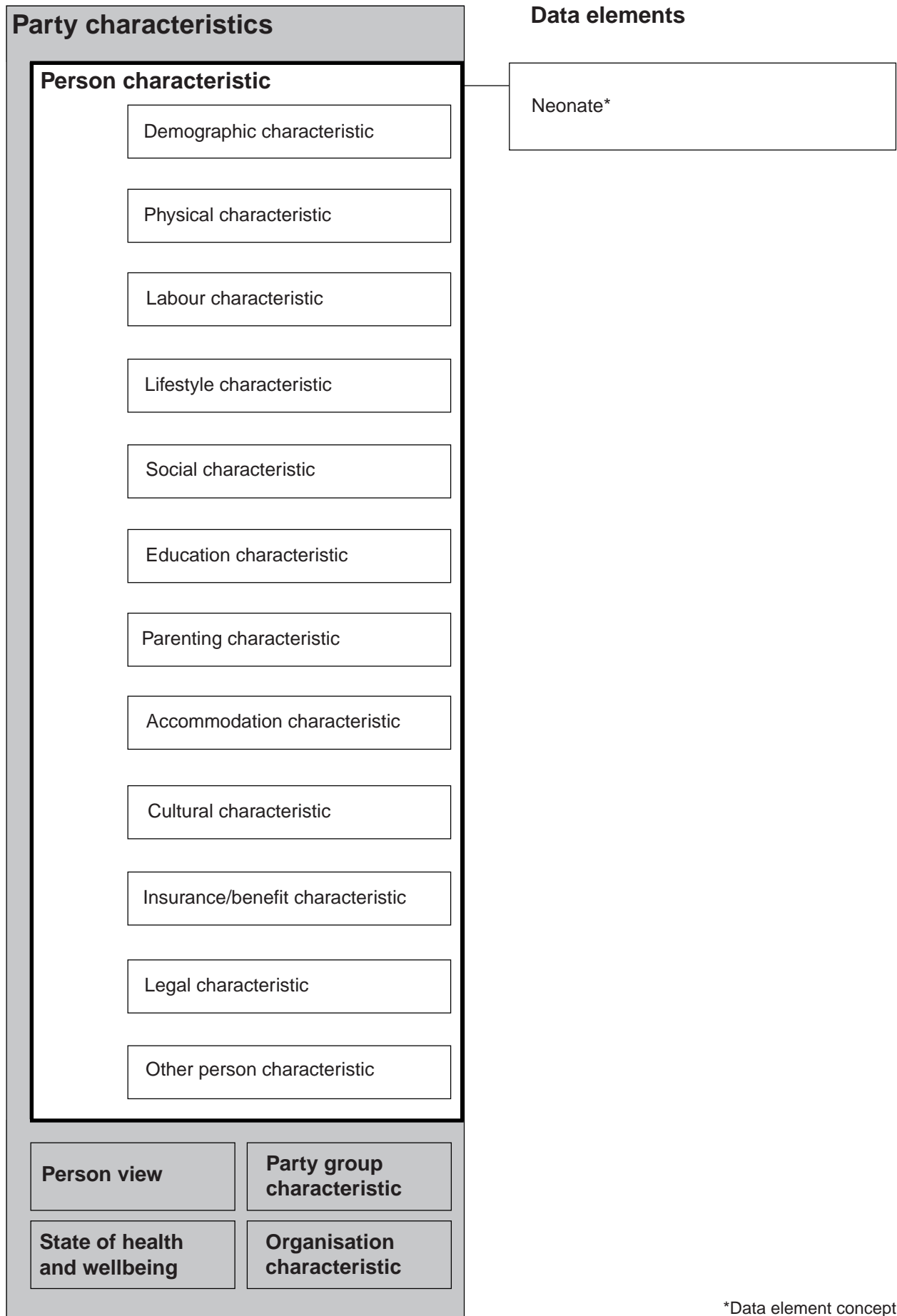


## National Health Information Model entities



\*Data element concept

## Neonate

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**Admin. status:** CURRENT 1/07/95

### Identifying and definitional attributes

**NHIK identifier:** 000103 **Version number:** 1

**Data element type:** DATA ELEMENT CONCEPT

**Definition:** A live birth who is less than 28 days old.

**Context:** Perinatal

### Relational and representational attributes

**Datatype:** **Representational form:**

**Field size:** **Min.** **Max.** **Representational layout:**

**Data domain:**

**Guide for use:**

**Verification rules:**

**Collection methods:**

**Related data:**

### Administrative attributes

**Source document:** International Classification of Diseases and Related Health Problems, 10th Revision, WHO, 1992

**Source organisation:** National Health Data Committee,  
National Perinatal Data Advisory Committee

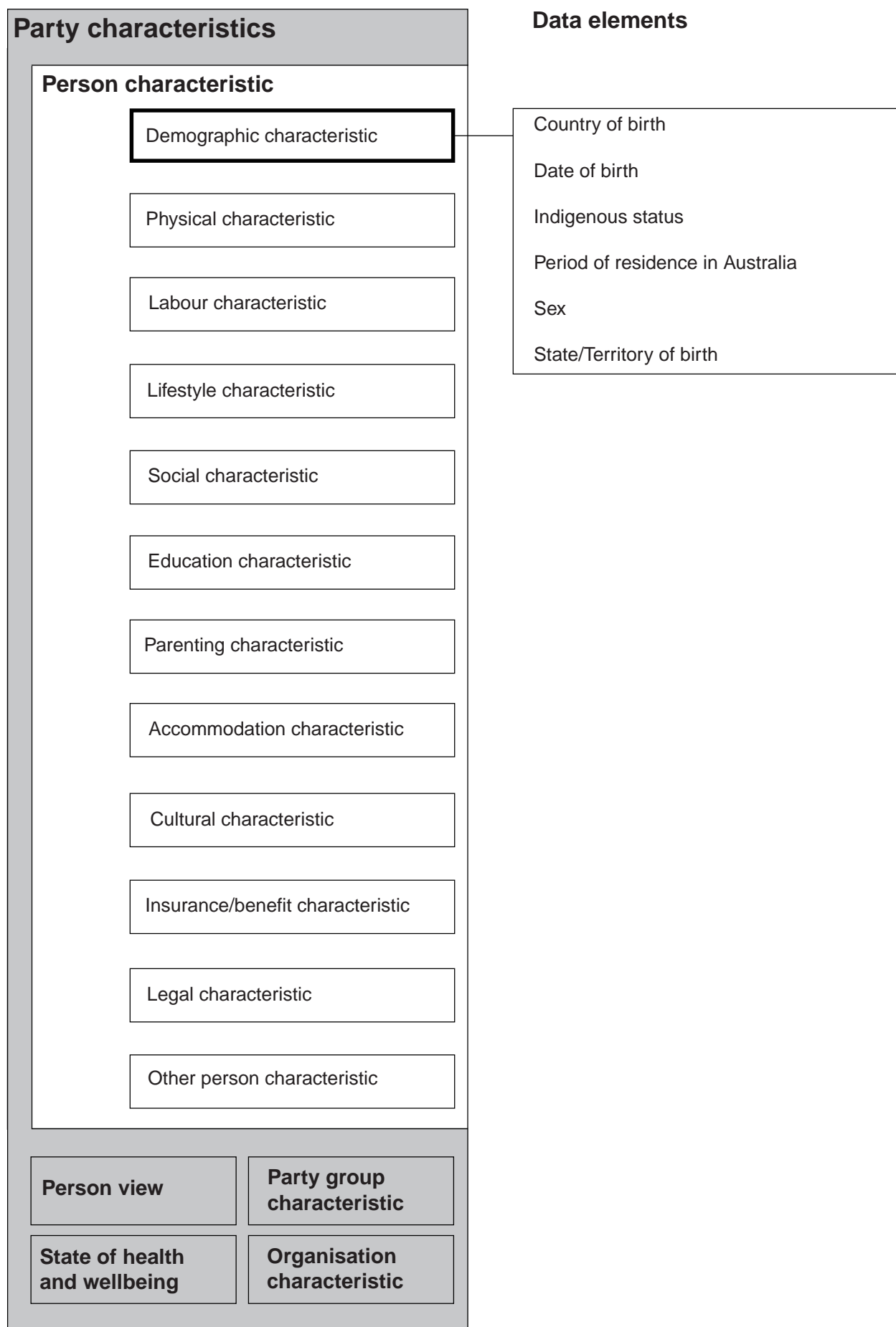
### National minimum data sets:

Institutional health care from 1/07/89 to

Perinatal collection from 1/07/97 to

**Comments:** The neonatal period is exactly four weeks or 28 completed days, commencing on the date of birth (day 0) and ending on the completion of day 27. For example, a baby born on 1 October remains a neonate until completion of the four weeks on 28 October and is no longer a neonate on 29 October.

