other structures which are aggregations of SLAs (such as Local Government Areas) may also be available.

At each level of the classification, the units in aggregate cover the whole of Australia without gaps or overlaps. The ASGC also contains units based on populations and remoteness from services.

Although provision has been made to compile statistics from the survey in respect of geographic areas within States and Territories, there are limits to the extent to which survey data can usefully be compiled for those areas, particularly those with smaller populations. The ability of the survey to provide reliable estimates for sub-State areas varies from area to area, according to the number of persons in the area which were

CHAPTER 6 POPULATION CHARACTERISTICS *continued*

GEOGRAPHIC CLASSIFICATIONS *continued*

included in the sample, and the level of data disaggregation attempted (e.g. number of variables cross-classified, level of detail required for each variable).

The standard output of geographic area available for the 2007–08 NHS are:

- States/Territories and Australia;
- Capital cities/balance of State;
- Section of State
- Remoteness; and
- Accessibility/Remoteness Index of Australia (ARIA).

States/Territories and Australia

The Northern Territory was included in the survey, with a sample sufficient to contribute to national estimates, but not large enough to support most separate estimates for the NT.

Capital cities/balance of State

Used for each State where the capital city is defined as the area covered by the relevant city Statistical Division.

Section of State

CDs are grouped together to form defined areas according to population size criteria. The resulting areas are known as Urban Centres or Localities. The Section of State structure uses population counts of these Urban Centres/Localities to classify CDs into the following categories:

- Major urban (urban centres with a population of 100,000 or more)
- Other urban (urban centres with a population between 1,000 and 99,999)
- Bounded locality (localities with a population of between 200 and 999)
- Rural Balance (remainder of the State/Territory).

Remoteness

The ASGC Remoteness classification is based on the Accessibility/Remoteness Index of Australia (ARIA+), mapped to CDs from the Census of Population and Housing, and classified to the following categories:

<i>ASGC remoteness category</i>	<i>Index values</i>
Major cities of Australia	0 up to and including 0.2
Inner regional Australia	Greater than 0.2 up to and including 2.4
Outer regional Australia	Greater than 2.4 up to and including 5.92
Remote Australia	Greater than 5.92 up to and including 10.53
Very remote Australia	Greater than 10.53

Each respondent is classified to the full 5 category classification above, based on the CD in which they resided (and were enumerated). For output purposes, some categories may need to be collapsed.

Both 2001 and 2006 versions are available for NHS 2007–08.

CHAPTER 6 POPULATION CHARACTERISTICS *continued*

*Accessibility/Remoteness
Index of Australia (ARIA)*

CDs from the 2006 Census of Population and Housing have been mapped to ARIA categories. Overlaying this with CDs from the sampled population enables output from the 2007–08 NHS to be compiled by ARIA category - Highly Accessible, Accessible, Moderately Accessible, Remote, and Very Remote.

In addition to the geographic classifications outlined above, data from the 2007–08 NHS may be compiled in respect of other geographic units (to suit individual user requirements) on request. Such requests will be considered on a case-by-case basis in terms of sampling, data reliability and confidentiality issues, and the additional costs to the user involved in programming to create the units. It is recommended that any such units be of a similar size to Statistical Divisions, and that the areas be defined in terms of component CDs or SLAs.

CHAPTER 7 DATA QUALITY AND INTERPRETATION OF RESULTS

CONTENTS

Data quality

- Sampling variability

- Measure of sampling variability

- Significance testing on differences between survey estimates

- Non-sampling error

- Errors related to scope and coverage

- Response errors

- Non response bias

- Processing errors

- Other factors affecting estimates

Interpretation of results

- Comparability with 2004–05

- General survey characteristics

- Sample design/size

- Partial enumeration of households

- Enumeration period

- Survey content

- Comparability of long term conditions data with 2004–05

DATA QUALITY

Although care was taken to ensure that the results of the 2007–08 NHS are as accurate as possible, there are certain factors which may affect the reliability of the results and for which no adequate adjustments can be made. One such factor is known as sampling variability. Other factors are collectively referred to as non-sampling error. These factors, which are discussed below, should be kept in mind in interpreting results of the survey.

Sampling variability

Since the estimates are based on information obtained from a sample of the population, they are subject to sampling variability (or sampling error), that is, they may differ from the figures that would have been obtained from an enumeration of the entire population, using the same questionnaires and procedures. The magnitude of the sampling error associated with a sample estimate depends on the following factors:

- Sample design - there are many different methods which could have been used to obtain a sample from which to collect data on health status, health-related actions and health risk factors. The final design attempted to make survey results as accurate as possible within cost and operational constraints. (Details of sample design are contained in Chapter 2: Survey Design and Operation, under Sample Design and Selection);
- Sample size - the larger the sample on which the estimate is based, the smaller the associated sampling error; and
- Population variability - the extent to which people differ on the particular characteristic being measured. The smaller the population variability of a particular characteristic, the more likely it is that the population will be well represented by the sample, and therefore the smaller the sampling error. Conversely, the more variable the characteristic, the greater the sampling error.

Measure of sampling variability

One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate might have varied because only a sample of dwellings was included. There are about two chances in three that the sample estimate will differ by less than one SE from the figure that would have been obtained if all dwellings had been included, and about 19 chances in 20 that the difference will be less than two SEs.

Another measure of the likely difference is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate to which it relates. The RSE is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling, and thus avoids the need to refer also to the size of the estimate. More detail on the calculation of SEs and RSEs can be found in the Technical Note.

For estimates of population sizes, the size of the SE generally increases with the level of the estimate, so that the larger the estimate, the larger the SE. However, the larger the sampling estimate, the smaller the SE in percentage terms (RSE). Thus, larger sample estimates will be relatively more reliable than smaller estimates. Very small estimates may be subject to such high relative standard errors as to detract seriously from their value for most reasonable purposes.

Only estimates with relative standard errors less than 25% are considered sufficiently reliable for most purposes. However, estimates with relative standard errors of 25% or more are included in ABS publications of results from this survey. Estimates with RSEs greater than 25% but less than or equal to 50% are annotated by an asterisk to indicate

Measure of sampling variability continued

they are subject to high SEs and should be used with caution. Estimates with RSEs of greater than 50%, annotated by a double asterisk, are considered too unreliable for general use and should only be used to aggregate with other estimates to provide derived estimates with RSEs of 25% or less.

Relative standard errors for estimates from NHS 2007–08 are published in 'direct' form. In previous NHSs, a statistical model was produced that related the size of estimates to their corresponding RSEs, and this information was displayed via a standard error table. For NHS 2007–08, RSEs for estimates were calculated for each separate estimate and published individually.

The Jackknife method of variance estimation was used for this process, through a process called replicate weighting, where a small group of households in the sample are assigned a zero weight and then the remaining records are reweighted to the survey benchmark population. For the 2007–08 NHS, this process was repeated 60 times to produce 60 replicate weights. These replicate weights are used for calculating the variances of the estimates by finding the difference between the estimate for each replicate group and the original estimate, squaring the difference and summing these differences over all of the 60 replicate groups. The difference between the replicate estimates and the original estimate is then used in calculating the standard error of the estimate. Unlike the previous method, direct calculation of RSEs can result in larger estimates having larger RSEs than smaller ones, since these larger estimates may have more inherent variability.

More information about the replicate weights technique can be found in the Technical Note.

Standard errors of proportions, differences and sums

Proportions formed from the ratio of two estimates are subject to sampling error. The size of the error depends on the accuracy of both the estimates.

The difference between, or sum of, two survey estimates (of numbers or percentages) is itself an estimate and is therefore also subject to sampling error. The SE of the difference between, or sum of, two survey estimates depends on their SEs and the relationship between them.

The formulas to approximate the RSE for proportions and the SE of the difference between, or sum of, two estimates can be found in the Technical Note.

Testing for statistically significant differences

For comparing estimates between surveys or between populations within a survey it is useful to determine whether apparent differences are 'real' differences between the corresponding population characteristics, or simply the product of differences between the survey samples. One way to examine this is to determine whether the difference between the estimates is statistically significant. This is done by calculating the standard error of the difference between two estimates (x and y) and using that to calculate the test statistic using the formula below:

$$\frac{(x-y)}{SE(x-y)}$$

Testing for statistically significant differences continued

If the value of the test statistic is greater than 1.96, then we may say that we are 95% certain that there is a statistically significant difference between the two populations with respect to that characteristic. Otherwise, it cannot be stated with confidence that there is a real difference between the populations.

Non-sampling error

Lack of precision due to sampling variability should not be confused with inaccuracies that may occur for other reasons, such as errors in response and recording. Inaccuracies of this type are referred to as non-sampling error. This type of error is not specific to sample surveys and can occur in a census enumeration. The major sources of non-sampling error are:

- errors related to scope and coverage;
- response errors due to incorrect interpretation or wording of questions;
- interviewer bias;
- bias due to non-response, because health status, health-related behaviour and other characteristics of non-responding persons may differ from responding persons; and
- errors in processing such as mistakes in the recording or coding of the data obtained.

These sources of error are discussed below.

Errors related to scope and coverage

Some dwellings may have been inadvertently included or excluded because, for example, the distinctions between whether they were private or non-private dwellings may have been unclear. All efforts were made to overcome such situations by constant updating of lists both before and during the survey. Also, some persons may have been inadvertently included or excluded because of difficulties in applying the scope rules concerning the identification of usual residents, and the treatment of some overseas visitors.

Response errors

In this survey response errors may have arisen from three main sources:

- deficiencies in questionnaire design and methodology;
- deficiencies in interviewing technique; and
- inaccurate reporting by the respondent.

Errors may be caused by misleading or ambiguous questions, inadequate or inconsistent definitions of terminology used, or poor overall survey design (for example, context effects where responses to a question are directly influenced by the preceding questions). In order to overcome problems of this kind, individual questions and the questionnaire overall were thoroughly tested before being finalised for use in the survey. Testing took two forms:

- cognitive interviewing and focus group testing of concepts, terminology, questions and measurement/reporting issues relating to the following topics: alcohol consumption, smoking, arthritis, osteoporosis, exercise, injuries, and dietary behaviours; and
- field testing, which involved a pilot test and dress rehearsal conducted in Victoria, South Australia and Western Australia respectively, each covering 250–300 households.

Response errors continued

As a result of both forms of testing, modifications were made to question design, wording, ordering and associated prompt cards, and some changes were made to survey procedures. In considering modifications, it was sometimes necessary to balance better response to a particular item/topic against increased interview time or effects on other parts of the survey; for example, questions for collecting data on usual intake of fruit and vegetables referred to consumption in the form of 'serves', which required the use of a prompt card to define a serve, and a fair amount of recall and calculation on the part of the respondent.

Although every effort was made to minimise response errors due to questionnaire design and content issues, some will have inevitably have occurred in the final survey enumeration.

As the survey is quite lengthy, reporting errors may also have resulted from interviewer and/or respondent fatigue (i.e. loss of concentration), particularly for those respondents reporting for both themselves and a child. Inaccurate reporting may also occur if respondents provide deliberately incorrect responses. While efforts were made to minimise errors arising from fatigue, or from deliberate misreporting or non-reporting by respondents, through emphasising the importance of the data and checks on consistency within the survey instrument, some instances will have inevitably occurred.

Reference periods used in relation to each topic were selected to suit the nature of the information being sought; in particular to strike the right balance between minimising recall errors and ensuring the period was meaningful and representative (from both respondent and data use perspectives), and would yield sufficient observations in the survey to support reliable estimates. It is possible that the reference periods did not suit every person for every topic and that difficulty with recall may have led to inaccurate reporting in some instances.

Lack of uniformity in interviewing standards may also result in non-sampling errors. Training and retraining programs, regular supervision and checking of interviewers' work were methods employed to achieve and maintain uniform interviewing practices and a high level of accuracy in recording answers on the survey questionnaire (see Data Collection: Interviews, in Chapter 2: Survey Design and Operation). The operation of the Computer Assisted Instrument (CAI) itself, and the built in checks within it, ensure that data recording standards are maintained. Respondent perception of the personal characteristics of the interviewer can also be a source of error, as the age, sex, appearance or manner of the interviewer may influence the answers obtained.

Non-response bias

Non-response may occur when people cannot or will not cooperate in the survey, or cannot be contacted by interviewers. Non-response can introduce a bias to the results obtained insofar as non-respondents may have different characteristics and behaviour patterns in relation to their health to those persons who did respond. The magnitude of the bias depends on the extent of the differences and the level of non-response.

The 2007–08 NHS achieved an overall response rate of 91% (fully responding households, after sample loss). Data to accurately quantify the nature and extent of the differences in health characteristics between respondents in the survey and non-respondents are not available. Under or over-representation of particular

Non-response bias continued

demographic groups in the sample are compensated for at the State, section of State, sex and age group levels in the weighting process. Other disparities are not adjusted for.

Households with incomplete interviews were treated as fully responding for estimation purposes where the only questions that were not answered were legitimate 'don't know' or refusal options, or any or all questions on income, or where weight and height (measured and self-reported) were not obtained. These non-response items were coded to 'not stated'. If any other questions were not answered, in any interview, households were treated as if they had been non-responding; i.e. as if no responses to the questionnaire(s) had been obtained.

Processing Errors

Processing errors may occur at any stage between the initial collection of the data and the final compilation of statistics. These may be due to a failure of computer editing programs to detect errors in the data, or may occur during the manipulation of raw data to produce the final survey data files; for example, in the course of deriving new data items from raw survey data, or during the estimation procedures or weighting of the data file.

To minimise the likelihood of these errors occurring, a number of quality assurance processes were employed, including:

- comprehensive quality assurance procedures, applied to the coding of conditions, medications and alcohol data. An automated coding system was used, complemented by manual coding of medications unable to be recognised by the automated coding system;
- computer editing. Edits were devised to ensure that logical sequences were followed in the questionnaires, that necessary items were present, and that specific values lay within certain ranges. These edits were designed to detect reporting and recording errors, incorrect relationships between data items, and missing data items;
- data file checks. At various stages during processing (such as after computer editing and subsequent amendments, weighting of the file, and derivation of new data items), frequency counts and/or tabulations were obtained from the data file showing the distribution of persons for different characteristics. These were used as checks on the contents of the data file, to identify unusual values which might have significantly affected estimates, and illogical relationships not previously identified by edits. Further checks were conducted to ensure consistency between related data items, and between relevant populations; and
- comparison of data. Where possible, checks of the data were undertaken to ensure consistency of the survey outputs against results of previous NHSs and data available from other sources.

Other factors affecting estimates

In addition to data quality issues, there are a number of both general and topic-specific factors which should be considered in interpreting the results of this survey. The general factors affect all estimates obtained, but may affect topics to a greater or lesser degree depending on the nature of the topic and the uses to which the estimates are put. This section outlines these general factors. Additional issues relating to the interpretation of individual topics are discussed in the topic descriptions provided in other sections of this User's Guide.