## National Health Information Model entities



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## Country of birth

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**Admin. status:** CURRENT 1/07/94

### Identifying and definitional attributes

**NHIK identifier:** 000035 **Version number:** 2

**Data element type:** DATA ELEMENT

**Definition:** The country in which the person was born.

**Context:** Country of birth is important in the study of access to services by different population sub-groups. Country of birth is the most easily collected and consistently reported of possible data items. The item provides a link between the Census of Population and Housing, other ABS statistical collections and regional data collections. Country of birth may be used in conjunction with other data elements such as period of residence in Australia, etc., to derive more sophisticated measures of access to services by different population sub-groups.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 4 **Max.** 4 **Representational layout:** NNNN

**Data domain:** Australian Standard Classification of Countries for Social Statistics (ASCCSS) 4-digit (individual country) level. ABS catalogue no. 1269.0

**Guide for use:** A country, even if it comprises other discrete political entities such as states, is treated as a single unit for all data domain purposes. Parts of a political entity are not included in different groups. Thus, Hawaii is included in Northern America (as part of the identified country United States of America), despite being geographically close to and having similar social and cultural characteristics as the units classified to Polynesia in the ASCCSS.

**Verification rules:**

**Collection methods:**

**Related data:** supersedes previous data element Country of birth, version 1

### Administrative attributes

**Source document:** ABS Catalogue No. 1269.0

**Source organisation:** Australian Bureau of Statistics

#### National minimum data sets:

Institutional health care from 1/07/89 to

Institutional mental health care from 1/07/97 to

Perinatal collection from 1/07/97 to

**Comments:** As defined in the ABS Directory of concepts and standards for social, labour and demographic statistics, 1993

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## Date of birth

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**Admin. status:** CURRENT 1/07/94

### Identifying and definitional attributes

**NHIK identifier:** 000036 **Version number:** 2

**Data element type:** DATA ELEMENT

**Definition:** The date of birth of the person.

**Context:** Required to derive age for demographic analyses, for analysis by age at a point of time and for use to derive a Diagnosis Related Group (admitted patients).

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** DATE

**Field size:** **Min.** 8 **Max.** 8 **Representational layout:** DDMMYYYY

**Data domain:** Valid dates

**Guide for use:** If date of birth is not known, provision should be made to collect age (in years) and a date of birth derived from age.

**Verification rules:** For the provision of State and Territory hospital data to Commonwealth agencies this field must:

- be <= Admission date, otherwise resulting in a fatal error
- not be null
- be consistent with diagnoses and procedure codes, for records to be grouped, otherwise resulting in a fatal error.

**Collection methods:** It is recommended that in cases where all components of the date of birth are not known or where an estimate is arrived at from age, a valid date be used together with a flag to indicate that it is an estimate.

**Related data:** supersedes previous data element Date of birth, version 1  
is used in the derivation of Diagnosis related group, version 1

### Administrative attributes

**Source document:**

**Source organisation:** National Health Data Committee

#### National minimum data sets:

Institutional health care	from 1/07/89 to
Health labourforce	from 1/07/89 to
Perinatal collection	from 1/07/97 to
Community mental health care	from 1/07/98 to

**Comments:**

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## Indigenous status

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**Admin. status:** CURRENT 1/07/97

### Identifying and definitional attributes

**NHIK identifier:** 000001 **Version number:** 2

**Data element type:** DATA ELEMENT

**Definition:** An Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives (High Court of Australia in Commonwealth V Tasmania (1983) 46 ALR).

**Context:** Given the gross inequalities in health status between Indigenous and non-Indigenous peoples in Australia, the size of the Aboriginal and Torres Strait Islander populations and their historical and political context, there is a strong case for ensuring that information on Indigenous status is collected for planning and service delivery purposes and for monitoring Aboriginal and Torres Strait Islander health.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 1 **Representational layout:** N

**Data domain:**

1	Indigenous - Aboriginal but not Torres Strait Islander origin
2	Indigenous - Torres Strait Islander but not Aboriginal origin
3	Indigenous - Aboriginal and Torres Strait Islander origin
4	Not indigenous - not Aboriginal or Torres Strait Islander origin
9	Not stated (not for use in primary data collection)

#### Guide for use:

#### Verification rules:

**Collection methods:** There are three components to the definition:

- descent
- self identification
- community acceptance

It is not possible to collect the three components of the definition in a single question. The Australian Bureau of Statistics (ABS) proposes that the focus of a single question should be the descent, the first component of the definition. The ABS therefore proposes the use of the following alternative questions, depending on whether the person is present or not.

Where the person is present

‘Are you of Aboriginal or Torres Strait Islander origin?’; or

where the person is not present and someone who knows the person well responds for them,

‘Is the person of Aboriginal or Torres Strait Islander origin?’

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## Indigenous status (*continued*)

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**Collection methods (cont'd):** The ABS recommends collection of response in tick boxes, e.g.:

- No
- Yes Aboriginal
- Yes Torres Strait Islander.

Persons of both Aboriginal and Torres Strait Islander origin will mark 'Yes' to both questions enabling the responses to be coded.

Self reporting of descent is not equivalent to self reporting of identity but because of the absence of a second 'identity' question some respondents will interpret the 'origin' question to mean both descent and identification. What identification in the context of the variable Indigenous Status should measure is an individual's self assessed historical and cultural affiliation.

The code in the not stated classification is for use in administrative collections when transferring data from data sets where the item has not been collected. It is not to be used in primary collections.

**Related data:** supersedes previous data element Aboriginality, version 1

### Administrative attributes

**Source document:**

**Source organisation:** National Health Data Committee

**National minimum data sets:**

Institutional health care	from 1/07/89 to
Institutional mental health care	from 1/07/97 to
Perinatal collection	from 1/07/97 to
Community mental health care	from 1/07/98 to

**Comments:** The ABS has revised its interim standard for statistics on indigenous status aimed at providing a conceptual framework for the collection of information about Aboriginal or Torres Strait Islander peoples.

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## Period of residence in Australia

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**Admin. status:** CURRENT 1/07/89

### Identifying and definitional attributes

**NHIK identifier:** 000126 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** Length of time in years.

**Context:** This data item was included in the recommended second-level data set by the National Committee on Health and Vital Statistics (1979) to allow analyses relating to changes in morbidity patterns of ethnic subpopulations related to length of stay in host country; for example, cardiovascular disease among Greek immigrants in Australia.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** QUANTITATIVE VALUE

**Field size:** **Min.** 2 **Max.** 2 **Representational layout:** NN

**Data domain:**

00	Under one year residence in Australia
01-97	One to 97 years residence in Australia
98	Born in Australia
99	Unknown

**Guide for use:**

**Verification rules:**

**Collection methods:** This information may be obtained either from:

- a direct question with response values as specified in the data domain; or
- derived from other questions about date of birth, birthplace and year of arrival in Australia.

**Related data:** is used in conjunction with Country of birth, version 1  
is used in conjunction with Country of birth, version 2

### Administrative attributes

**Source document:**

**Source organisation:** National minimum data set working parties

**National minimum data sets:**

**Comments:** This item was not considered a high priority by the Office of Multicultural Affairs (1988) and to date only 'Country of birth' and 'Indigenous status' are considered by the National Health Data Committee to be justified for inclusion in the National Minimum Data Set - Institutional Health Care.

A group of items to enable collection of non-English speaking background is under development by the Australian Bureau of Statistics during 1997.



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## Sex

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000149 **Version number:** 2

**Data element type:** DATA ELEMENT

**Definition:** The sex of the person.

**Context:** Required for analyses of service utilisation, needs for services and epidemiological studies.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 1 **Representational layout:** N

**Data domain:**

1	Male
2	Female
3	Indeterminate
9	Not stated / inadequately described

**Guide for use:** An indeterminate sex category may be necessary for situations such as the classification of perinatal statistics when it is not possible for the sex to be determined.

**Verification rules:** For the provision of State and Territory hospital data to Commonwealth agencies this field must be consistent with diagnosis and procedure codes, for records grouped in Major Diagnostic Categories 12, 13 and 14, for valid grouping, otherwise resulting in a fatal error for sex conflicts. For other Major Diagnostic Categories, sex conflicts result in a warning error.

**Collection methods:** It is suggested that the following format be used for data collection:

What is your (the person's) sex?

\_\_\_ Male

\_\_\_ Female

The term 'sex' refers to the biological differences between males and females, while the term 'gender' refers to the socially expected/perceived dimensions of behaviour associated with males and females - masculinity and femininity. The ABS advises that the correct terminology for this data element is sex. Information collection for transsexuals and people with transgender issues should be treated in the same manner. To avoid problems with edits, transsexuals undergoing a sex change operation should have their sex at time of hospital admission recorded.

**Related data:** supersedes previous data element Sex, version 1  
is used in the derivation of Diagnosis related group, version 1

### Administrative attributes

**Source document:** ABS Directory of concepts and standards for social, labour and demographic statistics, 1993

## **Sex (continued)**

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**Source organisation:** National Health Data Committee

**National minimum data sets:**

Institutional health care	from 1/07/89 to
Institutional mental health care	from 1/07/97 to
Perinatal collection	from 1/07/97 to
Community mental health care	from 1/07/98 to

**Comments:** This item has been altered to enable standardisation of the collection of information relating to sex, gender, people with transgender issues and transsexuals.

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## State / Territory of birth

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**Admin. status:** CURRENT 1/07/96

### Identifying and definitional attributes

**NHIK identifier:** 000155 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** The State/Territory in which the birth occurred.

**Context:** Perinatal statistics: to enable analyses by State/Territory of delivery.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 1 **Representational layout:** N

**Data domain:**

0	Not applicable (includes resident overseas, no fixed address)
1	New South Wales
2	Victoria
3	Queensland
4	South Australia
5	Western Australia
6	Tasmania
7	Northern Territory
8	Australian Capital Territory
9	External Australian territories (Cocos (Keeling) Islands, Christmas Island and Jervis Bay Territory)

**Guide for use:**

**Verification rules:**

**Collection methods:**

**Related data:**

### Administrative attributes

**Source document:**

**Source organisation:** National Perinatal Data Advisory Committee

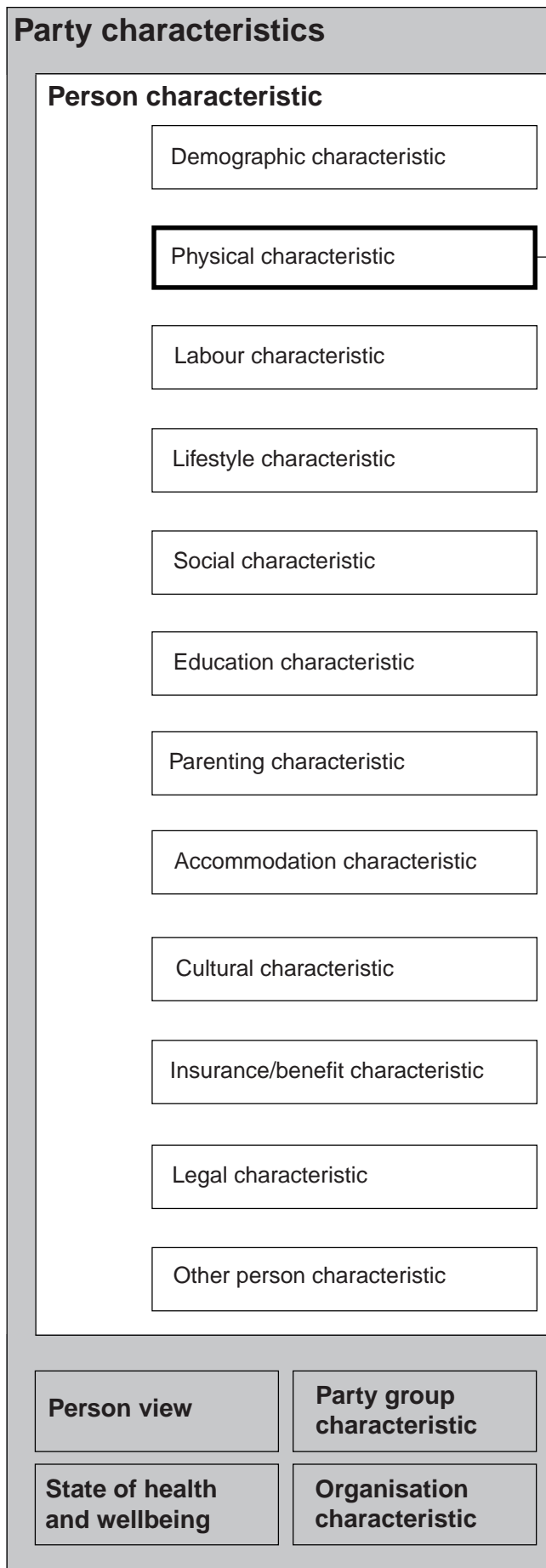
**National minimum data sets:**

Perinatal collection from 1/07/97 to

**Comments:**



**National Health Information Model entities**



**Data elements**

- Adult abdomen to hip ratio
- Adult abdominal circumference\*
- Adult abdominal circumference – measured
- Adult body mass index
- Adult body mass index – classification
- Adult height\*
- Adult height – measured
- Adult height – self-reported
- Adult hip circumference\*
- Adult hip circumference – measured
- Adult weight\*
- Adult weight – measured
- Adult weight – self-reported

\*Data element concept

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## Adult abdomen to hip ratio

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000373 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** A person's abdomen to hip ratio.  
Adult abdomen to hip ratio is a continuous variable.  
Adult abdomen to hip ratio is calculated by: abdominal circumference (cm) divided by hip circumference (cm).

**Context:** Public health and health care.

Body fat distribution has emerged as an important predictor of obesity-related morbidity and mortality. Abdominal obesity, which is more common in men than women, has, in epidemiological studies, been closely associated with conditions such as coronary heart disease, stroke, non-insulin dependent diabetes mellitus and high blood pressure.

Abdomen to hip ratio (AHR) can be used:

- to indicate the prevalence of abdominal obesity and its sociodemographic distribution (problem identification);
- to evaluate health promotion and disease prevention programs (assessment of interventions);
- to monitor progress towards National Health Goals and Targets;
- to ascertain determinants and consequences of abdominal obesity; and
- in nutritional surveillance and long-term planning.

Cutoff points for abdomen to hip ratio that may define increased risk of cardiovascular disease and all cause mortality range from 0.9 to 1.0 for men and 0.8 to 0.9 for women (Croft et al. 1995; Bray 1987; Bjorntorp 1985). These values are based primarily on evidence of increased risk of death in European populations, and may not be appropriate for all age and ethnic groups.

In Australia and New Zealand, the cutoffs of > 0.9 for males and > 0.8 for females were used in the Australian Bureau of Statistics' 1995 National Nutrition Survey.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** QUANTITATIVE VALUE

**Field size:** **Min.** 3 **Max.** 3 **Representational layout:** N.NN

**Data domain:**

**Guide for use:** Adult abdomen to hip ratio cannot be calculated if either component necessary for its calculation (i.e. abdominal circumference or hip circumference) has not been collected (i.e. is coded to 999.9).

**Verification rules:**

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## Adult abdomen to hip ratio (*continued*)

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**Collection methods:** AHR should be derived after the data entry of abdominal circumference and hip circumference. It should be stored on the raw data set as a continuous variable and should not be aggregated or rounded.

It is recommended that in population surveys, sociodemographic data including ethnicity should be collected, as well as other risk factors including physiological status (e.g. pregnancy), physical activity, smoking and alcohol consumption. Summary statistics may need to be adjusted for these variables.

**Related data:** is calculated using Adult hip circumference - measured, version 1  
is calculated using Adult abdominal circumference - measured, version 1

### Administrative attributes

**Source document:**

**Source organisation:** Responsible organisations: National Health Data Committee (NHDC) / National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare. (See also Comments)

**National minimum data sets:**

**Comments:** Submitting organisation: The Expert Working Group on Data Standards for Indicators of Body Fatness in Australian Adults through the National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare. Date of submission: October 1997

This data element applies to persons aged 18 years or older. It is recommended for use in population surveys and health care settings.

**Presentation of data:**

Means, 95% confidence intervals, medians and centiles should be reported to one decimal place. Where the sample permits, population estimates should be presented by sex and 5-year age groups. Estimates based on sample surveys may need to take into account sampling weights.

For consistency with conventional practice, and for current comparability with international data sets, recommended centiles are 5, 10, 15, 25, 50, 75, 85, 90 and 95. To estimate the 5th and 95th centiles a sample size of at least 200 is recommended for each group for which the centiles are being specified.