Other factors affecting estimates continued

SCOPE

The scope of the survey defines the boundaries of the population to which the estimates relate. The most important aspect of the survey scope affecting the interpretation of estimates from this survey is that institutionalised persons (including inpatients of hospitals, nursing homes and other health institutions) and other persons resident in non-private dwellings (e.g. hotels, motels, boarding houses) were excluded from the survey.

PERSONAL INTERVIEW AND SELF-ASSESSMENT NATURE OF THE SURVEY

The survey was designed using personal or proxy interviews to obtain data on respondents' own perceptions of their state of health, their use of health services and aspects of their lifestyle. The information obtained is therefore not necessarily based on any professional opinion (e.g. from a doctor, nurse, dentist, etc.) or on information available from records kept by respondents. For this reason, data from this survey are not necessarily compatible with data from other sources or collected by other methods.

CONCEPTS AND DEFINITIONS

The scope of each topic and the concepts and definitions associated with individual pieces of information should be considered when interpreting survey results. This information is available for individual topics in Chapters 3, 4 and 5 of this User's Guide.

WORDING OF QUESTIONS

To enable accurate interpretation of survey results it is essential to bear in mind the precise wording of questions used to collect individual items of data, particularly in those cases where the question involved 'running prompts' (where the interviewer reads from a list until the respondent makes a choice), or where a prompt card was used.

Testing has shown that reporting of medical conditions is improved where direct questions are asked about a specific condition, or where conditions are specifically identified in a prompt card; and that data is less robust where it is up to the respondent to identify conditions in response to a general question. It is not possible or practical to mention all conditions in questions or prompts, therefore the approach taken in the survey was to identify National Health Priority Area (NHPA) conditions, and some other conditions of particular interest or known from previous surveys to require special attention. As some conditions are specifically identified in the questionnaire and others are not, response levels and accuracy of condition reporting may be affected. Where the level and nature of condition identification has changed between surveys, comparability over time may be affected.

REFERENCE PERIODS

All results should be considered within the context of the time references that apply to the various topics. Different reference periods were used for specific topics (e.g. 'in the last week' for alcohol consumption, 'in the last week and last two weeks' for exercise, 'ever' and 'in the last 12 months' for actions taken).

Other factors affecting estimates continued

REFERENCE PERIODS *continued*

Although it can be expected that a larger section of the population would have reported taking a certain action if a longer reference period had been used, the increase is not proportionate to the increase in time. This should be taken into consideration when comparing results from this survey to data from other sources where the data relates to different reference periods.

CLASSIFICATIONS AND CATEGORIES

The classifications and categories used in the survey provide an indication of the level of detail available in survey output. However, the ability of respondents to provide the data may limit the amount of detail that can be output. Where respondents may have used non-medical terminology, symptoms rather than conditions, or generic rather than specific terminology, conditions may only be able to be output in general terms (e.g. 'heart condition nfd' rather than 'Angina' or 'Atrial fibrillation'). Categories used in the survey are available in the data item list which can be downloaded from the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey: Data Reference Package (cat. no. 4363.0.55.002). Classifications used in the survey can be found in Appendix 4: ABS Standard Classifications.

COLLECTION PERIOD

The NHS 2007–08 was enumerated from August 2007 to June 2008. When considering survey results over time or comparing them with data from another source, care must be taken to ensure that any differences between the collection periods take into consideration the possible effect of those differences on the data, for example, seasonal differences and effects of holidays.

INTERPRETATION OF RESULTS

As noted above, a range of factors have impacted on the quality of the data collected. The ABS has sought to minimise the effects of these factors through various means in the development and conduct of this survey, however, only sampling error can be quantified to allow users of the data to adjust for possible errors when using/interpreting the data. Information is not available from the survey to enable the effects of other issues affecting the data to be quantified. The relative importance of these factors will differ between topics, between items within topics, and by characteristics of respondents.

Comments have been included in individual topic descriptions in this publication to alert users of the data to the more significant issues likely to affect results for that topic, or items within it. These notes reflect ABS experience of past health and other surveys, feedback from users of data from those surveys, and ABS and other research on survey methods and response patterns, as well as information from survey testing and validation. However, they are indicative only, and do not necessarily reflect all factors impacting results, nor the relative importance of those factors.

Against this background, the following general comments are provided about interpreting data from the survey:

INTERPRETATION OF RESULTS *continued*

- The survey aims to provide statistics which represent the population or component groups of the population. It does not aim to provide data for analysis at the individual level. While errors of the types noted above may occur in individual respondent records, they will have little impact on survey estimates unless they are repeated commonly throughout the respondent population.
- The survey data are mainly self-reported and may differ from data sources that have different collection methodologies (e.g. administrative data), however, the NHS is able to provide dimensions of the data (e.g. population group, related health characteristics, uses of other health services) and cross-classifications (e.g. self-assessed health by alcohol risk level) which are not available from administrative sources.
- Some survey topics, such as alcohol consumption, have some known data quality issues. While this means the data should be interpreted with care, the information is still considered valuable for certain uses. For example, while the overall levels of alcohol consumption described by the survey should be interpreted with caution, the data is still considered useful in describing consumption patterns across days of the week, types of drink consumed, relative levels of consumption across population groups, and alcohol consumption in relation to other risk behaviours or characteristics. It is also useful for monitoring changes in the levels and patterns of consumption over time. Notes regarding any known data quality issues are contained in the individual topic descriptions in this User's Guide.
- Although various reference periods are used throughout the survey for different topics (e.g. current, usual, last week, last 2 weeks, last 4 weeks) the survey essentially provides a 'point in time' picture of the health of the population and of population sub-groups. That is, the survey provides information about the prevalence of characteristics, not the incidence of those characteristics or of changes in characteristics (except in terms of differences between surveys). As the survey was conducted over a 10 month period, the results are essentially an average over that period, that is, representative of a typical week, fortnight, etc in that period.

Comparability with 2004–05

Understanding the comparability of data from the 2007–08 NHS with data from previous NHSs is important to the use of those data and interpretation of apparent changes in health characteristics over time. While the 2007–08 NHS is deliberately the same or similar in many ways to the 2004–05 and 2001 NHS (and in part to the 1995 NHS), there are important differences in sample design and coverage, survey methodology and content, definitions and classifications between the surveys. These differences will affect the degree to which data are directly comparable between the surveys, and hence the interpretation of apparent changes in health characteristics over the 2004–05 to 2007–08 period.

Throughout the topic descriptions and in other parts of this publication, comments have been made about the changes between surveys and their expected impact on the comparability of data. These are general comments based on results of testing, ABS experience in survey development, and preliminary examination of data from the 2007–08 survey. They should not, therefore, be regarded as definitive statements on comparability, and they may omit the types of findings which might result from a detailed analysis of the effects of all changes made.

*Comparability with
2004–05 continued*

The following table summarises key differences in the general survey characteristics of the 2004–05 and 2007–08 surveys:

SURVEY CHARACTERISTICS

	2007–08 NHS	2004–05 NHS
Collection method	Personal interview with adult respondents; proxy interview for children less than 15 years	Personal interview with adult respondents; proxy interview for children less than 15 years
Questionnaires	Personal interview with children aged 15–17 years unless parents ask to be proxy. Single CAI instrument, incorporating household, adult and child components	Personal interview with children aged 15–17 years with parental consent; otherwise interview by proxy Single CAI instrument; incorporating household, adult and child components
Sample coverage	Private dwellings only Urban and rural areas All States and Territories(a)	Private dwellings only Urban and rural areas All States and Territories; additional sample in SA, Tas and ACT(a)
Sample design/size	One child aged 0–17 years, one adult per dwelling Fully responding households = 15792 Final sample = 5009 children, 15779 adults, 20788 persons	One child aged 0–17 years, one adult per dwelling Fully responding households = 19501 Final sample = 6405 children, 19501 adults, 25906 persons
Enumeration period	August 2007 to June 2008	August 2004 to June 2005
Collection methodology	CAI questionnaire Automated coding, supported by manual and CAC systems	CAI questionnaire Automated coding, supported by manual and CAC systems
Main output units	Person	Person

(a) The NT sample was reduced such that it contributes appropriately to national estimates, but is not large enough to support most estimates for the NT

Sample design/size

The overall sample of households was about 19% lower in 2007–08 than in 2004–05, with a similar proportion of people in each household enumerated (1.3 persons per hhd). This resulted in the total sample of persons in the 2007–08 survey being below that of 2004–05. The impact of the lower sample size on the RSEs of the NHS 2007-08 estimates, however, was significantly offset by design changes in 2007-08. Taking advantage of synergies in the reference period and sample sizes of the NHS 2007-08 survey and the Survey of Income and Housing 2007-08, the field operations of these two surveys were combined. This allowed the NHS 2007-08 sample to be collected from approximately twice as many geographic locations as previous cycles, which significantly lowered the effect of cluster sampling on the RSEs of the estimates. The RSEs for the two 2004-05 and 2007-08 NHS surveys are therefore reasonably comparable, despite the difference in sample sizes.

Differences in the reliability of estimates between surveys should be considered in interpreting apparent changes between the surveys. It is recommended that apparent changes are significance tested to ensure that changes are not simply the product of different sample size and design (see 'Testing for statistically significant differences', in the Data Quality section of this chapter).

*Sample design/size
continued*

Through the weighting process, survey estimates at the state by part of state by sex by broad age group will be the same or very similar to the benchmark populations. However, because the characteristics of the sample are not identical to those of the benchmark population, some records will receive higher or lower weights than others. As this will vary between surveys, it is a factor to consider in comparing 2004–05 with 2007–08 data, but the impact on comparability is expected to be small. Sample and population figures for the two surveys appear in the following table:

<i>Sex /age (years)</i>	<u>2007–08 NHS(a)</u>		<u>2004–05 NHS(b)</u>	
	% of adults in sample	% of adults in pop'n	% of adults in sample	% of adults in pop'n
Males	47.1	49.3	45.6	49.2
Females	59.2	50.7	54.4	50.8
18–24	8.6	12.7	9.3	12.7
25–34	16.9	18.3	17.3	18.8
35–44	20.4	19.3	20.6	19.8
45–54	18.0	18.3	18.0	18.3
55–64	15.9	14.9	15.1	14.2
65–74	10.8	9.2	10.6	9.0
75 and over	9.3	7.3	9.2	7.3
Persons	100.0	100.0	100.0	100.0

- (a) Benchmark population as at 31 December 2007
- (b) Benchmark population as at 31 December 2004

*Partial enumeration of
households*

Prior to 2001, all persons in sampled dwellings were included in NHSs, and only records from fully responding households were retained on the data file. This meant that results could be compiled at household, family and income unit level, in addition to person level. The 2001, 2004–05 and 2007–08 surveys, however, sub-sampled persons in households (one adult and one child 0–17 years), therefore complete enumeration occurs only in a minority of households, and by definition, only in single adult households.

As basic demographic characteristics, and some other items (e.g. number of daily smokers in household) were collected from the selected adult about all household members, some household, family and income unit characteristics of the respondent are available as person level items. This information enables a greater degree of analysis in relation to the person and the household; for example; number of children aged 0–14 in households containing smokers. This level of information is only available for persons enumerated in the survey, not all people in the household. No data at the household, family or income unit level is available.

Enumeration period

The 2007–08 and 2004–05 NHSs were enumerated over a ten and eleven month period respectively: 2007–08 from August to June; and 2004–05 from August to July, therefore some winter weeks were not enumerated. Research using data from previous NHSs shows minimal seasonal effects on the data for most survey topics, however, statistically significant seasonal differences were found for some items in the alcohol consumption, visits to other health professionals and exercise topics. The effect of the missed enumeration months compared to a full 12 month period has been included in the

*Enumeration period
continued*

uncertainty of the estimates. As discussed in Chapter 2: Survey Design and Operation, the sample weights from each sub-period of a calendar quarter have included an adjustment to ensure each sub-period does represent the population for the full quarter. With enumeration from only two winter months, the final weights then accurately reflect the higher uncertainty in estimates for this period compared to other quarters. The RSEs in the yearly estimates, which are the sum of the quarterly estimates, also then include the higher uncertainty in the estimates for the winter months.

*Comparability of long term
conditions data with
2004–05*

There are a number of issues affecting comparability of data for long-term medical conditions between the 2004–05 and 2007–08 surveys, including:

- the methodology used in the questionnaire to elicit responses;
- the ways in which responses were recorded; and
- the ways in which they were turned into coded information for the survey data file.

These issues are discussed in general terms below. Further discussion of issues related to particular conditions is contained in the relevant condition sections of this Users' Guide, and a general discussion of the methodologies used for collecting data on medical conditions is included at the beginning of Chapter 3: Health status indicators.

METHODOLOGICAL ISSUES

The question methodology for long-term conditions in 2007–08 was similar to that of 2004–05: a combination of direct questions, general questions supported by prompt cards (either showing examples of conditions, or a list of conditions from which respondents are asked to select), and open ended questions. Differences between the two surveys are outlined below:

- In the 2007–08 survey, the derivation of current asthma changed so that the respondent must have had symptoms of asthma or taken treatment for asthma in the last 12 months, rather than as assessed by the respondent. This has decreased the prevalence of asthma over all age groups.
- Although heart failure, heart attack, stroke, angina and rheumatic heart disease may have been reported as not current by the respondent, they are treated as being a current condition. This has increased the prevalence of these conditions.
- Depression was added to the prompt card for other long term conditions. This is likely to have increased the prevalence of depression.
- The population answering questions about osteoporosis/osteopenia is restricted to those aged 15 years and over plus any children aged less than 15 years who currently had arthritis, gout or rheumatism. This has a negligible affect on the data.
- Actions taken for arthritis and osteoporosis/osteopenia were asked as one question in 2007–08, whereas they were asked separately in 2004–05. Where respondents have both arthritis and osteoporosis, the condition for which a particular action was taken cannot be identified in 2007–08.

A further factor which may affect comparability is that the reported prevalence of illness is complex and dynamic, and is a function of respondent knowledge and attitudes, which in turn may be affected by the availability of health services and health information, public education and awareness, accessibility to self-help, etc. For example, a public education program has been running in Australia over a number of years aimed to raise public awareness and public acceptance of mental health disorders. Consequently,

Comparability of long term conditions data with 2004–05 continued

METHODOLOGICAL ISSUES *continued*

respondents may be more willing to talk about or report feelings of anxiety or depression than in previous years.

RECORDING OF CONDITION DETAILS

Provision made to record conditions information (a combination of selected categories and text responses) was similar in the 2004–05 and 2007–08 surveys. Interviewers were encouraged in both surveys to add supplementary information if they felt this would help clarify responses or assist with coding.

CODING CONDITIONS DATA

The classification of medical conditions and the supporting coding index introduced in the 2004–05 NHS was used largely unchanged in 2007–08. For both surveys, conditions (and medications and alcohol) data were coded progressively throughout the enumeration period by a group of coders employed and trained specifically to undertake this coding. This coding was subject to rigorous quality assurance procedures.

In 2004–05, survey coding was initially performed manually, supported by a computer assisted coding (CAC) system, and coded values were included on computer survey records via a separate data entry process. From February 2005 an automated coding system was introduced, which automatically assigned a code, and added it to the computer record from the survey. Cases which could not be coded by the auto-coding system were manually coded using the CAC system. The auto-coding system, which coded on the basis of an 'exact match' with the coding index, was successful in coding 29% of coding instances in the period of its operation.

In the 2007–08 survey the automated coding system was in place and used throughout the entire survey process. Auto-coding was effective in 20% of coding instances, and the remaining coding was done manually using the CAC system. Specific coders were employed for quality and consistency.

The coding processes and systems were designed to ensure the codes assigned were as specific and accurate as possible. Thorough testing of the auto-coding system prior to its introduction ensured it met or surpassed manual coding quality levels. Although auto-coding could be expected to ensure greater consistency in the coding process, the nature of the coding processes used is considered to have minimal impact on the comparability of data between the surveys.

Survey content

The following tables summarise the main differences in content between the 2007–08 and 2004–05 surveys:

CHAPTER 7 DATA QUALITY AND INTERPRETATION OF RESULTS *continued*

SURVEY CONTENT POPULATION CHARACTERISTICS

<i>Topics covered</i>	<i>2004-05 NHS</i>	<i>2007-08 NHS</i>	<i>Main items available from 2007-08</i>	<i>Comments on main differences between 2004-05 and 2007-08</i>
General demographics	X	X	Sex; age; marital status (registered & social); Indigenous status; country of birth; year of arrival in Australia; main language spoken at home; proficiency in English; family type; household size, composition, type; Income unit type; Location.	Same content in 2007-08 as in 2004-05.
Education	X	X	Whether attending school; highest year of school completed; whether has non-school qualification; level of highest educational attainment; level of highest non-school qualification; whether currently studying full or part time; field of study of qualification obtained.	Same content in 2007-08 as in 2004-05.
Labour force	X	X	Labour force status; status in employment; occupation, industry and industry sector of main job; hours worked; duration of unemployment; shift work.	Same content in 2007-08 as in 2004-05.
Income	X	X	Personal income - Level; equivalised sources and main source; type of pension/benefit received; Household income level, equivalised	Similar content in 2007-08 as in 2004-05, excluding income unit level items in 2007-08. Hhld income collected using different methodology - 2007-08 personal income for adults only collected for 18+, 2004-05 was collected for 15+.
Housing	X	X	Dwelling type; number of bedrooms; household tenure; landlord type.	Hhd content in 2007-08 as in 2004-05. Personal tenure not collected in 2007-08.
Private health insurance/health cards	X	X	Whether has PHI; type of cover; time covered by PHI; reasons having/not having PHI; duration with PHI; Whether has DVA or other Govt concession card: type of card.	Same content in 2007-08 as in 2004-05.

CHAPTER 7 DATA QUALITY AND INTERPRETATION OF RESULTS *continued*

SURVEY CONTENT HEALTH STATUS INDICATORS

<i>Topics covered</i>	<i>2004-05 NHS</i>	<i>2007-08 NHS</i>	<i>Main items available from 2007-08</i>	<i>Comments on main differences between 2004-05 and 2007-08</i>
Arthritis and Osteoporosis	X	X	Type of arthritis; age first told arthritis; types of specific vitamins/minerals or herbal remedies taken for arthritis and osteoporosis; types of other specific actions taken for arthritis and osteoporosis; types of medications used in last 2 weeks; visits to health professionals; bone density checked.	Similar content in 2007-08 to 2004-05. Osteoporosis population changed to 15+ with gout, rheumatism or arthritis. Bone density checked. Visits to health professionals for all persons. Actions taken for arthritis and osteoporosis not separately available for 2007-08.
Asthma	X	X	Whether asthma worse or out of control; whether attended emergency; whether has written asthma action plan; types of medication used in last 2 weeks; visits to health professionals; and whether discussed self management.	Similar content in 2007-08 to 2004-05. New items: whether worse or out of control; whether attended emergency. New derivation for current long-term asthma. Visits to health professionals for all persons. Whether discussed self management.
Cancer	X	X	Cancer status; type of cancer; visits to health professionals.	Similar content in 2007-08 to 2004-05. Possible to identify priority cancer types.
Cause of reported long-term conditions	X	X	Whether condition result of an injury; where injury occurred; age injury occurred.	Similar content in 2007-08 to 2004-05. Some questions not asked in 2007-08; 'where injury occurred' questions combined into one question for 2007-08.
Circulatory conditions	X	X	Types of condition; blood pressure taken and by whom; cholesterol/blood pressure checks in last 12 months and 5 years; whether aspirin taken; if advised by doctor to take aspirin; type of medications used in last 2 weeks. Visits to GPs, specialists, other health professionals. Whether discussed self management.	Similar content in 2007-08 to 2004-05. New items: blood pressure taken in last 12mths and by whom; cholesterol checks in last 12 mths and 5 yrs; whether aspirin taken; whether advised by GP to take aspirin; visits to health profs for all persons; and whether discussed self-management. Derivations for heart attack, heart failure, stroke, rheumatic heart disease and angina changed so condition always current and long-term in 2007-08.
Diabetes/ high sugar levels	X	X	Types of diabetes; types of meds used in last 2 weeks; type of other actions taken to manage condition; whether screened for diabetes in the last 3 years; age first told; whether condition interferes with usual activity; whether has diabetes-related sight problems; period since last visited optometrist/eye specialist; whether discussed self-management.	Similar content in 2007-08 to 2004-05. New items: Whether screened for diabetes in last 3 years. Visits to health professionals for all persons. Whether discussed self-management.
Disability		X	Disability status; type of disability; main type of disability.	New module in 2007-08
Other long-term conditions	X	X	Types of condition.	Same content in 2007-08 as 2004-05.
Mental health condition	X	X	Type of condition; health consults and frequencies of consults for GP; Psychiatrist, OHP, age first told, brand of medication taken in last 2 weeks; type of medication taken in the last 2 weeks; how long taken medication; how often taken medication	Similar content in 2007-08 to 2004-05. New items: health consults and freq for GP, Psychiatrist, OHP; age first told; brand of meds taken in last 2 weeks; type of meds taken in the last 2 weeks; how long and how often taken medication. Some new items included on prompt card which may change prevalence.
Mental wellbeing	X	X	Psychological distress (K10); reported types of medication used in last 2 weeks; frequency and duration of use.	Same content in 2007-08 as 2004-05.
Bodily pain		X	Bodily pain in last 4 weeks; whether interfered with work.	New module in 2007-08
Self assessed health	X	X	SF1 - Rate health	Same content in 2007-08 as 2004-05.
Status of condition	X	X	Status for each condition reported	Same content in 2007-08 as 2004-05.
Health transitions	X		Not collected in 2007-08	
Recent injuries	X		Not collected in 2007-08	
Quality of life	X		Not collected in 2007-08	

CHAPTER 7 DATA QUALITY AND INTERPRETATION OF RESULTS *continued*

SURVEY CONTENT - HEALTH-RELATED ACTIONS

<i>Topics covered</i>	<i>2004-05 NHS</i>	<i>2007-08 NHS</i>	<i>Main items available from 2007-08</i>	<i>Comments on main differences between 2004-05 and 2007-08</i>
Doctor consultations	X	X	Collected within each NHPA module regarding specific NHPA condition - how often consulted GP/Specialist/OHP. All persons - frequency of check-ups; whether seen specialist in last 12 months; whether discussed lifestyle issues with GP in last 12 months.	New collection method in 2007-08 - GP/Specialist visits collected within each NHPA module regarding specific NHPA condition. New questions and timeframes for all other consultation questions. Not comparable to 2004-05.
Consultations with other health professionals	X	X	Collected within each NHPA regarding specific NHPA condition - whether discussed specific condition with OHP in last 12 months. All persons - whether consulted OHP in last 12 months; whether discussed lifestyle issues with OHP in last 12 months; type of OHP.	New collection method in 2007-08 - OHP visits collected within each NHPA module regarding specific NHPA condition. New questions and timeframes for all other consultation questions. Not comparable with 2004-05.
Days away from work/study/school: own illness	X	X	Collected within each NHPA regarding specific NHPA condition. Whether had days away in last 12 months due to own specific NHPA condition; number of days.	New collection method in 2007-08 from 2004-05. Not comparable to 2004-05.
Healthy lifestyle	X	X	Whether have check ups with GP, frequency of check-ups; whether discussed health lifestyle issues with GP in the last 12 months; whether discussed health lifestyle issues with OHP (inc specialist) in last 12 months; which OHP discussed health lifestyle issues with.	New collection method in 2007-08 from 2004-05. Collected as a stand alone module, mostly not comparable to 2004-05.
Use of medications (incl vitamins, minerals, natural and herbal medicines).	X	X	Collected within each NHPA regarding specific NHPA condition.	Collection method the same as in 2004-05. In addition to medication taken for mental wellbeing, medication for mental health also collected in 2007-08. Whether used aspirin daily for heart or circulatory condition, and whether that was done on the advice of a doctor also collected in 2007-08.
Stays in hospital or emergency department	X	X	Number of times asthma got worse and went to hospital in last 12 months	Only item collected in 2007-08. Not comparable to 2004-05.
Days away from work/school as carer	X		Not collected in 2007-08	
Dental consultations	X		Not collected in 2007-08	
Other days of reduced activity	X		Not collected in 2007-08	
Visits to casualty, outpatients, day clinics	X		Not collected in 2007-08	

SURVEY CONTENT, HEALTH RISK BEHAVIOURS

<i>Topics covered</i>	<i>2004-05 NHS</i>	<i>2007-08 NHS</i>	<i>Main items available from 2007-08</i>	<i>Comments on main differences between 2004-05 and 2007-08</i>
Alcohol consumption	X	X	Period since last drank; days consumed alcohol in last week; quantity of alcohol by type of drink consumed in last week (max 3 days); alcohol risk level; graduated frequency; how consumption changed since this time last year.	Same content in 2007-08 as 2004-05, with additional population of persons aged 15 to 17 years. New item: How consumption changed since this time last year.
Body mass	X	X	Self-reported height, weight and body mass; body mass index; measured height, weight, waist and hip measurements; and waist/hip ratio.	Same content in 2007-08 as 2004-05, plus measured height, weight and hip and waist measurements for persons aged 5 years and over.
Dietary habits	X	X	Type of milk usually consumed; usual daily intake of vegetables & fruit; fat content of milk.	Similar content to 2007-08 as 2004-05, with new item on fat content of milk, but food security items not collected. Additional population 5 years and over.
Exercise	X	X	Type, frequency and duration of exercise in last 2 weeks and in the last week; exercise level; whether walked for transport; number of times walked and total duration; time spent sitting at work and home.	Same content in 2007-08 as 2004-05, with new items on exercise in the past week and time spent sitting at work and home.
Smoking	X	X	Smoker status; number of smokers in household, age started/stopped smoking regularly.	Same content in 2004-05 as 2004-05. Includes additional population of persons aged 15-17 years.
Sun protection	X	—	Not collected in 2007-08	0
Adult immunisation	X	—	Not collected in 2007-08	0
Breastfeeding	X	—	Not collected in 2007-08	0
Children's immunisation	X	—	Not collected in 2007-08	0
Contraception/protection	X	—	Not collected in 2007-08	0

— nil or rounded to zero (including null cells)

CHAPTER 8 DATA OUTPUT AND DISSEMINATION

CONTENTS

Data availability

Publications

Access to microdata

Special data services

Other health and related publications

DATA AVAILABILITY

Results from the 2007–08 NHS are available in:

- publications and other releases of sets of standard tables;
- unidentifiable unit records; and
- tables produced on request to meet specific information requirements from the survey.

This section outlines the products and services currently available and those expected to be available over the coming months. The program of publications has not been finalised.

PUBLICATIONS

Selected results of the 2007–08 NHS are contained in National Health Survey: Summary of Results, Australia 2007–08 (Reissue) (cat. no. 4364.0), released in May 2009 and reissued in August 2009.

This publication contains summary level statistics for most topics covered in the 2007–08 NHS. The publication primarily presents national results, and some tables contain results from previous National Health Surveys for comparative purposes.

Sets of tables for individual states and the ACT are also available in National Health Survey: Summary of Results; State Tables, 2007–08 (Reissue) (cat. no. 4362.0).

Results from the survey will also be released in a variety of other publications including:

- various compendium style publications such as Australian Social Trends (cat. no. 4102.0);
- a series of thematic publications focusing on particular topics or topic areas covered by the survey. A program and timetable for these releases had not been finalised at the time this Guide was prepared; and
- a series of smaller web-based reports focusing on particular health issues. A program and timetable for these releases has not been finalised.

ACCESS TO MICRODATA

The ABS is required by legislation not to release information in a manner that is likely to enable the identification of a particular person or organisation. To meet this requirement in releasing microdata, the ABS aims to protect against two main types of risk; spontaneous recognition, and matching against other data sources. In order to ensure the confidentiality of respondents, the ABS usually removes some items from the microdata it makes available, and reduces the level of detail shown for some other items. However, in this process, the ABS is conscious of the need to find an appropriate balance between ensuring confidentiality while maximising the usefulness of the data set to users of the data.

To assist with finding this balance, approved users of the data can be granted remote access to confidentialised data files via the Remote Access Data Laboratory (RADL) which enables greater security around access to, and use of, the file, and effectively removes the risk of matching to other data sources.

Two confidentialised unit record files will be released from the 2007–08 NHS; a Basic file available on CD ROM and through the RADL, and an Expanded file available through RADL only. The extra protections around the data provided by the RADL enable more information to be released on the Expanded CURF than on the Basic CURF.

It is expected these data files will be available from September 2009.

CHAPTER 8 DATA OUTPUT AND DISSEMINATION *continued*

ACCESS TO MICRODATA

continued

A full list of the data items available in both files is contained in the Information Paper: National Health Survey, 2007–08: Confidentialised Unit Record File (cat. no. 4324.0.55.001), which can be viewed from the ABS web site from September 2009.

Release of all confidentialised unit record information is subject to the approval of the Australian Statistician, and is contingent upon users of the file agreeing in writing to abide by the legislative restrictions on use and such other conditions of sale as may be determined by the Australian Statistician. These include use of the data for statistical purposes only, not attempting to identify particular persons or organisations and not attempting to match the information with any other unit level list of persons or organisations. Full details of the conditions of sale and use, together with application and undertaking forms, are available from the CURF Microdata page on the ABS Website.