## Adult abdominal circumference

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000371

**Version number:** 1

**Data element type:** DATA ELEMENT CONCEPT

**Definition:** A person's abdominal circumference

**Context:**

### Relational and representational attributes

**Datatype:** **Representational form:**

**Field size:** **Min.** **Max.** **Representational layout:**

**Data domain:**

**Guide for use:**

**Verification rules:**

**Collection methods:**

**Related data:** relates to the data element Adult abdominal circumference - measured, version 1

### Administrative attributes

**Source document:**

**Source organisation:**

**National minimum data sets:**

**Comments:**



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## Adult abdominal circumference - measured

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000372 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** A person's abdominal circumference measured half way between the inferior margin of the last rib and the crest of the ilium in the mid-axillary plane. The measurement is taken at the end of normal expiration.

The measurement of abdominal circumference is not the same as that of waist circumference where the minimum girth is measured.

Adult abdominal circumference: measured is a continuous variable measured to the nearest 0.1 cm.

In order to ensure consistency in measurement, the measurement protocol described under Data Collection Methods should be used.

**Context:** Public health and health care.

Its main use is to enable the calculation of Adult abdomen to hip ratio which requires the measurement of hip circumference and abdominal circumference.

There is evidence that abdominal circumference alone might be used to identify people at health risk both from being overweight and from having a central fat distribution (Lean et al. 1995; Han et al. 1995; Pouliot et al. 1994; Seidell et al. 1992).

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** QUANTITATIVE VALUE

**Field size:** **Min.** 3 **Max.** 4 **Representational layout:** NNN.N

**Data domain:**

**Guide for use:** If measured abdominal circumference is not able to be collected, code 999.9

**Verification rules:**

**Collection methods:** Measurement protocol:

The measurement of abdominal circumference requires a narrow (< 7 mm wide), flexible, inelastic tape measure. The kind of tape used should be described and reported. The graduations on the tape measure should be at 0.1 cm intervals and the tape should have the capacity to measure up to 200 cm. Measurement intervals and labels should be clearly readable under all conditions of use of the tape measure.

The subject should remove any belts and heavy outer clothing. Measurement of abdominal circumference should be taken over at most one layer of light clothing. Ideally the measure is made directly over the skin.

The subject stands comfortably with weight evenly distributed on both feet, and the feet separated about 25-30 cm. The arms should hang loosely at the sides. Posture can affect abdominal circumference.

## Adult abdominal circumference - measured (*continued*)

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**Collection methods**  
(*cont'd*):

The measurement is taken midway between the inferior margin of the last rib and the crest of the ilium, in the mid axillary plane. Each landmark should be palpated and marked, and the midpoint determined with a tape measure and marked.

The circumference is measured with an inelastic tape maintained in a horizontal plane, at the end of normal expiration. The tape is snug, but does not compress underlying soft tissues. The measurer is positioned by the side of the subject to read the tape. To ensure contiguity of the two parts of the tape from which the circumference is to be determined, the cross-handed technique of measurement, as described by Norton et al. (1996), should be used. Ideally an assistant will check the position of the tape on the opposite side of the subject's body.

The measurement is recorded at the end of a normal expiration to the nearest 0.1 cm. Take a repeat measurement and record it to the nearest 0.1 cm. If the two measurements disagree by more than 1 cm, then take a third measurement. All raw measurements should be recorded on the data collection form. If practical, it is preferable to enter the raw data into the database as this enables intra- and, where relevant, inter-observer errors to be assessed. The subject's measured abdominal circumference is subsequently calculated as the mean of the two observations, or the mean of the two closest measurements if a third is taken, and recorded on the form. If only a mean value is entered into the database then the data collection forms should be retained.

It may be necessary to round the mean value to the nearest 0.1 cm. If so, rounding should be to the nearest even digit to reduce systematic over reporting (Armitage and Berry 1994). For example, a mean value of 72.25 cm would be rounded to 72.2 cm, while a mean value of 72.35 cm would be rounded to 72.4 cm.

It is recommended that in population surveys, sociodemographic data including ethnicity should be collected, as well as other risk factors including physiological status (e.g. pregnancy), physical activity, smoking and alcohol consumption. Summary statistics may need to be adjusted for these variables.

National health data elements currently exist for sex, date of birth, country of birth and Indigenous Status. Data elements are being developed for physical activity and smoking.

Validation and quality control measures:

Steel tapes should be checked against a 1 metre engineer's rule every 12 months. If tapes other than steel are used they should be checked daily against a steel rule.

Within- and, if relevant, between-observer variability should be reported. They can be assessed by the same (within-) or different (between-) observers repeating the measurement, on the same subjects, under standard conditions after a short time interval. The standard deviation of replicate measurements (technical error of measurement (Pederson & Gore 1996)) between observers should not exceed 2% and be less than 1.5% within observers.

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## Adult abdominal circumference - measured (*continued*)

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**Collection methods (cont'd):** Extreme values at the lower and upper end of the distribution of measured abdominal circumference should be checked both during data collection and after data entry. Individuals should not be excluded on the basis of true biological difference.

Last digit preference, and preference or avoidance of certain values, should be analysed in the total sample and (if relevant) by observer, survey site and over time if the survey period is long.

**Related data:** is used in the calculation of Adult abdomen to hip ratio, version 1

### Administrative attributes

**Source document:** The measurement protocol described below is that recommended by the World Health Organization (WHO Expert Committee 1995).

**Source organisation:** World Health Organization (see also Comments)

### National minimum data sets:

**Comments:** Submitting organisation: The Expert Working Group on Data Standards for Indicators of Body Fatness in Australian Adults through the National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare.

Responsible organisations: National Health Data Committee (NHDC) / National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare.

This data element applies to persons aged 18 years or older. It is recommended for use in population surveys and health care settings.

Presentation of data:

Means, 95% confidence intervals, medians and centiles should be reported to one decimal place. Where the sample permits, population estimates should be presented by sex and 5-year age groups. Estimates based on sample surveys may need to take into account sampling weights.

For consistency with conventional practice, and for current comparability with international data sets, recommended centiles are 5, 10, 15, 25, 50, 75, 85, 90 and 95. To estimate the 5th and 95th centiles a sample size of at least 200 is recommended for each group for which the centiles are being specified.

For reporting purposes, it may be desirable to present abdominal circumference in categories. It is recommended that 5 cm groupings are used for this purpose. Abdominal circumference should not be rounded before categorisation. The following categories may be appropriate for describing the abdominal circumferences of Australian men and women, although the range will depend on the population.

Abdom < 60 cm  
 60 cm = Abdom < 65 cm  
 65 cm = Abdom < 70 cm  
 ... in 5 cm categories  
 105 cm = Abdom < 110 cm  
 Abdom = 110 cm

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## Adult body mass index

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000367 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** A person's weight (body mass) relative to height. It is a measure of body mass corrected for height which is used to assess the extent of weight deficit or excess. In sedentary populations, body mass index (BMI) also provides an imprecise but practical indicator of the level of body fat.

Adult body mass index is a continuous variable.

Adult body mass index is calculated by: weight (kg) divided by (height (m) squared)

**Context:** Public health and health care.

BMI is used as an indicator of both underweight and, overweight and obesity, in sedentary Western adults. On a population basis there is a strong association between BMI and health risk.

In population based surveys, BMI may be used:

- to indicate the prevalence of thinness and overweight and their sociodemographic distribution (problem identification);
- to evaluate health promotion and disease prevention programs (assessment of interventions);
- to monitor progress towards National Health Goals and Targets;
- to ascertain determinants and consequences of thinness and overweight; and
- in nutritional surveillance and long-term planning.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** QUANTITATIVE VALUE

**Field size:** **Min.** 3 **Max.** 4 **Representational layout:** NN.NN\* / NN.N\*\*

**Data domain:**

**Guide for use:** Adult body mass index cannot be calculated if either component necessary for its calculation (i.e. weight or height) is unknown or has not been collected (i.e. is coded to 888.8 or 999.9)

**Verification rules:**

**Collection methods:** \*NN.NN for BMI calculated from measured height and weight.

\*\*NN.N for BMI calculated from self-reported height and/or self-reported weight

BMI calculated from measured height and weight should be distinguished from BMI calculated from self-reported height and/or weight. When either self-reported height or self-reported weight is used in the calculation, BMI should be recorded as self-reported BMI.

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## Adult body mass index (*continued*)

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**Collection methods (cont'd):** BMI should be derived after the data entry of weight and height. It should be stored on the raw data set as a continuous variable and should not be aggregated or rounded.

It is recommended that in population surveys, sociodemographic data including ethnicity should be collected, as well as other risk factors including physiological status (e.g. pregnancy), physical activity, smoking and alcohol consumption. Summary statistics may need to be adjusted for these variables.