SPECIAL DATA SERVICES

In addition to the products outlined above, a range of special data services are available on request, on a fee for service basis. Subject to sampling and confidentiality constraints, tables can be compiled to individual specifications, and other data and analytical services are available. For people wishing to request special tables, a list of all output data items are available from the Downloads tabs of the National Health Survey: Users' Guide, 2007–08 (cat. no. 4363.0.55.001) and the National Health Survey: Data Reference Package, 2007–08 (cat.no. 4363.0.55.002). For further information, please contact the National Information and Referral Service 1300 135 070.

OTHER HEALTH AND RELATED PUBLICATIONS

Other ABS publications which may be of interest are available at the Health theme page on the ABS web site (www.abs.gov.au).

National Health Survey:

- National Health Survey, Summary of Results, Australia, 2004–05, 2001 and 1995 (cat. no. 4364.0);
- National Health Survey, Summary of Results, State Tables, 2004–05 (cat. no. 4362.0);
- National Health Survey, Users' Guide, 2004–05 and 2001 (cat. no. 4363.0.55.001) and 1995 (cat. no. 4363.0);
- National Health Survey and National Aboriginal and Torres Strait Islander Health Survey 2004/05: Data Reference Package, 2004–05 (cat. no. 4363.0.55.002);
- National Health Survey: Confidentialised Unit Record Files, Basic and Expanded (back to 1977–78) (cat. no. 4324.0.55.001); and
- Information Paper: National Health Survey – Confidentialised Unit Record Files, 2001 and 2004–05 (cat. no. 4324.0).

Other releases from the 2004–05 National Health Survey:

- Asthma in Australia: A Snapshot, 2004–05 (cat. no. 4819.0.55.001);
- Cancer in Australia: A Snapshot, 2004–05 (cat. no. 4822.0.55.001);
- Cardiovascular Disease in Australia: A Snapshot, 2004–05 (cat. no. 4821.0.55.001);
- Diabetes in Australia: A Snapshot, 2004–05 (cat. no. 4820.0.55.001);
- Injury in Australia: A Snapshot, 2004–05 (cat. no. 4825.0.55.001);
- Musculoskeletal Conditions in Australia, A Snapshot, 2004–05 (cat. no. 4823.0.55.001);
- Overweight and Obesity in Adults Australia, 2004–05 (cat. no. 4719.0);
- Alcohol Consumption in Australia, A Snapshot, 2004–05 (cat. no. 4832.0.55.001);
- Tobacco Smoking in Australia, A Snapshot, 2004–05 (cat. no. 4831.0.55.001);

OTHER HEALTH AND RELATED PUBLICATIONS *continued*

- Physical Activity in Australia, A Snapshot, 2004–05 (cat. no. 4835.0.55.001);
- Health of Children in Australia, A Snapshot, 2004–05 (cat. no. 4829.0.55.001);
- Health of Older People in Australia, A Snapshot, 2004–05 (cat. no. 4833.0.55.001);
- Health of Mature Age Workers in Australia, A Snapshot, 2004–05 (cat. no. 4837.0.55.001);
- Self-Assessed Health in Australia, A Snapshot, 2004–05 (cat. no. 4828.0.55.001);
- Mental Health in Australia, A Snapshot, 2004–05 (cat. no. 4824.0.55.001);
- Changes in health, A Snapshot, 2004–05 (cat. no. 4834.0.55.001);
- Selected Health Occupations: Australia, 2006 (cat. no. 4819.0);
- Household Expenditure on health, A Snapshot, 2004–05 (cat. no. 4836.0.55.001);
and
- Private Health Insurance, A Snapshot, 2004–05 (cat. no. 4815.0.55.001).

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- Occasional Paper: Vaccination Coverage in Australian Children, 2001 (cat. no. 4813.0.55.001);
- Occasional Paper: Measuring Dietary Habits in the 2001 NHS (cat. no. 4814.0.55.001); and
- Breastfeeding in Australia, 2001 (cat. no. 4810.0.55.001).

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- National Aboriginal and Torres Strait Islander Health Survey, 2004–05 (cat. no. 4715.0);
- National Aboriginal and Torres Strait Islander Health Survey, 2004–05, Expanded CURF (cat. no. 4715.0.55.001); and
- The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples, 2008 (cat. no. 4704.0).

Other publications and sites of interest:

- Occasional Paper: Long-term Health Conditions – a Guide to Time Series Comparability from the NHS 2001 (cat. no. 4816.0.55.001);
- Occasional Paper: Health Risk Factors – a Guide to Time Series Comparability from the NHS 2004 (cat. no. 4826.0.55.001);
- National Survey of Mental health and Wellbeing: A Summary of Results, 2007 (cat. no. 4326.0);
- Disability, Ageing and Carers, Australia: Summary of Findings, 2003 (cat. no. 4430.0);
- Sports and Physical Recreation: A Statistical Overview, Australia, 2008 (Edition 2) (cat. no. 4156.0);
- Private Hospitals, Australia, 2006–07 (cat. no. 4390.0);
- Information Paper: External Causes of Death, Data Quality, 2005 (cat. no. 3317.0.55.001);
- How Australians Measure Up, 1995 (cat. no. 4359.0)
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- National Health Survey: SF36 Population Norms, Australia, 1995 (cat. no. 4399.0).

APPENDIX 1 SAMPLE COUNTS AND ESTIMATES

NHS SAMPLE COUNTS AND WEIGHTED ESTIMATES, Age by sex by ASGC remoteness groups

Age group (years)	PERSONS IN SAMPLE			WEIGHTED ESTIMATE ('000)		
	Males	Females	Persons	Males	Females	Persons

MAJOR CITIES OF AUSTRALIA

0-17	1 637	1 675	3 312	1 598	1 550	3 148
18-64	4 076	4 438	8 514	4 453	4 441	8 894
65 and over	774	1 110	1 884	722	871	1 593
Total	6 487	7 223	13 710	6 773	6 862	13 635

INNER REGIONAL AUSTRALIA

0-17	511	522	1 033	576	547	1 122
18-64	1 211	1 287	2 498	1 340	1 406	2 747
65 and over	371	487	858	338	390	727
Total	2 093	2 296	4 389	2 254	2 343	4 596

REMAINDER

0-17	320	344	664	317	305	622
18-64	808	784	1 592	768	741	1 509
65 and over	198	235	433	150	131	281
Total	1 326	1 363	2 689	1 235	1 177	2 412

NHS SAMPLE COUNTS AND WEIGHTED ESTIMATES, Age by sex, Australia

Age Group (years)	PERSONS IN SAMPLE			WEIGHTED ESTIMATE ('000)		
	Males	Females	Persons	Males	Females	Persons
0-4	752	751	1 503	688.9	650.1	1 339.0
5-9	612	613	1 225	681.3	625.3	1 306.6
10-14	648	670	1 318	703.4	693.5	1 396.9
15-19	640	691	1 331	717.3	685.0	1 402.3
20-24	500	495	995	717.8	730.6	1 448.4
25-29	600	656	1 256	734.1	703.0	1 437.1
30-34	624	786	1 410	713.0	726.5	1 439.5
35-39	790	884	1 674	744.1	788.9	1 533.0
40-44	763	782	1 545	758.4	754.0	1 512.4
45-49	742	770	1 512	737.3	766.7	1 504.0
50-54	653	681	1 334	684.8	695.6	1 380.4
55-59	616	646	1 262	617.4	632.6	1 250.0
60-64	623	625	1 248	554.1	538.2	1 092.3
65-69	461	512	973	398.3	408.1	806.4
70-74	320	419	739	306.8	330.4	637.2
75-79	279	390	669	246.5	281.1	527.6
80-84	189	309	498	183.2	225.7	408.9
85 and over	94	202	296	74.5	146.5	221.0
Total	9 906	10 882	20 788	10 261.4	10 381.8	20 643.1

APPENDIX 1 SAMPLE COUNTS AND ESTIMATES *continued*

NHS SAMPLE COUNTS, Age by States and Territories

	NSW	Vic.	Qld	SA	WA	Tas.	NT(a)	ACT	Aust.
Age group (years)									
0-17	1 006	836	732	708	604	464	37	622	5 009
18-64	2 400	2 057	1 930	1 911	1 513	1 122	91	1 580	12 604
65 and over	626	532	472	552	331	400	9	253	3 175
Total	4 032	3 425	3 134	3 171	2 448	1 986	137	2 455	20 788

(a) This sample is designed to contribute to national estimates only; the sample is insufficient to produce reliable estimates for the NT.

APPENDIX 2 CLASSIFICATION OF MEDICAL CONDITIONS

CLASSIFICATION OF MEDICAL CONDITIONS: BASED ON ICD10 *continued*

<i>LABEL</i>	<i>ABS INPUT CODES</i>
Diseases of the respiratory system	
Chronic lower respiratory diseases	
Bronchitis	583 979
Emphysema	596 981
Asthma	597
Other diseases of the respiratory system	
Hayfever & allergic rhinitis	215 975
Chronic sinusitis	580 976
Other diseases of the respiratory system	120 178 180 568 569 578 579 581 582 584 585 586 587 594 599 897
Symptoms & signs involving the respiratory system	
Symptoms & signs involving the respiratory system	9 37 179 214 558 559 560 561 562 563 564 565 566 567 570 572 576 598
Diseases of the digestive system	
Diseases of the oesophagus, stomach & duodenum	
Diseases of the oesophagus	285
Stomach/duodenal/gastrointestinal ulcer	287 286 990
Other diseases of the oesophagus, stomach & duodenum	129 288
Hernia	
Hernia	291 292 293 984
Other diseases of the intestines	
Irritable bowel syndrome	295
Other diseases of the intestines	98 146 147 152 294 296
Gallstones	
Gallstones	486
Other diseases of the digestive system	
Other diseases of the digestive system	131 132 133 138 148 149 150 155 157 192 193 194 283 284 289 298 299 300 301
Symptoms & signs involving the digestive system	
Symptoms & signs involving the digestive system	96 97 100 101 128 130 145 153 154 195 196 197 198 202 269
Diseases of the skin & subcutaneous tissue	
Diseases of the skin & subcutaneous tissue	
Dermatitis & eczema	99 601 636 637 638 639
Psoriasis	647 989
Other diseases of the skin & subcutaneous tissue	25 68 121 181 183 186 605 606 607 614 615 617 618 626 630 634 635 646 648 649 650 652 653 654 655 656 657 658
Symptoms & signs involving the skin & subcutaneous tissue	174 464 600 603 604 616 622

APPENDIX 2 CLASSIFICATION OF MEDICAL CONDITIONS *continued*

CLASSIFICATION OF MEDICAL CONDITIONS: BASED ON ICD10

LABEL	ABS INPUT CODES
Certain infectious & parasitic diseases	
Tuberculosis	20 992
Viral infections characterised by skin & mucous membrane lesions	21 22 39 49 123 602 623 651 903
Viral hepatitis	271
Other infectious & parasitic diseases	23 24 35 40 48 83 118 151 184 237 265 270 272 282 297 330 492 494 495 496 577 624 625 792 793 794 795 810 811 812 831 832 833 834 835 836 962
Neoplasms	
Malignant neoplasms	
Digestive organs	273 274 275 276 277 589 877 921 927
Respiratory & intrathoracic organs	44 45 350 379 380 588 924
Skin	41 42 43 627 920
Mesothelial & soft tissue	418 993
Breast	798 922
Female genital organs	426 743 797 925
Male genital organs	837 838 923
Other	70 71 72 73 74 85 497 674 676 677 711 712 713 714 926 928 929
Site unknown	26 46 47 930
Benign neoplasms & neoplasms of uncertain nature	
Benign neoplasms & neoplasms of uncertain nature	86 87 278 321 378 456 457 498 499 590 595 628 629 631 632 633 675 678 715 716 744 799 800 801 802 839 876
Diseases of the blood & blood forming organs	
Diseases of the blood & blood forming organs	
Anaemias	76 78 79 80 978
Other diseases of the blood & blood forming organs	64 81 82 84 901
Endocrine, nutritional & metabolic disorders	
Diseases of the thyroid gland	
Disorders of the thyroid gland	673 681 684 685 686 695 991
Diabetes mellitus	
Type 1	688 947
Type 2	689 948
Type unknown	90
Other endocrine, nutritional & metabolic diseases	
High sugar levels in blood/urine	91
High cholesterol	693 942
Other endocrine, nutritional & metabolic diseases	55 92 187 188 189 242 667 682 687 690 691 694 891 950 980
Mental & behavioural problems	
Organic mental problems	
Organic mental problems	538 539
Alcohol & drug problems	
Alcohol & drug problems	526 527 528 529 530
Mood (affective) disorders	
Feeling depressed	515
Other mood (affective) disorders	541 545

APPENDIX 2 CLASSIFICATION OF MEDICAL CONDITIONS *continued*

CLASSIFICATION OF MEDICAL CONDITIONS: BASED ON ICD10 *continued*

LABEL	ABS INPUT CODES
Mental & behavioural problems <i>cont.</i>	
Other mental & behavioural problems	
Anxiety related problems	89 514 542 543 544 547 548 551
Problems of psychological development	534
Behavioural & emotional problems with usual onset in childhood/adolescence	520 521 522 523 524 525 532 533 550 882
Other mental & behavioural problems	264 518 540 549 552 553 554 555 556 557 890 892
Symptoms & signs involving cognition, perceptions, emotional state & behaviour	7 175 176 177 341 487 531 893
Diseases of the nervous system	
Episodic & paroxysmal disorders	
Epilepsy	505 982
Migraine	506 986
Other episodic & paroxysmal disorders	507 512
Other diseases of the nervous system	112 113 461 462 463 468 503 504 508 509 510 511 513 737
Diseases of the eye & adnexa	
Cataract	
Cataract	331 961
Glaucoma	
Glaucoma	332 960
Disorders of the choroid & retina	
Macular degeneration	328
Other disorders of the choroid & retina	326, 327, 645
Disorders of the ocular muscles, binocular movement, accommodation & refraction	
Astigmatism	103 952
Presbyopia	36 954
Short sightedness/myopia	105 879 953
Long sightedness/hyperopia	640 955
Other disorders of the ocular muscles, binocular movement, accommodation & refraction	107 334 880 963
Visual disturbances & blindness	
Complete blindness (one or both eyes)	93 94 956 957
Partial blindness (one or both eyes)	95 102 958 959
Other visual disturbances or loss of vision	305 306 307 315 333 642
Other diseases of the eye & adnexa	
Colour blind	106, 951
Other diseases of the eye & adnexa	119 302 303 304 308 309 310 311 316 317 318 319 320 329 335
Diseases of the ear & mastoid	
Complete deafness	
Complete deafness	108 964