National health data elements currently exist for sex, date of birth, country of birth and Indigenous Status. Data elements are being developed for physical activity and smoking.

**Related data:**

- is calculated using Adult height - measured, version 1
- is calculated using Adult height - self-reported, version 1
- is calculated using Adult weight - measured, version 1
- is calculated using Adult weight - self-reported, version 1
- is used in the derivation of Adult body mass index - classification, version 1

### Administrative attributes

**Source document:**

**Source organisation:** Responsible organisations: National Health Data Committee (NHDC) / National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare. (See also Comments)

**National minimum data sets:**

**Comments:** Submitting organisation: The Expert Working Group on Data Standards for Indicators of Body Fatness in Australian Adults through the National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare. Date of submission: October 1997

This data element applies to persons aged 18 years or older. It is recommended for use in population surveys and health care settings.

Presentation of data:

Means, 95% confidence intervals, medians and centiles should be reported to one decimal place. Where the sample permits, population estimates should be presented by sex and 5-year age groups. Estimates based on sample surveys may need to take into account sampling weights.

For consistency with conventional practice, and for current comparability with international data sets, recommended centiles are 5, 10, 15, 25, 50, 75, 85, 90 and 95. To estimate the 5th and 95th centiles a sample size of at least 200 is recommended for each group for which the centiles are being specified.

Body mass index can be calculated from measured height and weight, or self-reported height and weight.

Body mass index tends to be underestimated when based on self-reported, rather than measured, height and weight. This is due to the fact that, on average, height tends to be overestimated and weight tends to be underestimated when self-reported by respondents.

## Adult body mass index (*continued*)

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**Comments (cont'd):** There are many individuals for whom BMI is an inappropriate measure of body fatness. These are individuals whose high body mass is due to excess muscle rather than fat (e.g. body builders or others in whom the level of physical activity promotes an increase in muscle mass); or in those with osteoporosis who will have a lower than usual BMI; or those who have a different body build (e.g. individuals with unusually long or short legs or a different body fat distribution) (WHO Expert Committee 1995). This is particularly important when assessing individuals but should also be taken into account in interpreting data from populations in which there are sub-groups with genetic or environmental differences in body build, composition, skeletal proportions or body fat distribution.

Epidemiological research shows that there is a strong association between BMI and health risk. Excess adipose tissue in adults is associated with excess morbidity and mortality from conditions such as hypertension, unfavourable blood lipid concentrations, diabetes mellitus, coronary heart disease, some cancers, gall bladder disease, and osteoarthritis. It may also lead to social and economic disadvantage as well as psychosocial problems. It is a major public health issue in most industrialised societies.

Thinness (low BMI) is also an indicator of health risk, often being associated with general illness, anorexia, cigarette smoking, drug addiction and alcoholism. Low BMI is consistently associated with increased risk of osteoporosis and fractures in the elderly.

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## Adult body mass index - classification

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000368 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** The category of weight deficit or excess.

**Context:** Public health and health care.

BMI is used as an indicator of both underweight and, overweight and obesity, in sedentary Western adults. On a population basis there is a strong association between BMI and health risk.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 1 **Representational layout:** N

**Data domain:**

1	Grade 3 thinness (BMI < 16.00)
2	Grade 2 thinness (BMI 16.00-16.99)
3	Grade 1 thinness (BMI 17.00-18.49)
4	Normal range (BMI 18.50-19.99)
5	(BMI 20.00-24.99)
6	Grade 1 overweight (BMI 25.00-29.99)
7	Grade 2 overweight (BMI 30.00-39.99)
8	Grade 3 overweight (BMI > or = 40.00)

(WHO Expert Committee 1995; NHMRC 1984, 1985)

**Guide for use:**

**Verification rules:**

**Collection methods:** It is recommended that in population surveys, sociodemographic data including ethnicity should be collected, as well as other risk factors including physiological status (e.g. pregnancy), physical activity, smoking and alcohol consumption. Summary statistics may need to be adjusted for these variables.

National health data elements currently exist for sex, date of birth, country of birth and Indigenous Status. Data elements are being developed for physical activity and smoking.

Standard definitions of overweight and obesity in terms of BMI are used to derive age-specific and age-adjusted indicators of overweight and obesity for reporting progress towards National Health Goals and Targets.

**Related data:** is used in conjunction with Adult body mass index, version 1

### Administrative attributes

**Source document:** 'Physical status: the use and interpretation of anthropometry' (WHO Expert Committee 1995)

**Source organisation:** World Health Organization (see also Comments)

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## Adult body mass index - classification (*continued*)

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### **National minimum data sets:**

#### **Comments:**

Submitting organisation: The Expert Working Group on Data Standards for Indicators of Body Fatness in Australian Adults through the National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare.

Responsible organisation: National Health Data Committee (NHDC) / National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare.

There are, however, many individuals for whom BMI is an inappropriate measure of body fatness. These are individuals whose high body mass is due to excess muscle rather than fat (e.g. body builders or others in whom the level of physical activity promotes an increase in muscle mass); or in those with osteoporosis who will have a lower than usual BMI; or those who have a different body build (e.g. individuals with unusually long or short legs or a different body fat distribution) (WHO Expert Committee 1995). This is particularly important when assessing individuals but should also be taken into account in interpreting data from populations in which there are sub-groups with genetic or environmental differences in body build, composition, skeletal proportions or body fat distribution.

Epidemiological research shows that there is a strong association between BMI and health risk. Excess adipose tissue in adults is associated with excess morbidity and mortality from conditions such as hypertension, unfavourable blood lipid concentrations, diabetes mellitus, coronary heart disease, some cancers, gall bladder disease, and osteoarthritis. It may also lead to social and economic disadvantage as well as psychosocial problems. It is a major public health issue in most industrialised societies.

Overweight and obesity, as defined by NHMRC guidelines for the interpretation of BMI (NHMRC 1984, 1985), are exceedingly common in Australia and their prevalence is increasing. The direct economic cost of obesity (BMI = 30) to Australia was estimated to be over \$500 million in 1992-93 (NHMRC 1997).

Thinness (low BMI) is also an indicator of health risk, often being associated with general illness, anorexia, cigarette smoking, drug addiction and alcoholism. Low BMI is consistently associated with increased risk of osteoporosis and fractures in the elderly.

The WHO may revise this classification to:

- 1 Grade 3 thinness (BMI < 16.00)
- 2 Grade 2 thinness (BMI 16.00 16.99)
- 3 Grade 1 thinness (BMI 17.00 18.49)
- 4 Normal range (BMI 18.50 24.99)
- 5 Overweight (BMI 25.00 29.99)
- 6 Obesity Grade 1 (BMI 30.00 34.99)
- 7 Obesity Grade 2 (BMI 35.00 44.99)
- 8 Obesity Grade 3 (BMI = 45.00)

This data element applies to persons aged 18 years or older. It is recommended for use in population surveys and health care settings.



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## Adult body mass index - classification (*continued*)

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**Comments (cont'd):** Presentation of data:

Methods used to establish cut-off points for overweight have been arbitrary and, as a result, cut-off points vary between countries. The data are derived mainly from studies of mortality and morbidity risk performed in people living in western Europe or the United States of America, and cut-off points for BMI as an indicator of adiposity and risk in populations who differ in body build and genetic disposition are likely to vary. Caution is required in relation to BMI cut-off points when used for different ethnic groups because of limited outcome data for some ethnic groups, e.g. Aboriginal and Torres Strait Islander peoples. Further, the cut-off points for adults should not be used for children.

There are no recognised reference standards for the lower limit of the 'normal' range. The classification below is that recommended by the World Health Organization. This is regarded as an interim classification. As with overweight the cut-off points for a given level of risk are likely to vary with body build, genetic background and physical activity.

The classification below is different to ones that have been used in the past and it is important that in any trend analysis consistent definitions are used.

## Adult height

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000361

**Version number:** 1

**Data element type:** DATA ELEMENT CONCEPT

**Definition:** A person's height.

**Context:**

### Relational and representational attributes

**Datatype:** **Representational form:**

**Field size:** **Min.** **Max.** **Representational layout:**

**Data domain:**

**Guide for use:**

**Verification rules:**

**Collection methods:**

**Related data:** relates to the data element Adult height - measured, version 1  
relates to the data element Adult height - self-reported, version 1

### Administrative attributes

**Source document:**

**Source organisation:**

**National minimum data sets:**

**Comments:**

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## Adult height - measured

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000362 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** A person's measured height.  
Adult height: measured is a continuous variable measured to the nearest 0.1 cm.

In order to ensure consistency in measurement, the measurement protocol described under Data Collection Methods should be used.