APPENDIX 2 CLASSIFICATION OF MEDICAL CONDITIONS *continued*

CLASSIFICATION OF MEDICAL CONDITIONS: BASED ON ICD10 *continued*

LABEL	ABS INPUT CODES
Diseases of the ear & mastoid <i>cont.</i>	
Partial deafness & hearing loss nec	
Partial deafness & hearing loss nec	109 110 337 358 359 360 965 966
Diseases of the middle ear & mastoid processes	
Otitis media	346 347 349 969
Other diseases of the middle ear & mastoid processes	348 352
Diseases of the inner ear	
Menieres disease	111 968
Other diseases of the inner ear	357
Other diseases of the ear	
Other diseases of the ear	134 336 338 339 340 344 345 356 361 934 967
Diseases of the circulatory system(a)	
Hypertensive disease	
Hypertensive disease	392 393 394 939
Ischaemic heart diseases	
Angina	117 938
Other ischaemic heart diseases	382 383 384 391 936
Other heart diseases	
Other heart diseases	136 376 385 386 390 400
Tachycardia	
Tachycardia	365 387 388 943
Cerebrovascular diseases	
Cerebrovascular diseases	396 397 398 937
Oedema	
Oedema	135 941
Diseases of the arteries, arterioles & capillaries	
Diseases of the arteries, arterioles & capillaries	114 115 290 367 399 404 940
Diseases of the veins, lymphatic vessels, etc	
Haemorrhoids	403 945
Varicose veins	402 405 946
Other diseases of the veins, lymphatic vessels, etc	67 69 127 401
Other diseases of the circulatory system	
Low blood pressure	116 395
Other diseases of the circulatory system	377 935
Symptoms & signs involving the circulatory system	
Abnormalities of heartbeat	366
Cardiac murmurs and cardiac sounds	389 944
Other symptoms & signs involving the circulatory system	362 363 364 375

APPENDIX 2 CLASSIFICATION OF MEDICAL CONDITIONS *continued*

CLASSIFICATION OF MEDICAL CONDITIONS: BASED ON ICD10 *continued*

<i>LABEL</i>	<i>ABS INPUT CODES</i>
Diseases of the musculoskeletal system & connective tissue	
Arthropathies	
Gout	692 972
Arthritis - Rheumatoid	445 480 481 971
Arthritis - Osteoarthritis	421 423 446 447 448 482 483 970
Arthritis - Other & type unknown	422 449 476 479 974 484 478
Other arthropathies	139 141 142 143 144 158 159 160 161 412 458 485
Soft tissue disorders	
Rheumatism	216 973
Other soft tissue disorders	140 410 411 442 443 444 450 451 452 453 477
Dorsopathies	
Sciatica	425
Disc disorders	171 440
Back pain/problems nec	406 407 408 441 878
Curvature of the spine	424
Osteoporosis	
Osteoporosis	455 987
Other diseases of the musculoskeletal system & connective tissue	
Other diseases of the musculoskeletal system & connective tissue	173 417 454 459 905
Symptoms & signs involving the musculoskeletal system & connective tissue	
Symptoms & signs involving the musculoskeletal system & connective tissue	137 409 416 466 491 899
Diseases of the genito-urinary system	
Diseases of the genito-urinary system	
Urinary calculus	721 985
Incontinence: urine	696
Diseases of male genital organs	814 816 817 818 819 820 821 822 830 843 848 849 850
Diseases of female pelvic organs & genital tract	732 762 763 764 765 766 767 768 769 770 772 773 774 775 776 777 778 779 791 796 805 807 809 813
Other diseases of the genito-urinary system	203 204 207 208 209 211 643 644 697 698 701 702 705 706 707 708 709 710 720 723 780 808
Congenital malformations, deformations & chromosomal abnormalities	
Congenital malformations, deformations & chromosomal abnormalities	
Of the musculoskeletal system	420
Other congenital malformations, deformations & chromosomal abnormalities	54 77 88 185 281 324 325 355 381 593 679 680 719 746 804 844 845 846 847 904

APPENDIX 2 CLASSIFICATION OF MEDICAL CONDITIONS *continued*

CLASSIFICATION OF MEDICAL CONDITIONS: BASED ON ICD10 *continued*

<i>LABEL</i>	<i>ABS INPUT CODES</i>
Symptoms, signs & conditions nec	
Dizziness	467
Disability nec	17 201 267 343 372 373 415 490 537 575 621 790 829 856
Speech difficulties	469 571
Fluid retention (non circulatory)	983
Allergy (undefined)	56 977
Amputation	217 218
Fatigue and exhaustion	124
Injuries	
Fractures	162 163 164 165 166 906
Sprains & Strains	167 168 169
Tear ligament, muscle or tendon	493
Injury internal organs	31 75 280 717
Injury skin	38 122 612 613
Injury knee nec	172
Injury eye	323
Injury joint	419
Injury neck nec	894
Injury nerve	502
Burns & scalds	609
Adverse effects of treatment	33 34 50 51 52 53 932
Other injuries	29 30 32 279 353 841 170 182 219 268 322 351 354 460 500 501 591 592 608 610 611 718 745 803 806 840 842
All other symptoms, signs & conditions nec	1 2 3 4 5 6 8 11 63 125 126 190 191 465 516 659 660 661 662 663 664 665 666 670 671 672 699 722 729 730 739 740 747 750 753 771 815 860 866 873 874 875 888 998 999

APPENDIX 3 CLASSIFICATION OF MEDICATIONS

CLASSIFICATION OF TYPES OF MEDICATION

ABS category *Generic medication name*

MEDICATIONS COMMONLY USED FOR MENTAL HEALTH AND WELLBEING

Tricyclic antidepressants and mianserin

100	Amitriptyline
101	Clomipramine
102	Doxepin
103	Imipramine
104	Nortriptyline
105	Trimipramine
106	Mianserin
107	Dothiepin

Monoamine oxidase inhibitors

200	Phenelzine
201	Tranylcypromine

Monoamine oxidase A inhibitors

300	Moclobemide
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Selective serotonin reuptake inhibitors

400	Citalopram
401	Fluoxetine
402	Fluvoxamine
403	Paroxetine
404	Sertraline

Other antidepressants

500	Mirtazapine
501	Nefazodone
502	Reboxetine
503	Venlafaxine

Conventional antipsychotics

600	Chlorpromazine
601	Droperidol
602	Fluphenazine
603	Flupenthixol
604	Haloperidol
605	Pericyazine
606	Pimozide
607	Thioridazine
608	Thiothixene
609	Trifluoperazine
610	Zuclopenthixol

Atypical antipsychotics

700	Amisulpride
701	Clozapine
702	Olanzapine
703	Quetiapine
704	Risperidone

Lithium

APPENDIX 3 CLASSIFICATION OF MEDICATIONS *continued*

CLASSIFICATION OF TYPES OF MEDICATION *continued*

ABS category *Generic medication name*

MEDICATIONS COMMONLY USED FOR MENTAL HEALTH
AND WELLBEING *cont.*

110	Lithium
Benzodiazepines	
800	Alprazolam
801	Bromazepam
802	Clobazam
803	Diazepam
804	Flunitrazepam
805	Lorazepam
806	Nirtazepam
807	Oxazepam
808	Temazepam
809	Trazolam
899	Other Benzodiazepines
Other anxiolytics and hypnotics	
120	Buspirone
900	Zolpidem
901	Zopiclone
Other sedatives and tranquillisers	
0027, 0999	Other sedatives and tranquillisers

APPENDIX 3 CLASSIFICATION OF MEDICATIONS *continued*

CLASSIFICATION OF TYPES OF MEDICATION *continued*

ABS category *Generic medication name*

MEDICATIONS COMMONLY USED FOR RESPIRATORY CONDITIONS

Sympathomimetics	
2023	Pseudoephedrine
2101	Flunisolide
2102	Methoxamine
2103	Oxymetazoline
2104	Phenylephrine
2105	Tramazoline
2106	Xylometazoline
2108	Tetryzoline
2110	Ephedrine
2114	Isopto homatropine
2201	Astemizole
2301	Naphazoline
Antihistamine for topical use (nasal)	
2401	Levocabastine (nasal drops)
2402	Ipratropium Bromide
2403	Azelastine
2404	Mapirocin
Antihistamine for topical use (conjunctival)	
2501	Levocabastine (eye drops)
2502	Olopatadine
Anti-inflammatory steroids for oral use	
2605	Prednisolone
2606	Prednisone
Anti-inflammatory steroids for topical use (nasal)	
3221	Beclomethasone
3222	Budesonide
3223	Mometasone
Anti-inflammatory steroids for topical use (conjunctival)	
2701	Dexamethasone
2702	Fluorometholone
2703	Hydrocortisone
2704	Medrysone
2705	Prednisolone (eye drops)
Anti-inflammatory non-steroids	
2802	Flurbiprofen
2803	Indomethacin (respiratory)
2804	Ketorolac (respiratory)
Antihistamines for systemic use	
2202	Azatadine
2203	Cetirizine

APPENDIX 3 CLASSIFICATION OF MEDICATIONS *continued*

CLASSIFICATION OF TYPES OF MEDICATION *continued*

ABS category *Generic medication name*

MEDICATIONS COMMONLY USED FOR RESPIRATORY CONDITIONS *cont.*

2204	Chlorpheniramine
2205	Cyproheptadine
2206	Dexchlorpheniramine
2207	Diphenhydramine
2208	Diphenylpyraline
2209	Hydroxyzine
2210	Loratadine
2211	Mebhydrolin
2212	Meclozine
2213	Methdilazine
2214	Pheniramine
2215	Promethazine
2216	Terfenadine
2217	Alimemazine
2218	Fexofenadine
2999	Allergy medications nec

MEDICATIONS COMMONLY USED FOR ASTHMA

Reliever-bronchodilators

3101	Adrenaline
3102	Fenoterol
3103	Isoprenaline
3104	Orciprenaline
3105	Salbutamol
3106	Terbutaline
3107	Salmeterol
3108	Eformoterol

Preventers-inhaled steroids

3201	Beclamethasone (inhaler)
3202	Budesonide (inhaler)
3203	Fluticasone
3204	Ipratropium
3205	Montelukast sodium
3206	Zafirlukast
3401	Tiotropium

Preventers-non-steroids

3207	Cromoglycate
3208	Nedocromil

Other anti-asthmatics for systemic use

3301	Aminophylline
3302	Theophylline
3303	Choline Theophyllinate
3304	Ipratropium (bromide)

Asthma medications nec

3999	Asthma medications nec
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APPENDIX 3 CLASSIFICATION OF MEDICATIONS *continued*

CLASSIFICATION OF TYPES OF MEDICATION *continued*

ABS category *Generic medication name*

MEDICATIONS COMMONLY USED FOR ARTHRITIS AND OSTEOPOROSIS	
Androgens	
2730	Testosterone
Medications affecting bone structure and mineralization	
2740	Raloxifene
Bisphosphonates	
2750	Etidronate
2751	Etidronate plus calcium
2752	Alendronate
2753	Risedronate
2754	Pamidronate
2755	Zoledronic acid
Anti-inflammatory and antirheumatic products, non steroids	
2810	Meloxicam
2811	Naproxen
2812	Parecoxib
2813	Piroxicam
2815	Sulindac
2816	Tiaprofenic acid
2821	Diclofenac
2823	Indomethacin (arthritis)
2824	Ketorolac (arthritis)
2825	Celecoxib
2826	Diflunisal
2827	Ibuprofen
2828	Ketoprofen
2829	Mefenamic acid
Quinolines	
2830	Chloroquine
2831	Hydroxychloroquine
Gold salts	
2850	Auranofin
2851	Aurothiomalate
Immunosuppressants	
2817	Methotrexate
2840	Azathioprine
2841	Cyclosporin
2842	Etanercept
2844	Leflunomide
Other medications for rheumatoid arthritis	
2860	Penicillamine
2861	Sulfasalazine
2843	Other medications for rheumatoid arthritis
Antigout preparation	
2818	Colchicine

APPENDIX 3 CLASSIFICATION OF MEDICATIONS *continued*

CLASSIFICATION OF TYPES OF MEDICATION *continued*

ABS category *Generic medication name*

MEDICATIONS COMMONLY USED FOR ARTHRITIS AND OSTEOPOROSIS *cont.*

2870	Allopurinol
2872	Probenecid
Intra-articular corticosteroids	
2880	Betamethasone
2881	Methylprednisolone
2882	Triamcinolone
Other musculoskeletal	
2814	Rofecoxib
2820	Hylans
2836	Methsulfonylemethane
Vitamin D substances	
2760	Ergocalciferol
2761	Cholecalciferol
2762	Calcitriol
Calcium	
2770	Calcium citrate
2771	Calcium carbonate
2835	Calcium
Other arthritis medications	
2780	Parathyroid hormone
2790	Strontium ranelate
Vitamins or mineral supplements or herbal or natural remedies	
2800	Glucosamine
2805	Shark cartilage
2806	Osteoeze
2807	Lyprinol
2808	Fish oil
2809	Celery seed
2837	Other vitamins or minerals for arthritis
2838	Other herbal remedies for arthritis
2839	Other vitamins, minerals or herbal remedies for arthritis nec
2845	Vitamin E
2846	Vitamin C
2847	Vitamin B (arthritis)
2848	Crotico (B5 or B6)
2849	Vitamin D
2855	Vitamin K1

APPENDIX 3 CLASSIFICATION OF MEDICATIONS *continued*

CLASSIFICATION OF TYPES OF MEDICATION *continued*

ABS category *Generic medication name*

MEDICATIONS COMMONLY USED FOR DIABETES

Insulins	
4101	Insulin lispro
4102	Insulin neutral
4103	Insulin isophane
4104	Insulin neutral - insulin isophane
4105	Insulin zinc suspension
Oral blood glucose lowering drugs	
4200	Acarbose
4201	Chlorpropamide
4202	Glibenclamide
4203	Gliclazide
4204	Glipizide
4205	Metformin
4206	Tolbutamide
4207	Glimepiride
4301	Pioglitazone
4302	Rosiglitazone
4303	Repaglinide
4304	Glucagon
Diabetes medication nec	
4999	Diabetes medication nec

APPENDIX 3 CLASSIFICATION OF MEDICATIONS *continued*

CLASSIFICATION OF TYPES OF MEDICATION *continued*

ABS category *Generic medication name*

MEDICATIONS COMMONLY USED FOR HEART AND BLOOD PRESSURE

Cardiac glycosides	
5101	Digoxin
5102	Proscillaridin
Anti-arrhythmics	
5201	Amiodarone
5202	Bretylium tosylate
5203	Disopyramide
5204	Flecainide
5205	Lignocaine
5206	Mexiletine
5207	Procainamide
5208	Quinidine
Vasodilators used in cardiac disease	
5210	Adenosine
5301	Glyceryl trinitrate
5302	Isosorbide Dinitrate
5303	Nicorandil
5304	Isosorbide Mononitrate
Anti-adrenergic agents, centrally acting	
5401	Clonidine
5402	Methyldopa
Anti-adrenergic agents, peripherally acting	
5501	Alprostadiil
5502	Prazosin
5503	Terazosin
Arteriolar smooth muscle, agents acting on	
5601	Hydralazine
5602	Minoxidil
5603	Nitroprusside
5604	Diazoxide
Beta blocking agents	
5801	Alprenolol
5802	Atenolol
5803	Metoprolol
5804	Oxprenolol
5805	Pindolol
5806	Propranolol
5807	Sotalol
5808	Timolol
5809	Esmolol
5810	Labetalol
5811	Carvedilol
Calcium channel blockers	
5901	Amlodipine