**Context:** Public health and health care.

Stature is a major indicator of general body size and of bone length. It is important in screening for disease or malnutrition, and in the interpretation of weight (Lohman et al. 1988). Shortness is known to be a predictor of all cause mortality, coronary heart disease mortality in middle aged men, and of less favourable gestational outcomes in women (Marmot et al. 1984, Kramer 1988).

Its main use is to enable the calculation of Adult body mass index which requires the measurement of height and weight.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** QUANTITATIVE VALUE

**Field size:** **Min.** 3 **Max.** 4 **Representational layout:** NNN.N

**Data domain:**

**Guide for use:** If measured height is not able to be collected, code 999.9.

**Verification rules:**

**Collection methods:** Measurement protocol:

The measurement of height requires a vertical metric rule, a horizontal headboard, and a non-compressible flat even surface on which the subject stands. The equipment may be fixed or portable, and should be described and reported.

The graduations on the metric rule should be at 0.1 cm intervals, and the metric rule should have the capacity to measure up to at least 210 cm. Measurement intervals and labels should be clearly readable under all conditions of use of the instrument.

Apparatus that allows height to be measured while the subject stands on a platform scale is not recommended.

The subject should be measured without shoes (i.e. is barefoot or wears thin socks) and wears little clothing so that the positioning of the body can be seen. Anything that may affect or interfere with the measurement should be noted on the data collection form (e.g. hairstyles and accessories, or physical problems).

## Adult height - measured (*continued*)

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**Collection methods**  
(*cont'd*):

The subject stands with weight distributed evenly on both feet, heels together, and the head positioned so that the line of vision is at right angles to the body. The correct position for the head is in the Frankfort horizontal plane (Norton et al. 1996). The arms hang freely by the sides. The head, back, buttocks and heels are positioned vertically so that the buttocks and the heels are in contact with the vertical board.

To obtain a consistent measure, the subject is asked to inhale deeply and stretch to their fullest height. The measurer applies gentle upward pressure through the mastoid processes to maintain a fully erect position when the measurement is taken. Ensure that the head remains positioned so that the line of vision is at right angles to the body, and the heels remain in contact with the base board.

The movable headboard is brought onto the top of the head with sufficient pressure to compress the hair.

The measurement is recorded to the nearest 0.1 cm. Take a repeat measurement. If the two measurements disagree by more than 0.5 cm, then take a third measurement. All raw measurements should be recorded on the data collection form. If practical, it is preferable to enter the raw data into the database as this enables intra- and, where relevant, inter-observer errors to be assessed. The subject's measured height is subsequently calculated as the mean of the two observations, or the mean of the two closest measurements if a third is taken, and recorded on the form. If only a mean value is entered into the database then the data collection forms should be retained.

It may be necessary to round the mean value to the nearest 0.1 cm. If so, rounding should be to the nearest even digit to reduce systematic over reporting (Armitage and Berry 1994). For example, a mean value of 172.25 cm would be rounded to 172.2 cm, while a mean value of 172.35 cm would be rounded to 172.4 cm.

It is recommended that in population surveys, sociodemographic data including ethnicity should be collected, as well as other risk factors including physiological status (e.g. pregnancy), physical activity, smoking and alcohol consumption. Summary statistics may need to be adjusted for these variables.

National health data elements currently exist for sex, date of birth, country of birth and Indigenous Status. Data elements are being developed for physical activity and smoking.

Validation and quality control measures:

All equipment, whether fixed or portable should be checked prior to each measurement session to ensure that both the headboard and floor (or footboard) are at 90 degrees to the vertical rule. With some types of portable anthropometer it is necessary to check the correct alignment of the headboard, during each measurement, by means of a spirit level.

Within- and, if relevant, between-observer variability should be reported. They can be assessed by the same (within-) or different (between-) observers repeating the measurement of height, on the same subjects, under standard conditions after a short time interval. The standard deviation of replicate measurements (technical error of measurement (Pederson & Gore 1996))

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## Adult height - measured (*continued*)

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**Collection methods (cont'd):** between observers should not exceed 5 mm and be less than 5 mm within observers.

Extreme values at the lower and upper end of the distribution of measured height should be checked both during data collection and after data entry. Individuals should not be excluded on the basis of true biological difference.

Last digit preference, and preference or avoidance of certain values, should be analysed in the total sample and (if relevant) by observer, survey site and over time if the survey period is long.

**Related data:** is used in the calculation of Adult body mass index, version 1

### Administrative attributes

**Source document:** The measurement protocol described below is those recommended by the International Society for the Advancement of Kinanthropometry as described by Norton et al. (1996), and the World Health Organization (WHO Expert Committee 1995), which was adapted from Lohman et al. (1988).

**Source organisation:** International Society for the Advancement of Kinanthropometry and the World Health Organization. (See also Comments)

### National minimum data sets:

**Comments:** Submitting organisation: The Expert Working Group on Data Standards for Indicators of Body Fatness in Australian Adults through the National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare. Date of submission: October 1997

Responsible organisation: National Health Data Committee (NHDC) / National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare

This data element applies to persons aged 18 years or older. It is recommended for use in population surveys and health care settings.

Presentation of data:

Means, 95% confidence intervals, medians and centiles should be reported to one decimal place. Where the sample permits, population estimates should be presented by sex and 5-year age groups. Estimates based on sample surveys may need to take into account sampling weights.

For consistency with conventional practice, and for current comparability with international data sets, recommended centiles are 5, 10, 15, 25, 50, 75, 85, 90 and 95. To estimate the 5th and 95th centiles a sample size of at least 200 is recommended for each group for which the centiles are being specified.

For some reporting purposes, it may be desirable to present height data in categories. It is recommended that 5 cm groupings are used for this purpose. Height data should not be rounded before categorisation. The following categories may be appropriate for describing the heights of Australian men and women, although the range will depend on the population. The World Health Organization's range for height is 140-190 cm.

## Adult height - measured (*continued*)

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**Comments (cont'd):** Ht <140 cm  
140 cm = Ht < 145 cm  
145 cm = Ht < 150 cm  
... in 5 cm categories  
185 cm = Ht < 190 cm  
Ht = 190 cm

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## Adult height - self-reported

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000363 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** A person's self-reported height.

**Context:** Public health and health care.

Stature is a major indicator of general body size and of bone length. It is important in screening for disease or malnutrition, and in the interpretation of weight (Lohman et al. 1988). Shortness is known to be a predictor of all cause mortality and coronary heart disease mortality in middle aged men (Marmot et al. 1984) and of less favourable gestational outcomes in women (Kramer 1988).

Its main use is to enable the calculation of body mass index which requires the measurement of height and body mass (weight).

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** QUANTITATIVE VALUE

**Field size:** *Min.* 2 *Max.* 3 **Representational layout:** NNN

**Data domain:**

**Guide for use:** If self-reported height is unknown, code 888  
If self-reported height is not responded to, code 999

**Verification rules:**

**Collection methods:** The method of data collection, e.g. face to face interview, telephone interview or self-completion questionnaire, can affect survey estimates and should be reported.

The data collection form should include a question asking the respondent what their height is. For example, the ABS National Health Survey 1995 included the question 'How tall are you without shoes?'. The data collection form should allow for both metric (to the nearest 1 cm) and imperial (to the nearest 0.5 inch) units to be recorded.

If practical, it is preferable to enter the raw data into the database before conversion of measures in imperial units to metric. However if this is not possible, height reported in imperial units can be converted to metric prior to data entry using a conversion factor of 2.54 cm to the inch.

Rounding to the nearest 1 cm will be required for measures converted to metric prior to data entry, and may be required for data reported in metric units to a greater level of precision than the nearest 1 cm. The following rounding conventions are desirable to reduce systematic over reporting (Armitage and Berry 1994):

nnn.x where  $x < 5$  - round down, e.g. 172.2 cm would be rounded to 172 cm.

nnn.x where  $x > 5$  - round up, e.g. 172.7 cm would be rounded to 173 cm.

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## Adult height - self-reported (*continued*)

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**Collection methods (cont'd):** nnn.x where x = 5 - round to the nearest even number, e.g. 172.5 cm would be rounded to 172 cm, while 173.5 cm would be rounded to 174 cm.

It is recommended that in population surveys, sociodemographic data including ethnicity should be collected, as well as other risk factors including physiological status (e.g. pregnancy), physical activity, smoking and alcohol consumption. Summary statistics may need to be adjusted for these variables.

National health data elements currently exist for sex, date of birth, country of birth and Indigenous Status. Data elements are being developed for physical activity and smoking.

**Related data:** is used in the calculation of Adult body mass index, version 1

### Administrative attributes

**Source document:**

**Source organisation:** Responsible organisations: National Health Data Committee (NHDC) / National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare. (See also Comments)

**National minimum data sets:**

**Comments:** Submitting organisation: The Expert Working Group on Data Standards for Indicators of Body Fatness in Australian Adults through the National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare. Date of submission: October 1997

This data element applies to persons aged 18 years or older. It is recommended for use in population surveys when it is not possible to measure height.

**Presentation of data:**

Means, 95% confidence intervals, medians and centiles should be reported to one decimal place. Where the sample permits, population estimates should be presented by sex and 5-year age groups. Estimates based on sample surveys may need to take into account sampling weights.

For consistency with conventional practice, and for current comparability with international data sets, recommended centiles are 5, 10, 15, 25, 50, 75, 85, 90 and 95. To estimate the 5th and 95th centiles a sample size of at least 200 is recommended for each group for which the centiles are being specified.

For some reporting purposes, it may be desirable to present height data in categories. It is recommended that 5 cm groupings are used for this purpose. Height data should not be rounded before categorisation. The following categories may be appropriate for describing the heights of Australian men and women, although the range will depend on the population. The World Health Organization's range for height is 140-190 cm.

Ht <140 cm  
140 cm = Ht < 145 cm  
145 cm = Ht < 150 cm  
... in 5 cm categories  
185 cm = Ht < 190 cm  
Ht = 190 cm



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## Adult height - self-reported (*continued*)

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**Comments (cont'd):** On average, height tends to be overestimated when self-reported by respondents. Data for Australian men and women aged 20-69 years in 1989 indicated that men overestimated by an average of 1.1 cm (sem of 0.04 cm) and women by an average of 0.5 cm (sem of 0.05 cm) (Waters 1993). The extent of overestimation varied with age.

## Adult hip circumference

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000369

**Version number:** 1

**Data element type:** DATA ELEMENT CONCEPT

**Definition:** A person's hip circumference

**Context:**

### Relational and representational attributes

**Datatype:** **Representational form:**

**Field size:** **Min.** **Max.** **Representational layout:**

**Data domain:**

**Guide for use:**

**Verification rules:**

**Collection methods:**

**Related data:** relates to the data element Adult hip circumference - measured, version 1

### Administrative attributes

**Source document:**

**Source organisation:**

**National minimum data sets:**

**Comments:**

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## Adult hip circumference - measured

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000370 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** A person's hip circumference measured at the level of maximum posterior extension of the buttocks.

Adult hip circumference: measured is a continuous variable measured to the nearest 0.1 cm.

In order to ensure consistency in measurement, the measurement protocol described under Data Collection Methods should be used.

**Context:** Public health and health care.

Its main use is to enable the calculation of Adult abdomen to hip ratio which requires the measurement of hip circumference and abdominal circumference.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** QUANTITATIVE VALUE

**Field size:** *Min.* 3 *Max.* 3 **Representational layout:** NNN.N

**Data domain:**

**Guide for use:** If measured hip circumference is not able to be collected, code 999.9

**Verification rules:**

**Collection methods:** Measurement protocol:

The data collection form should allow for up to three measurements of hip circumference to be recorded in centimetres to 1 decimal place. The data collection form should also have the capacity to record any reasons for the non-collection of hip circumference data.

The measurement of hip circumference requires a narrow (< 7 mm wide), flexible, inelastic tape measure. The kind of tape used should be described and reported. The graduations on the tape measure should be at 0.1 cm intervals and the tape should have the capacity to measure up to 200 cm. Measurement intervals and labels should be clearly readable under all conditions of use of the tape measure.

The subject should wear only non-restrictive briefs or underwear, a light smock over underwear or light clothing. Belts and heavy outer clothing should be removed. Hip measurement should be taken over one layer of light clothing only.

The subject stands erect with arms at the sides, feet together and the gluteal muscles relaxed. The measurer sits at the side of the subject so that the level of maximum posterior extension of the buttocks can be seen. An inelastic tape is placed around the buttocks in a horizontal plane. To ensure contiguity of the two parts of the tape from which the circumference is to be determined, the cross-handed technique of measurement, as described by Norton et al. (1996),

## Adult hip circumference - measured (*continued*)

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**Collection methods**  
(*cont'd*):

should be used. Ideally an assistant will check the position of the tape on the opposite side of the subject's body. The tape is in contact with the skin but does not compress the soft tissues. Fatty aprons should be excluded from the hip circumference measurement.

The measurement is recorded to the nearest 0.1 cm. Take a repeat measurement and record it to the nearest 0.1 cm. If the two measurements disagree by more than 1 cm, then take a third measurement. All raw measurements should be recorded on the data collection form. If practical, it is preferable to enter the raw data into the data base as this enables intra- and, where relevant, inter-observer errors to be assessed. The subject's measured hip circumference is subsequently calculated as the mean of the two observations, or the mean of the two closest measurements if a third is taken, and recorded on the form. If only a mean value is entered into the database then the data collection forms should be retained.

It may be necessary to round the mean value to the nearest 0.1 cm. If so, rounding should be to the nearest even digit to reduce systematic over reporting. For example, a mean value of 102.25 cm would be rounded to 102.2 cm, while a mean value of 102.35 cm would be rounded to 102.4 cm.

It is recommended that in population surveys, sociodemographic data including ethnicity should be collected, as well as other risk factors including physiological status (e.g. pregnancy), physical activity, smoking and alcohol consumption. Summary statistics may need to be adjusted for these variables.

Validation and quality control measures:

Steel tapes should be checked against a 1 metre engineer's rule every 12 months. If tapes other than steel are used they should be checked daily against a steel rule.

Within- and, if relevant, between-observer variability should be reported. They can be assessed by the same (within -) or different (between-) observers repeating the measurement, on the same subjects, under standard conditions after a short time interval. The standard deviation of replicate measurements (technical error of measurement (Pederson & Gore 1996)) between observers should not exceed 2% and be less than 1.5% within observers.

Extreme values at the lower and upper end of the distribution of measured hip circumference should be checked both during data collection and after data entry. Individuals should not be excluded on the basis of true biological difference.

Last digit preference, and preference or avoidance of certain values, should be analysed in the total sample and (if relevant) by observer, survey site and over time if the survey period is long.

**Related data:**

is used in the calculation of Adult abdomen to hip ratio, version 1

### Administrative attributes

**Source document:**

The measurement protocol described below is that recommended by the World Health Organization (WHO Expert Committee 1995).

**Source organisation:**

World Health Organization (see also Comments)

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## Adult hip circumference - measured (*continued*)

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### **National minimum data sets:**

#### **Comments:**

Submitting organisation: The Expert Working Group on Data Standards for Indicators of Body Fatness in Australian Adults through the National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare. Date of submission: October 1997.

Responsible organisation: National Health Data Committee (NHDC) / National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare.

This data element applies to persons aged 18 years or older. It is recommended for use in population surveys and health care settings.

Presentation of data:

Means, 95% confidence intervals, medians and centiles should be reported to one decimal place. Where the sample permits, population estimates should be presented by sex and 5-year age groups. Estimates based on sample surveys may need to take into account sampling weights.

For consistency with conventional practice, and for current comparability with international data sets, recommended centiles are 5, 10, 15, 25, 50, 75, 85, 90 and 95. To estimate the 5th and 95th centiles a sample size of at least 200 is recommended for each group for which the centiles are being specified.

For some reporting purposes, it may be desirable to present hip circumference data in categories. It is recommended that 5cm groupings be used for this purpose. Hip circumference data should not be rounded before categorisation.

## Adult weight

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000364

**Version number:** 1

**Data element type:** DATA ELEMENT CONCEPT

**Definition:** A person's weight (body mass).

**Context:**

### Relational and representational attributes

**Datatype:** **Representational form:**

**Field size:** **Min.** **Max.** **Representational layout:**

**Data domain:**

**Guide for use:**

**Verification rules:**

**Collection methods:**

**Related data:** relates to the data element Adult weight - measured, version 1  
relates to the data element Adult weight - self-reported, version 1

### Administrative attributes

**Source document:**

**Source organisation:**

**National minimum data sets:**

**Comments:**

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## Adult weight - measured

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000365 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** A person's measured weight (body mass) without any clothing or in light indoor clothes.

Adult weight: measured is a continuous variable measured to the nearest 0.1 kg.

In order to ensure consistency in measurement, the measurement protocol described under Data Collection Methods should be used.