APPENDIX 3 CLASSIFICATION OF MEDICATIONS *continued*

CLASSIFICATION OF TYPES OF MEDICATION *continued*

ABS category *Generic medication name*

MEDICATIONS COMMONLY USED FOR HEART AND BLOOD PRESSURE *cont.*

5902	Diltiazem
5903	Felodipine
5904	Nifedipine
5905	Nimodipine
5906	Perhexiline
5907	Verapamil
5908	Lercanidipine

ACE inhibitors, plain

5701	Captopril
5702	Enalapril
5703	Fosinopril
5704	Lisinopril
5705	Perindopril
5706	Quinapril
5707	Ramipril
5708	Trandolapril

Cardiovascular drugs nec

5999	Cardiovascular drugs nec
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APPENDIX 3 CLASSIFICATION OF MEDICATIONS *continued*

CLASSIFICATION OF TYPES OF MEDICATION *continued*

ABS category Generic medication name

FLUID / DIURETIC MEDICATIONS

Low-ceiling diuretics,
thiazides

6101	Bendrofluazide
6102	Chlorothiazide
6103	Cyclopenthiiazide
6104	Hydrochlorothiazide
6105	Methyclothiazide

Low-ceiling diuretics,
excluding thiazides

6201	Chlorthalidone
6202	Indapamide
6203	Metolazone
6204	Quinethazone

High-ceiling diuretics

6301	Bumetanide
6302	Ethacrynic acid
6303	Frusemide

Potassium-sparing
agents

6401	Amiloride
6402	Spironolactone
6403	Triamterene

Diuretics and
potassium-sparing
agents in combination

6501	Amiloride and Hydrochlorothiazide
6502	Triamterene and Hydrochlorothiazide

Fluid/diuretic
medications nec

6999	Fluid/diuretic medications nec
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SERIN LIPID REDUCING AGENTS

Cholesterol and
triglycerid reducers

7101	Cholestyramine
7102	Clofibrate
7103	Colestipol
7104	Gemfibrozil
7105	Nicotinic acid
7106	Pravastatin
7107	Probucol
7108	Simvastatin
7201	Atorvastatin
7202	Cerivastatin
7203	Fluvastatin
7207	Lipobay

Serum lipid reducing
medications nec

7999	Serum lipid reducing medications nec
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APPENDIX 3 CLASSIFICATION OF MEDICATIONS *continued*

CLASSIFICATION OF TYPES OF MEDICATION *continued*

ABS category *Generic medication name*

MEDICATIONS COMMONLY USED FOR CARDIAC AND BLOOD ORGANS

Antithrombotic agents

9101	Antithrombin III
9102	Dalteparin
9103	Danapariod
9104	Enoxaparin
9105	Heparin
9106	Heparin, combinations
9107	Nadroparin
9108	Parnaparin
9109	Reviparin
9110	Sulodexide
9111	Tinzaparin
9112	Warfarin
9113	Phenindione
9114	Fondaparinux
9201	Phenoxybenzamine
9202	Dipyridamole
9203	Clopidogrel
9204	Ticlopidine
9401	Alteplase
9402	Reteplase
9403	Streptokinase
9404	Urokinase
9405	Tenecteplase

Antifibrinolytics

9115	Factor VIII
9116	Factor IX
9117	Protamine
9118	Tranexamic acid
9119	Vitamin K

Angiotensin II antagonists

9301	Candesartan
9302	Irbesartan
9303	Eprosartan
9304	Telmisartan
9305	Losartan

APPENDIX 3 CLASSIFICATION OF MEDICATIONS *continued*

CLASSIFICATION OF TYPES OF MEDICATION *continued*

ABS category *Generic medication name*

ANALGESICS MEDICATION

Opioids

8101	Buprenorphine
8102	Codeine phosphate
8103	Dextromoramide
8104	Dextropropoxyphene
8105	Fentanyl citrate
8106	Methadone
8107	Morphine
8108	Oxycodone
8109	Papaveretum
8110	Pentazocine
8111	Pethidine
8112	Phenoperidine
8113	Tramadol
8114	Hydromorphone

Other analgesics and anti-pyretics

8201	Aspirin / other antiplatelet agents
8202	Paracetamol
8203	Aspirin combinations
8204	Paracetamol combinations
8998	Other analgesics/anti-pyretics

Analgesics medications nec

8999	Analgesics medications nec
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APPENDIX 3 CLASSIFICATION OF MEDICATIONS *continued*

CLASSIFICATION OF TYPES OF MEDICATION *continued*

<i>ABS category</i>	<i>Generic medication name</i>
OTHER MEDICATIONS	
Other medications	
1	Vitamin or mineral supplement
2	Herbal or natural treatments or remedies
22	Iron supplements
23	Cough/cold medications
24	Skin ointments and creams
32	Other antidotes and antivenoms
33	Other dermatological medications
34	Other ear, nose and throat medications
35	Other eye medications
36	Other gastrointestinal medications
37	Other genitourinary medications
38	Other musculoskeletal medications
39	Other neurological medications
40	Other obstetric/gynaecological medications
41	Other psychotropics medications
42	Other vaccines and immunoglobulins medications
43	Other endocrine medications
44	Other immunomodulators medications
45	Anti-infectives medications
95	Vitamins
96	Herbal
97	Other vitamins, minerals or herbal supplements nec
98	All other medications nec
99	Don't know/not stated

Some medications are unable to be coded to a particular category as they contain a combination of active ingredients, and are therefore coded to medication not elsewhere classified (for the respective condition). For example, Seretide, which has the active ingredients Fluticasone and Salmeterol, could not be assigned to either Fluticasone or Salmeterol, and was therefore coded to 'Asthma medications nec'.

APPENDIX 4 ABS STANDARD CLASSIFICATIONS

ABS STANDARD CLASSIFICATIONS

A number of ABS standard classifications have been referred to throughout the Users' Guide. The following contains more information about each of the classifications and their general use in the National Health Survey.

Classification of country of birth

Country of birth is classified to the Standard Australian Classification of Countries (SACC), Second Edition, (cat. no. 1269.0). While survey results can technically be classified to the 4 digit level, the survey sample is often not sufficient to support reliable estimates at this level of detail. For general purposes, classification of country of birth to the 2 digit Minor Group level is most suitable.

Classification of main language spoken at home

Main language spoken at home is classified to the Australian Standard Classification of Languages (ASCL), 2005-06 (cat. no. 1267.0). While survey results can technically be classified to the 4 digit level, the survey sample is often not sufficient to support reliable estimates at this level of detail. For general purposes, classification of main language spoken at home to the 2 digit Minor Group level is more suitable.

Classification of occupation

Occupation (of main job held at the time of the interview) is classified to both the Australian Standard Classification of Occupations (cat. no. 1220.0) and the Australian and New Zealand Standard Classification of Occupations (ANZSCO), 2007 (cat. no. 1220.0). While survey results can technically be classified to the 4 digit level, the survey sample is often not sufficient to support reliable estimates at this level of detail. For general purposes, classification of occupation to the broader Major and Sub-major levels is most suitable.

Classification of industry

Industry (of main job held at the time of the interview) is classified to the Australian and New Zealand Standard Industrial Classification (ANZSIC), First Edition (cat. no. 1292.0). While survey results can technically be classified to the 4 digit level, the survey sample is often not sufficient to support reliable estimates at this level of detail. For general purposes, classification of industry to the broader Division level is most suitable.

Industry sector (of main job held at the time of the interview) is classified to the following 1 digit categories: public sector, private sector and Australian Defence Force.

Classification of education

Level of highest non-school educational qualification and field of study of that qualification are classified to the Australian Standard Classification of Education (ASCED), 2001 (cat. no. 1272.0). While survey results for field of study can be classified to the 6 digit detailed level, the survey sample is often not sufficient to support reliable estimates at this level of detail. For general purposes, classification of field of study to the Broad and Narrow fields is most suitable. Level of highest non-school educational qualification is output at the 1 digit Broad level.

All classifications can be viewed on the ABS web site, at Statistics by Catalogue Number; 1. General; 12. Classifications and work manuals:

<http://www.abs.gov.au/AUSSTATS/abs@.nsf/ViewContent?readform&view=ProductsbyCatalogue&Action=Expand&Num=1.3>

APPENDIX 5 CLASSIFICATION OF BMI FOR CHILDREN

BODY MASS INDEX (BMI)

CUT-OFF POINTS

BMI cut-off points for adolescents and children

The following table shows the cut-off points for the grouping of BMI scores for underweight, overweight and obesity, by sex, for exact years and half-years between two and 18 years. (Underweight has three categories of thinness: thinness grades 1, 2, and 3, corresponding to severe, moderate and mild thinness).

Cut-off points for each grouping for children are based on corresponding cut-off points for persons aged 18 years and over; i.e: a score of 22.77 for a nine year old boy is equivalent to a score of 30 (obese) for an adult, and a score of 13.59 for a ten-and-a-half year old girl is equivalent to a score of 17 (moderate thinness) for an adult.

The cut-off points for underweight (equivalent to BMI scores of 16, 17 and 18.5 in adults) are sourced from Cole et al, *Body mass index cut offs to define thinness in children and adolescents: international survey*, 2007. The cut-off points for overweight (equivalent to a BMI score of 25 for an adult) and obesity (equivalent to a BMI score of 30 for an adult) are the cut-off points for children and adolescents sourced from Cole et al, *Establishing a standard definition for child overweight and obesity worldwide: international survey*, 2000.

In this table, ranges for underweight show the top of the range (up to 12.58, up to 16.98, etc), while ranges for overweight and obese show the bottom of the range (from 17.15, from 19.30, etc).

Children with BMI scores that fit between the top range for underweight and the bottom range for overweight are classified as being in the normal weight range.

Height and weight data for children in the NHS was only collected for children aged five years and over. As age is only available for whole years in the NHS, BMI calculations for children are based on the half-year cut-off points, as these are considered to provide an essentially unbiased estimate of prevalence. For example, a child who is recorded in the survey as being seven years old may have just turned seven, or may be shortly turning eight, so the half-year cut-off provides a mid-point across all seven year olds in the survey. This methodology assumes a fairly even spread of ages in years and months for each age group.

Standard BMI output categories for the NHS are underweight, normal weight, overweight and obese, or combinations of these. Other output is available on request.

APPENDIX 5 CLASSIFICATION OF BMI FOR CHILDREN *continued*

BODY MASS INDEX (BMI) CUT-OFF POINTS FOR CHILDREN AND ADOLESCENTS

Age (in years)	UNDERWEIGHT			OVERWEIGHT	OBESE
	<i>Adult cutoff point</i>	<i>Adult cutoff point</i>	<i>Adult cutoff point</i>	<i>Adult cutoff point</i>	<i>Adult cutoff point</i>
	16.00	17.00	18.50	25.00	30.00
BOYS					
5	12.66	13.31	14.21	17.42	19.30
5.5	12.58	13.22	14.13	17.45	19.47
6	12.50	13.15	14.07	17.55	19.78
6.5	12.45	13.10	14.04	17.71	20.23
7	12.42	13.08	14.04	17.92	20.63
7.5	12.41	13.09	14.08	18.16	21.09
8	12.42	13.11	14.15	18.44	21.60
8.5	12.45	13.17	14.24	18.76	22.17
9	12.50	13.24	14.35	19.10	22.77
9.5	12.57	13.34	14.49	19.46	23.39
10	12.66	13.45	14.64	19.84	24.00
10.5	12.77	13.58	14.80	20.20	24.57
11	12.89	13.72	14.97	20.55	25.10
11.5	13.03	13.87	15.16	20.89	25.58
12	13.18	14.05	15.35	21.22	26.02
12.5	13.37	14.25	15.58	21.56	26.43
13	13.59	14.48	15.84	21.91	26.84
13.5	13.83	14.74	16.12	22.27	27.25
14	14.09	15.01	16.41	22.62	27.63
14.5	14.35	15.28	16.69	22.96	27.98
15	14.60	15.55	16.98	23.29	28.30
15.5	14.86	15.82	17.26	23.60	28.60
16	15.12	16.08	17.54	23.90	28.88
16.5	15.36	16.34	17.80	24.19	29.14
17	15.60	16.58	18.05	24.46	29.41
17.5	15.81	16.80	18.28	24.73	29.70
18	16.00	17.00	18.50	25.00	30.00

APPENDIX 5 CLASSIFICATION OF BMI FOR CHILDREN *continued*

BMI cut-off points for adolescents and children continued

BODY MASS INDEX (BMI) CUT-OFF POINTS FOR CHILDREN AND ADOLESCENTS *continued*

Age (in years)	UNDERWEIGHT			OVERWEIGHT	OBESE
	Adult cutoff point	Adult cutoff point	Adult cutoff point	Adult cutoff point	Adult cutoff point
	16.00	17.00	18.50	25.00	30.00

GIRLS

5	12.50	13.09	13.94	17.15	19.17
5.5	12.40	12.99	13.86	17.20	19.34
6	12.32	12.93	13.82	17.34	19.65
6.5	12.28	12.90	13.82	17.53	20.08
7	12.26	12.91	13.86	17.75	20.51
7.5	12.27	12.95	13.93	18.03	21.01
8	12.31	13.00	14.02	18.35	21.57
8.5	12.37	13.08	14.14	18.69	22.18
9	12.44	13.18	14.28	19.07	22.81
9.5	12.53	13.29	14.43	19.45	23.46
10	12.64	13.43	14.61	19.86	24.11
10.5	12.78	13.59	14.81	20.29	24.77
11	12.95	13.79	15.05	20.74	25.42
11.5	13.15	14.01	15.32	21.20	26.05
12	13.39	14.28	15.62	21.68	26.67
12.5	13.65	14.56	15.93	22.14	27.24
13	13.92	14.85	16.26	22.58	27.76
13.5	14.20	15.14	16.57	22.98	28.20
14	14.48	15.43	16.88	23.34	28.57
14.5	14.75	15.72	17.18	23.66	28.87
15	15.01	15.98	17.45	23.94	29.11
15.5	15.25	16.22	17.69	24.17	29.29
16	15.46	16.44	17.91	24.37	29.43
16.5	15.63	16.62	18.09	24.54	29.56
17	15.78	16.77	18.25	24.70	29.69
17.5	15.90	16.89	18.38	24.85	29.84
18	16.00	17.00	18.50	25.00	30.00

APPENDIX 6 INCOME DECILES

DECILES FOR INCOME ITEMS

Certain income items from the 2007–08 NHS are available expressed in deciles. These are:

- Gross weekly cash income;
- Gross weekly cash income of household; and
- Gross weekly equivalised cash income of household.

Income deciles are groupings that result from ranking either all households or all persons in the population in ascending order according to income, and then dividing the population into ten equal groups, each comprising approximately 10% of the estimated population. The first decile contains the bottom 10%, the second decile contains the next 10%, and so on.

Income which is not stated or not known is excluded from the calculation of deciles.

The dollar amounts contained in each decile are shown in the following table:

DECILE GROUPING OF INCOME VALUES

Decile	\$ value
--------	----------

GROSS WEEKLY CASH INCOME

1	Less than 195
2	195–259
3	260–344
4	345–499
5	500–649
6	650–785
7	786–958
8	959–1,206
9	1,207–1,629
10	1,630 or more
	Not stated

GROSS WEEKLY CASH INCOME OF HOUSEHOLD

1	Less than 282
2	282–474
3	475–678
4	679–900
5	901–1,149
6	1,150–1,405
7	1,406–1,718
8	1,719–2,117
9	2,118–2,809
10	2,810 or more
	Not stated

GROSS WEEKLY EQUIVALISED CASH INCOME OF HOUSEHOLD

1	Less than 265
2	265–319
3	320–429
4	430–564
5	565–699
6	700–841
7	842–1,016
8	1,017–1,246
9	1,247–1,629
10	1,630 or more
	Not stated

TECHNICAL NOTE

STANDARD ERRORS AND REPLICATE WEIGHTS

Reliability of Estimates

SAMPLE SURVEY ERRORS

- 1** Two types of error are possible in estimates based on a sample survey:
 - sampling error; and
 - non-sampling error.
- 2** Sampling error occurs because only a small proportion of the total population is used to produce estimates that represent the whole population. Sampling error can be reliably measured, as it is calculated based on the scientific methods used to design surveys.
- 3** Non-sampling error may occur in any data collection, whether it is based on a sample or a full-count (i.e. Census). Non-sampling error may occur at any stage throughout the survey process. Examples include:
 - non-response by selected persons;
 - questions being misunderstood;
 - responses being incorrectly recorded; and
 - errors in coding or processing the survey data.
- 4** More detailed information on sample survey errors, including sampling error, non-sampling error and response rates is provided in Chapter 7: Data Quality and Interpretation of Results.

SAMPLING ERROR

- 5** Sampling error is the expected difference that could occur between the published estimates, derived from repeated random samples of persons, and the value that would have been produced if all persons in scope of the survey had been included. The magnitude of the sampling error associated with an estimate depends on the sample design, sample size and population variability.

MEASURES OF SAMPLING ERROR

- 6** A measure of the sampling error for a given estimate is provided by the Standard Error (SE), which is the extent to which an estimate might have varied by chance because only a sample of persons was obtained.
- 7** Another measure is the Relative Standard Error (RSE), which is the SE expressed as a percentage of the estimate. This measure provides an indication of the percentage errors likely to have occurred due to sampling.

STANDARD ERRORS OF ESTIMATES OF PROPORTIONS

- 8** Proportions formed from the ratio of two estimates are also subject to sampling errors. The size of the error depends on the accuracy of both the numerator and denominator. For proportions where the denominator is an estimate of the number of persons in a group, and the numerator is the number of persons in a sub-group of the denominator population, a formula to approximate the RSE is:

$$RSE\left(\frac{x}{y}\right) = \sqrt{[RSE(x)]^2 - [RSE(y)]^2}$$

- 9** Using this formula, the RSE of the estimated proportion will be lower than the RSE estimate of the numerator. Therefore another approximation for SEs of proportions may be derived by neglecting the RSE of the denominator; i.e. obtaining the RSE of the number of persons corresponding to the numerator of the proportion and then applying this figure to the estimated proportion.

Reliability of Estimates
continued

STANDARD ERROR OF A DIFFERENCE

10 The difference between two survey estimates is itself an estimate, and is therefore subject to sampling variability. The sampling error of the difference between the two estimates depends on their individual SEs and the level of statistical association (correlation) between the estimates. An approximate SE of the difference between two estimates ($x-y$) may be calculated by the following formula:

$$SE(x-y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

11 While this formula will only be exact for differences between separate sub-populations or uncorrelated characteristics of sub-populations, it is expected to provide a reasonable approximation for most differences likely to be of interest in relation to this survey.

STANDARD ERROR OF A SUM

12 The sum of two survey estimates is itself an estimate and is therefore subject to sampling variability. The sampling error of the sum of the two estimates depends on their individual SEs and the level of statistical association (correlation) between the estimates. An approximate SE of the sum of two estimates ($x+y$) may be calculated by the following formula:

$$SE(x+y) = \sqrt{[RSE(x)]^2 + [RSE(y)]^2}$$

13 While this formula will only be exact for sums of separate sub-populations or uncorrelated characteristics of sub-populations, it is expected to provide a reasonable approximation for most estimates likely to be of interest in relation to this survey.

Replicate Weights Technique

14 A class of techniques called 'replication methods' provide a general method of estimating variances for the types of complex sample designs and weighting procedures employed in ABS household surveys.

15 The basic idea behind the replication approach is to select sub-samples repeatedly from the whole sample, for each of which the statistic of interest is calculated. The variance of the full sample statistic is then estimated using the variability among the replicate statistics calculated from these sub-samples. The sub-samples are called 'replicate groups', and the statistics calculated from these replicates are called 'replicate estimates'.

16 There are various ways of creating replicate sub-samples from the full sample. The replicate weights produced for the 2007–08 NHS were created under the delete-a-group Jackknife method of replication (described below).

17 There are numerous advantages to using the replicate weighting approach, including the fact that:

- the same procedure is applicable to most statistics such as means, percentages, ratios, correlations, derived statistics and regression coefficients; and
- it is not necessary for the analyst to have available detailed survey design information if the replicate weights are included with the data file.

DERIVATION OF REPLICATE WEIGHTS

18 Under the delete-a-group Jackknife method of replicate weighting, weights were derived as follows:

- 60 replicate groups were formed, with each group formed to mirror the overall sample. Units from a cluster of dwellings all belong to the same replicate group, and a unit can belong to only one replicate group.
- For each replicate weight, one replicate group was omitted from the weighting and the remaining records were weighted in the same manner as for the full sample.
- The records in the group that was omitted received a weight of zero.

Replicate Weights Technique
continued

DERIVATION OF REPLICATE WEIGHTS *continued*

- This process was repeated for each replicate group (i.e. a total of 60 times).
- Ultimately each record had 60 replicate weights attached to it with one of these being the zero weight.

APPLICATION OF REPLICATE WEIGHTS

19 As noted above, replicate weights enable variances of estimates to be calculated relatively simply. They also enable unit record analyses such as chi-square and logistic regression to be conducted, which take into account the sample design.

20 Replicate weights for any variable of interest can be calculated from the 60 replicate groups, giving 60 replicate estimates. The distribution of this set of replicate estimates, in conjunction with the full sample estimate, is then used to approximate the variance of the full sample.

21 The formula for calculating the standard error (SE) and relative standard error (RSE) of an estimate using this method is shown below:

$$SE(y) = \sqrt{\left(\frac{59}{60}\right) \sum_{g=1}^{60} (y_g - y)^2}$$

22 where:

- $g = (1, \dots, 60)$ (the number of replicate weights);
- $y(g)$ = estimate from using replicate weighting; and
- y = estimate from using full person weight.

23 The $RSE(y) = SE(y)/y*100$.

24 This method can also be used when modelling relationships from unit record data, regardless of the modelling technique used. In modelling, the full sample would be used to estimate the parameter being studied (such as a regression coefficient); i.e., the 60 replicate groups would be used to provide 60 replicate estimates of the survey parameter. The variance of the estimate of the parameter from the full sample is then approximated, as above, by the variability of the replicate estimates.

AVAILABILITY OF RSES CALCULATED USING REPLICATE WEIGHTS

25 Actual RSEs were calculated in the summary publication released for this survey. The RSEs for estimates published in the National Health Survey: Summary of Results, 2007–08 (Reissue) (cat. no. 4364.0) are available in spreadsheet format (datacubes) from the ABS web site (www.abs.gov.au). The RSEs in the spreadsheets were calculated using the replicate weights methodology.

GLOSSARY

This document presents definitions for some of the terms used in this Guide and elsewhere in relation to the 2007–08 NHS. Further definitions are contained in the individual topic descriptions. It should be noted that the definitions used in this survey are not necessarily the same as those used for concepts or data items in other collections, and care should be taken when comparing data from different sources to ensure they are similarly defined.

Alcohol consumption risk level

Alcohol consumption risk level in the long-term was derived from the average daily consumption of alcohol by persons aged 15 years and over, collected for persons who had consumed alcohol in the week prior to the interview. Consumption details (type and volume of alcohol) were collected for the three most recent days of the week prior to interview on which alcohol was consumed. The data were then averaged over the days of the week the respondent reported having consumed alcohol, and grouped into relative risk levels according to the 2001 National Health and Medical Research Council (NHMRC) guidelines, as follows:

ALCOHOL RISK LEVEL (a)

CONSUMPTION PER DAY		
<i>Risk level</i>	<i>Males</i>	<i>Females</i>
Low risk	50 mLs or less	25 mLs or less
Risky	More than 50 mLs, up to 75 mLs	More than 25 mLs, up to 50 mLs
High risk	More than 75 mLs	More than 50 mLs

(a) One standard drink contains 12.5 mLs of alcohol.

It should be noted that risk level as defined by the NHMRC is based on regular consumption levels of alcohol, however the NHS does not determine whether consumption in the reference week was more, less or the same as usual consumption.

Drinking status information was also collected for those who did not consume any alcohol in the week prior to interview, categorised as:

- last consumed alcohol more than one week to less than 12 months ago;
- last consumed alcohol 12 months or more ago; and
- never consumed alcohol.

See Chapter 4: Health Risk Behaviours for more detail.

Ancillary cover

Any cover provided by private insurance organisations for health-related services other than medical or hospital cover (e.g. physiotherapy, dental, optical, chiropractic and ambulance).

Arthritis

Arthritis is characterised by an inflammation of the joints often resulting in pain, stiffness, disability and deformity.

ASGC Remoteness Structure

The Australian Standard Geographical Classification (ASGC) Remoteness Structure has 5 categories based on an aggregation of geographical areas which share common characteristics of remoteness, determined in the context of Australia as a whole. These categories are: Major cities of Australia, Inner regional Australia, Outer regional Australia, Remote Australia and Very remote Australia. The five categories are generally aggregated in some way for use in output.

The criteria for these categories are based on the Accessibility/Remoteness Index of Australia (ARIA) developed by the Commonwealth Department of Health and Ageing (DoHA) and the National Key Centre for Social Applications of GIS (GISCA). ARIA measures the remoteness of a point based on the physical road distance to the nearest Urban Centre in each of five size classes. For more information on how ARIA is defined see Information Paper: ABS Views on Remoteness, 2001 (cat. no. 1244.0) and Information Paper: Outcomes of ABS Views on Remoteness Consultation, Australia, Jun

GLOSSARY *continued*

ASGC Remoteness Structure <i>continued</i>	2001 (cat. no. 1244.0.00.001). Also refer to Census Geography Paper 03/01 - ASGC Remoteness Classification - Purpose and Use, available from the ABS web site.
Asthma	A chronic disease marked by episodes of wheezing, chest tightness and shortness of breath associated with widespread narrowing of the airways within the lungs and obstruction of airflow. A person must have received treatment or medication in the last year to be recorded as currently having asthma.
Body Mass Index (BMI)	<p>Body Mass Index (BMI) is a simple index of weight-for-height that is commonly used to classify underweight, overweight and obesity. It is defined as the weight in kilograms divided by the square of the height in metres (kg/m²). The NHS uses the World Health Organisation International Classification of adult underweight, overweight and obesity. Separate cut-off points by sex and age for each grouping are used for children aged 5 to 17 years, based on the corresponding scores for adults 18 years and over for each grouping. For more information, see Chapter 4: Health Risk Behaviours and Appendix 5: Classification of BMI for children.</p> <p>BMI scores are derived for self-reported and measured height and weight for NHS 2007–08.</p>
Cause of condition	Asked in respect of all the current long-term conditions which the respondent had previously reported. This refers to the respondent's perception of whether the condition was the result of an injury, and/or whether the condition was work-related (including injury at work).
Circulatory problems/diseases	Covers all diseases and related problems of the circulatory system. Includes specific conditions such as hypertension, angina, tachycardia, oedema, haemorrhoids, varicose veins and cardiac murmurs. For the purposes of condition status items in this survey, also includes high cholesterol. See also Heart, stroke and vascular diseases.
Co-morbid conditions	In this survey, co-morbid conditions refers to two or more medical conditions which a respondent has reported as current long-term conditions they have.
Conditions	See long-term medical condition.
Condition status	Condition status brings together information about whether or not a person has ever been told by a doctor or nurse they have a condition, whether a condition was current at the time of the survey, and if current whether the condition was long-term (i.e. had lasted or was expected to last for 6 months or more).
Current daily smoker	A current daily smoker is an adult who reported that they regularly smoked one or more cigarettes, cigars or pipes per day. See also Smoker status.
Days away from work or study	Refers to days on which the respondent was away from work, school or other educational institution for at least half the day.
Days out of role	Days away from work or school/study, and other days of reduced activity due to own illness or injury.
Diabetes mellitus	A chronic condition in which blood glucose levels become too high due to the body producing little or no insulin, or not using insulin properly.
Dietary habits	In the 2007–08 NHS this term refers to usual daily serves of fruit, usual daily serves of vegetables and the main type of milk usually consumed. Usual daily serves of fruit and vegetables are listed separately in this Glossary. See also Inadequate fruit and vegetable consumption.
Disability Status	<p>A disability or restrictive long-term health condition exists if a limitation, restriction, impairment, disease or disorder, which restricts everyday activities, has lasted, or is expected to last for six months or more.</p> <p>It is classified by whether or not a person has a specific limitation or restriction. Specific limitation or restriction is further classified by whether the limitation or restriction is a limitation in core activities or a schooling/employment restriction only.</p>

GLOSSARY *continued*

- Disability Status *continued*** There are four levels of core activity limitation (profound, severe, moderate and mild) which are based on whether a person needs help or has difficulty with, or uses aids or equipment for, self care, mobility or communication. A person's overall level of core activity limitation is determined by their highest level of limitation in these activities.
- Employed** Persons aged 15 and over who had a job or business, or who undertook work without pay in a family business for a minimum of one hour per week. Includes persons who were absent from a job or business. See also Unemployed and Not in the labour force.
- Equivalent income** Equivalisation is a process whereby reported household income is adjusted to take account of the size and composition of the household. For further details see Chapter 6: Population characteristics.
- Exercise level** Based on frequency, intensity (i.e. walking, moderate exercise and vigorous exercise) and duration of exercise (for recreation, sport or fitness) in the two weeks prior to the interview. Exercise level is also available for the week prior to the interview. From these components, an exercise score was derived using factors to represent the intensity of the exercise:
- 3.5 for walking
 - 5.0 for moderate exercise
 - 7.5 for vigorous exercise
- Scores were grouped into the following four categories:
- | <i>Exercise level</i> | <i>Criteria</i> |
|-----------------------|---|
| Sedentary | Scores less than 100 (includes no exercise) |
| Low | Scores of 100 to less than 1600 |
| Moderate | Scores of 1600 to 3200, or more than 3200 but less than 2 hours vigorous exercise |
| High | Scores greater than 3200 and 2 hours or more of vigorous exercise |
- For exercise levels in the last week, scores and time periods are halved.
- Inadequate exercise levels are sedentary and low exercise levels. Sedentary refers to sitting in one place for extended periods of time. See also Physical Activity guidelines, and Chapter 4: Health Risk Behaviours for more detail.
- Government health card** Refers to coverage by the following government-issued cards which entitle the card holder, and in some cases their dependents, to a variety of health benefits or concessions (e.g. medical care, hospital treatment/accommodation, supply of pharmaceuticals, free of charge or at reduced rates).
- any cards from the Department of Veterans' Affairs (DVA);
 - Health Care Card (including the low income health care card);
 - Pensioner Concession Card; and
 - Commonwealth Seniors Health Card.
- Health-related actions** Refers to the following health-related action(s) respondents reported they had taken.
- Visit to casualty/emergency units at hospitals (for asthma only);
 - Consultation with general practitioner (GP) and/or specialist;
 - Consultation with other health professionals (OHP): see separate entry in this Glossary; and
 - Days away from work or school;
- Heart, stroke and vascular conditions** A subset of reported long-term conditions comprising the following:
- Angina and other ischaemic heart disease;
 - Cerebrovascular disease;
 - Heart failure;
 - Oedema; and
 - Diseases of arteries, arterioles and capillaries.

GLOSSARY *continued*

Herbal and natural medications	Herbal and natural medications as reported by respondents. The data covers herbal and natural medications used in the previous 2 weeks for asthma, cancer, heart and circulatory conditions, diabetes and high sugar levels, mental health and well-being, arthritis and osteoporosis/osteopenia. Limited information on types of herbal and natural medication was collected for medication reported for arthritis or osteoporosis/osteopenia; otherwise information on types of herbal and natural medication used was not collected in this survey.
Hospital cover	Health insurance provided by a private insurance organisation to cover all or part of the costs of private accommodation in a public hospital, charges for private hospital treatment and care in a public hospital by a doctor of the patients choice.
Household	A household is defined as one or more persons, at least one of whom is at least 15 years of age, usually resident in the same private dwelling.
Household income	Reported as the sum of the personal cash incomes of all household members aged 15 years and over. Household income is available in dollar amounts and deciles/quintiles, in reported and equivalised form.
Household structure	Refers to the composition of the household to which the respondent belonged: for further details see Chapter 6: Population characteristics.
HSL	High sugar levels in blood or urine.
ICD-10	ICD-10 refers to the TENTH REVISION OF THE INTERNATIONAL CLASSIFICATION OF DISEASES AND HEALTH RELATED PROBLEMS. The classification of long-term conditions most commonly used in output from the 2007–08 NHS was developed for use in this survey based on the ICD-10: see Appendix 2: Classification of Medical Conditions.
Inadequate Fruit or Vegetable Intake	This refers to inadequate fruit or vegetable dietary intake as reported by the respondent, based on the NHMRC <i>Dietary Guidelines for Australian Adults</i> and <i>Dietary Guidelines for Children and Adolescents in Australia</i> .
Incidence	Incidence refers to the number of new cases of a particular characteristic, such as cancer, which occur within a certain period. This differs from prevalence, which refers to the number of cases of a particular characteristic that are present in a population at one point in time.
Index of disadvantage	This is one of four Socio-economic Indexes for Areas (SEIFAs) compiled by ABS following each Census of Population and Housing, from various characteristics of persons resident in particular areas. The Index of Disadvantage summarises attributes such as income, educational attainment, unemployment and occupation skill levels. For further information see Chapter 6: Population characteristics.
Indigenous	Refers to people who identified themselves, or were identified by another household member, as being of Aboriginal and/or Torres Strait Islander origin.
Ischaemic heart disease	A disease of the blood vessels supplying the heart muscle.
In the labour force	People who, during the reference week, were employed or unemployed, as defined (See also Labour force status).
Kessler 10 (K10)	See Psychological distress.
Labour force status	Refers to the employment situation of respondents at the time of the survey. Categories are: <ul style="list-style-type: none">■ Employed;■ Unemployed (aged 15 years and over, not employed and actively looked for work in the 4 weeks prior to the survey); and■ Not in the labour force (all children less than 15 years, and persons 15 years and over who were neither employed or unemployed).
Level of highest non-school educational qualification	The level of the highest educational qualification obtained other than school qualification; may include non-school qualification obtained while still at school.

GLOSSARY *continued*

Long-term medical condition	A medical condition (illness, injury or disability) which has lasted at least six months, or which the respondent expects to last for six months or more. Some reported conditions were assumed to be long-term in the 2007–08 NHS, including asthma, arthritis, gout, rheumatism, cancer, osteoporosis, diabetes, rheumatic heart disease, heart attack and stroke.
Main language spoken at home other than English	Obtained for adults only and refers to the language reported by the respondent as the main language they speak at home.
MET	Metabolic Equivalent of Task (MET) or intensity values are a measure of the energy expenditure required to carry out exercise, expressed as a multiple of the resting metabolic rate (RMR). MET is defined as the ratio of metabolic rate (and therefore the rate of energy consumption) during a specific physical activity to a reference rate of metabolic rate at rest. MET or intensity values operate as a factor when determining level of exercise. The 2007–08 NHS used the following intensity factors - 3.5 for walking, 5.0 for moderate exercise and 7.5 for vigorous exercise. MET values of physical activities range from 0.9 (sleeping) to 18 (running at 17.5 km/h).
Moderate exercise	Exercise for recreation, sport or fitness which caused a moderate increase in heart rate or breathing.
National Health Priority Areas (NHPA)	Comprises asthma, cancer, diabetes/high sugar levels, heart and circulatory conditions, musculoskeletal conditions (arthritis and osteoporosis/osteopenia), and mental health.
Neoplasm	A neoplasm is a new growth of abnormal tissue (a tumour). Tumours can be either benign (non-cancerous) or malignant (cancerous). Cancer refers to several diseases and can affect most types of cells in various parts of the body.
Not in the labour force	Persons who are not employed or unemployed as defined, including persons who: <ul style="list-style-type: none">■ are retired;■ no longer work;■ do not intend to work in the future;■ are permanently unable to work; and■ have never worked and never intend to work.
Oedema	A swelling of any organ or tissue due to accumulation of excess fluid.
Osteoporosis	A condition that thins and weakens bone mineral density, generally caused by loss of calcium, which leads to increased risk of fracture.
Other health professionals (OHP)	Includes: <ul style="list-style-type: none">■ Accredited counsellor;■ Acupuncturist;■ Chemist (advice only);■ Chiropodist/podiatrist;■ Chiropractor;■ Diabetes Educator;■ Dietitian/nutritionist;■ Naturopath;■ Nurse;■ Occupational therapist;■ Optician/optometrist;■ Osteopath;■ Physiotherapist/hydrotherapist;■ Psychologist; and■ Social worker/welfare officer.
Pharmaceutical medications	Any medication used in the two weeks prior to interview for the treatment of asthma, arthritis, osteoporosis, heart and circulatory conditions, diabetes/HSL or mental health and wellbeing. Does not include medications identified by respondents as vitamins or minerals, or natural or herbal medications. See Type of medication.

GLOSSARY *continued*

Prevalence	The number of cases of a particular characteristic (e.g. a specific long-term condition such as cancer) that are present in a population at one point in time. This differs from incidence, which refers to the number of new cases of a particular characteristic occurring within a certain period.
Private health insurance	Refers to the private health insurance coverage at the time of the survey of persons aged 15 years or more. The category 'With cover' includes those with hospital and/or ancillary cover, and those with cover whose type of cover was unknown.
Psychological distress	<p>Derived from the Kessler Psychological Distress Scale -10 items (K10). This is a scale of non-specific psychological distress based on 10 questions about negative emotional states in the four weeks prior to interview. The K10 is scored from 10 to 50, with higher scores indicating a higher level of distress. For the NHS, scores are grouped as follows:</p> <ul style="list-style-type: none">■ Low 10–15;■ Moderate 16–21;■ High 22–29; and■ Very high 30–50. <p>Data is only collected from respondents aged 18 years and over.</p>
Risky/high risk alcohol consumption	This is a combination of Moderate (or 'Risky') and High alcohol risk consumption levels in the long term. See Alcohol risk level.
SEIFAs	<p>Four Indexes compiled by the ABS following each population Census. Each index summarises different aspects of the socio-economic condition of areas. The Index of Disadvantage is the SEIFA index most frequently used in health analysis.</p> <p>The Indexes available for use with 2007–08 NHS data are those compiled from the 2001 and 2006 Census of Population and Housing. The Index scores have been mapped to the NHS sample at both the CD and SLA levels. For further information about the indexes, see Information Paper: Census of Population and Housing - Socio-Economic Indexes for Areas, Australia (ABS Cat no 2039.0).</p>
Self-assessed body mass	Respondents reported assessment of themselves as being of acceptable weight, underweight or overweight.
Self-assessed health status	A person's general assessment of their own health against a five point scale from excellent through to poor.
Significance testing	To determine whether a difference between two survey estimates is a real difference in the populations to which the estimates relate, or merely the product of different sampling variability, the statistical significance of the difference can be tested. This is particularly useful for interpreting apparent changes in estimates over time. The test is done by calculating the standard error of the difference between two estimates and then dividing the actual difference by the standard error of the difference. If the result is greater than 1.96, there are 19 chances in 20 that there is a real difference in the populations to which the estimates relate. For further information see Chapter 7: Data Quality and Interpretation of Results.
Smoker status	<p>The extent to which a person aged 15 years and over was smoking at the time of interview, referring to regular smoking of tobacco, including manufactured (packet) cigarettes, roll-your-own cigarettes, cigars and pipes, but excluding chewing tobacco and smoking of non-tobacco products. Categorised as:</p> <ul style="list-style-type: none">■ Current daily smoker – a respondent who reported at the time of interview that they regularly smoked one or more cigarettes, cigars or pipes per day;■ Current smoker: other – a respondent who reported at the time of interview that they smoked cigarettes, cigars or pipes less than weekly, or at least once a week, but not daily;■ Ex-smoker – a respondent who reported they did not currently smoke, but had regularly smoked daily, or had smoked at least 100 cigarettes, or smoked pipes, cigars, etc at least 20 times in their lifetime; and

GLOSSARY *continued*

Smoker status <i>continued</i>	<ul style="list-style-type: none">■ Never smoked – a respondent who reported they had never regularly smoked daily, and had smoked less than 100 cigarettes in their lifetime and/or had smoked pipes, cigars, etc less than 20 times in their lifetime.
Type of condition	The type of medical condition as reported by respondents and/or office coded by ABS from the description provided by respondents. All reported long-term medical conditions are coded to a classification developed by the ABS for use in the National Health Survey based on the TENTH REVISION OF THE INTERNATIONAL CLASSIFICATION OF DISEASES AND HEALTH RELATED PROBLEMS (ICD-10). See also ICD-10.
Type of medication	Obtained for medication reported as used in the two weeks prior to interview for asthma, arthritis, osteoporosis, heart and circulatory conditions, diabetes, mental health conditions or psychological distress. Included are vitamins and minerals, natural and herbal medication and pharmaceutical medication. Pharmaceutical medications are classified by generic type, based on reported medication name. The generic drug name is the non-proprietary name for the active chemicals in a medicine, in contrast to the proprietary name (trade or brand name) for a medicine. For further information see Appendix 3: Classification of Medications.
Type of medication used for mental health and wellbeing	Refers to the type of medication reported as used for mental health or wellbeing in the 2 weeks prior to interview. May include medications used for preventive health purposes as well as medications used for mental disorders, and includes vitamins and minerals, natural and herbal medications and pharmaceutical medications. Two items relating to type of medication are available for those with a mental health condition and for everyone aged 18 years and over related to psychological distress: <ul style="list-style-type: none">■ Type of medication as reported by respondent; e.g. sleeping tablet, antidepressant; and■ Generic type of medication: e.g. citalopram.
Unemployed	Persons aged 15 years and over who were not employed and were actively looking for work in the four weeks prior to the survey, and available to start work in the week prior to the survey.
Usual daily intake of fruit	Refers to the number of serves of fruit (excluding drinks) usually consumed each day, as reported by the respondent. A serve is approximately 150 grams of fresh fruit or 50 grams of dried fruit. The National Health and Medical Research Council (NHMRC) recommends a minimum of one serve of fruit per day for children aged 4 to 11 years, three serves of fruit per day for children aged 12 to 17 years, and two serves of fruit per day for adults.
Usual daily intake of vegetables	Refers to the number of serves of vegetables (excluding drinks and beverages) usually consumed each day, as reported by the respondent. A serve is approximately half a cup of cooked vegetables or one cup of salad vegetables—equivalent to approximately 75 grams. The National Health and Medical Research Council (NHMRC) recommends a minimum of two serves of vegetables per day for children aged 4 to 7 years, three serves of vegetables per day for children aged 8 to 11 years, four serves of vegetables per day for children aged 12 to 17 years, and five serves of vegetables per day for adults.
Vigorous exercise	Exercise for fitness, recreation or sport which caused a large increase in heart rate or breathing.
Vitamin and mineral supplements	Vitamin and mineral supplements as reported by respondents. The data covers only vitamins and mineral supplements used in the previous 2 weeks for asthma, heart and circulatory conditions, diabetes/high sugar levels, arthritis, osteoporosis or mental well-being. Information on the types of vitamin and mineral supplements used was collected only for supplements reported as used for arthritis or osteoporosis.

GLOSSARY *continued*

Waist circumference	<p>Waist circumference is associated with an increased risk of metabolic complications associated with obesity. The World Health Organisation (WHO) and National Health and Medical Research Council (NHMRC) approved the following guidelines for Caucasian men and women:</p> <p>Men:</p> <ul style="list-style-type: none">■ Substantially increased risk (more than or equal to 102cm)■ Increased risk (more than or equal to 94cm)■ Not at risk (less than 94cm) <p>Women</p> <ul style="list-style-type: none">■ Substantially increased risk (more than or equal to 88cm)■ Increased risk (more than or equal to 80cm)■ Not at risk (less than 80cm)
Work related conditions	<p>Long-term medical conditions reported in the survey which the respondent reported as work related; may include conditions arising from injuries at work.</p>
Year of arrival	<p>The year in which a person, reporting a country of birth other than Australia, first arrived in Australia to live for a period of one year or more.</p>

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