**Context:** Public health and health care.

Weight is an overall measure of body size that does not distinguish between fat and muscle. Weight is an indicator of nutrition status and health status. Low pre-pregnancy weight is an indicator of poorer gestational outcome in women (Kramer 1988). Low weight is also associated with osteoporosis. In general, change in weight in adults is of interest because it is an indicator of changing health status.

It is used to enable the calculation of Adult body mass index which requires the measurement of height and weight.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** QUANTITATIVE VALUE

**Field size:** **Min.** 3 **Max.** 4 **Representational layout:** NNN.N

**Data domain:**

**Guide for use:** If measured weight is not able to be collected, code 999.9

**Verification rules:**

**Collection methods:** Measurement protocol:

Equipment used should be described and reported. Scales should have a resolution of at least 0.1kg and should have the capacity to weigh up to at least 200 kg. Measurement intervals and labels should be clearly readable under all conditions of use of the instrument.

The subject stands over the centre of the weighing instrument, with the body weight evenly distributed between both feet.

Heavy jewellery should be removed and pockets emptied. Light indoor clothing can be worn, excluding shoes, belts, and sweater.

If the subject has had one or more limbs amputated, record this on the data collection form and weigh them as they are. If they are wearing an artificial limb, record this on the data collection form but do not ask them to remove it. Similarly, if they are not wearing the limb, record this but do not ask them to put it on.

## Adult weight - measured (*continued*)

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**Collection methods**  
(*cont'd*):

During weighing, any variations from light indoor clothing (e.g. heavy clothing, such as kaftans or coats worn because of cultural practices) should be noted on the data collection form. Adjustments for non-standard clothing (i.e. other than light indoor clothing) should only be made in the data checking/cleaning stage prior to data analysis.

The measurement is recorded to the nearest 0.1 kg. If the scales do not have a digital readout, take a repeat measurement. If the two measurements disagree by more than 0.5 kg, then take a third measurement. All raw measurements should be recorded on the data collection form. If practical, it is preferable to enter the raw data into the database as this enables intra- and, where relevant, inter-observer errors to be assessed. The subject's measured weight is subsequently calculated as the mean of the two observations, or the mean of the two closest measurements if a third is taken, and recorded on the form. If only a mean value is entered into the database then the data collection forms should be retained.

It may be necessary to round the mean value to the nearest 0.1 kg. If so, rounding should be to the nearest even digit to reduce systematic over reporting (Armitage and Berry 1994). For example, a mean value of 72.25 kg would be rounded to 72.2 kg, while a mean value of 72.35 kg would be rounded to 72.4 kg.

It is recommended that in population surveys, sociodemographic data including ethnicity should be collected, as well as other risk factors including physiological status (e.g. pregnancy), physical activity, smoking and alcohol consumption. Summary statistics may need to be adjusted for these variables.

National health data elements currently exist for sex, date of birth, country of birth and Indigenous Status.

Validation and quality control measures:

If practical, equipment should be checked daily using one or more objects of known weight in the range to be measured.

Within- and, if relevant, between-observer variability should be reported. They can be assessed by the same (within-) or different (between-) observers repeating the measurement of weight, on the same subjects, under standard conditions after a short time interval. The standard deviation of replicate measurements (technical error of measurement) between observers should not exceed 0.5 kg and be less than 0.5 kg within observers.

Extreme values at the lower and upper end of the distribution of measured height should be checked both during data collection and after data entry. Individuals should not be excluded on the basis of true biological difference.

Last digit preference, and preference or avoidance of certain values, should be analysed in the total sample and (if relevant) by observer, survey site and over time if the survey period is long.

**Related data:**

is used in the calculation of Adult body mass index, version 1



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## Adult weight - measured (*continued*)

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### Administrative attributes

**Source document:** The measurement protocol described below is that recommended by the World Health Organization (WHO Expert Committee 1995).

**Source organisation:** World Health Organization (see also Comments)

**National minimum data sets:**

**Comments:** Submitting organisation: The Expert Working Group on Data Standards for Indicators of Body Fatness in Australian Adults through the National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare. Date of submission: October 1997.

Responsible organisation: National Health Data Committee (NHDC) / National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare.

This data element applies to persons aged 18 years or older. It is recommended for use in population surveys and health care settings.

**Presentation of data:**

Means and 95% confidence intervals, medians and centiles should be reported to one decimal place. Where the sample permits, population estimates should be presented by sex and 5-year age groups. Estimates based on sample surveys may need to take into account sampling weights.

For consistency with conventional practice, and for current comparability with international data sets, recommended centiles are 5, 10, 15, 25, 50, 75, 85, 90 and 95. To estimate the 5th and 95th centiles a sample size of at least 200 is recommended for each group for which the centiles are being specified.

For some reporting purposes, it may be desirable to present weight data in categories. It is recommended that 5 kg groupings are used for this purpose. Weight data should not be rounded before categorisation.

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## Adult weight - self-reported

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000366 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** A person's self-reported weight (body mass) without any clothing or in light indoor clothes.

**Context:** Public health and health care.

Weight is an overall measure of body size that does not distinguish between fat and muscle. Weight is an indicator of nutrition status and health status. Low pre-pregnancy weight is an indicator of poorer gestational outcome in women (Kramer 1988). Low weight is also associated with osteoporosis. In general, change in weight is of interest in adults because it is an indicator of changing health status.

It is used to enable the calculation of body mass index which requires the measurement of height and weight.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** QUANTITATIVE VALUE

**Field size:** *Min.* 2 *Max.* 3 **Representational layout:** NNN

**Data domain:**

**Guide for use:** If self-reported body mass (weight) is unknown, code 888  
If self-reported body mass (weight) is not responded to, code 999

**Verification rules:**

**Collection methods:** The method of data collection, e.g. face to face interview, telephone interview or self-completion questionnaire, can affect survey estimates and should be reported.

The data collection form should include a question asking the respondent what their weight is. For example, the ABS National Health Survey 1989-90 included the question 'How much do you weigh without clothes and shoes?'. The data collection form should allow for both metric (to the nearest 1 kg) and imperial (to the nearest 1 lb) units to be recorded.

If practical, it is preferable to enter the raw data into the data base before conversion of measures in imperial units to metric. However, if this is not possible, weight reported in imperial units can be converted to metric prior to data entry using a conversion factor of 0.454 kg to the lb.

Rounding to the nearest 1 kg will be required for measures converted to metric prior to data entry, and may be required for data reported in metric units to a greater level of precision than the nearest 1 kg. The following rounding conventions are desirable to reduce systematic over reporting (Armitage and Berry 1994):

nnn.x where  $x < 5$  - round down, e.g. 72.2 kg would be rounded to 72 kg.

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## Adult weight - self-reported (*continued*)

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**Collection methods (cont'd):** nnn.x where  $x > 5$  - round up, e.g. 72.7 kg would be rounded to 73 kg.  
 nnn.x where  $x = 5$  - round to the nearest even number, e.g. 72.5 kg would be rounded to 72 kg, while 73.5 kg would be rounded to 74 kg.

It is recommended that in population surveys, sociodemographic data including ethnicity should be collected, as well as other risk factors including physiological status (e.g. pregnancy), physical activity, smoking and alcohol consumption. Summary statistics may need to be adjusted for these variables.

National health data elements currently exist for sex, date of birth, country of birth and Indigenous Status. Data elements are being developed for physical activity and smoking.

**Related data:** is used in the calculation of Adult body mass index, version 1

### Administrative attributes

**Source document:**

**Source organisation:** Responsible organisations: National Health Data Committee (NHDC) / National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare. (See also Comments)

**National minimum data sets:**

**Comments:** Submitting organisation: The Expert Working Group on Data Standards for Indicators of Body Fatness in Australian Adults through the National Centre for Monitoring Cardiovascular Disease, Australian Institute of Health and Welfare. Date of submission: October 1997

This data element applies to persons aged 18 years or older. It is recommended for use in population surveys when it is not possible to measure weight.

Presentation of data:

Means and 95% confidence intervals, medians and centiles should be reported to one decimal place. Where the sample permits, population estimates should be presented by sex and 5-year age groups. Estimates based on sample surveys may need to take into account sampling weights.

For consistency with conventional practice, and for current comparability with international data sets, recommended centiles are 5, 10, 15, 25, 50, 75, 85, 90 and 95. To estimate the 5th and 95th centiles a sample size of at least 200 is recommended for each group for which the centiles are being specified.

For some reporting purposes, it may be desirable to present weight data in categories. It is recommended that 5 kg groupings are used for this purpose. Weight data should not be rounded before categorisation. The following categories may be appropriate for describing the weights of Australian men and women, although the range will depend on the population. The World Health Organization's range for weight is 30-140 kg.

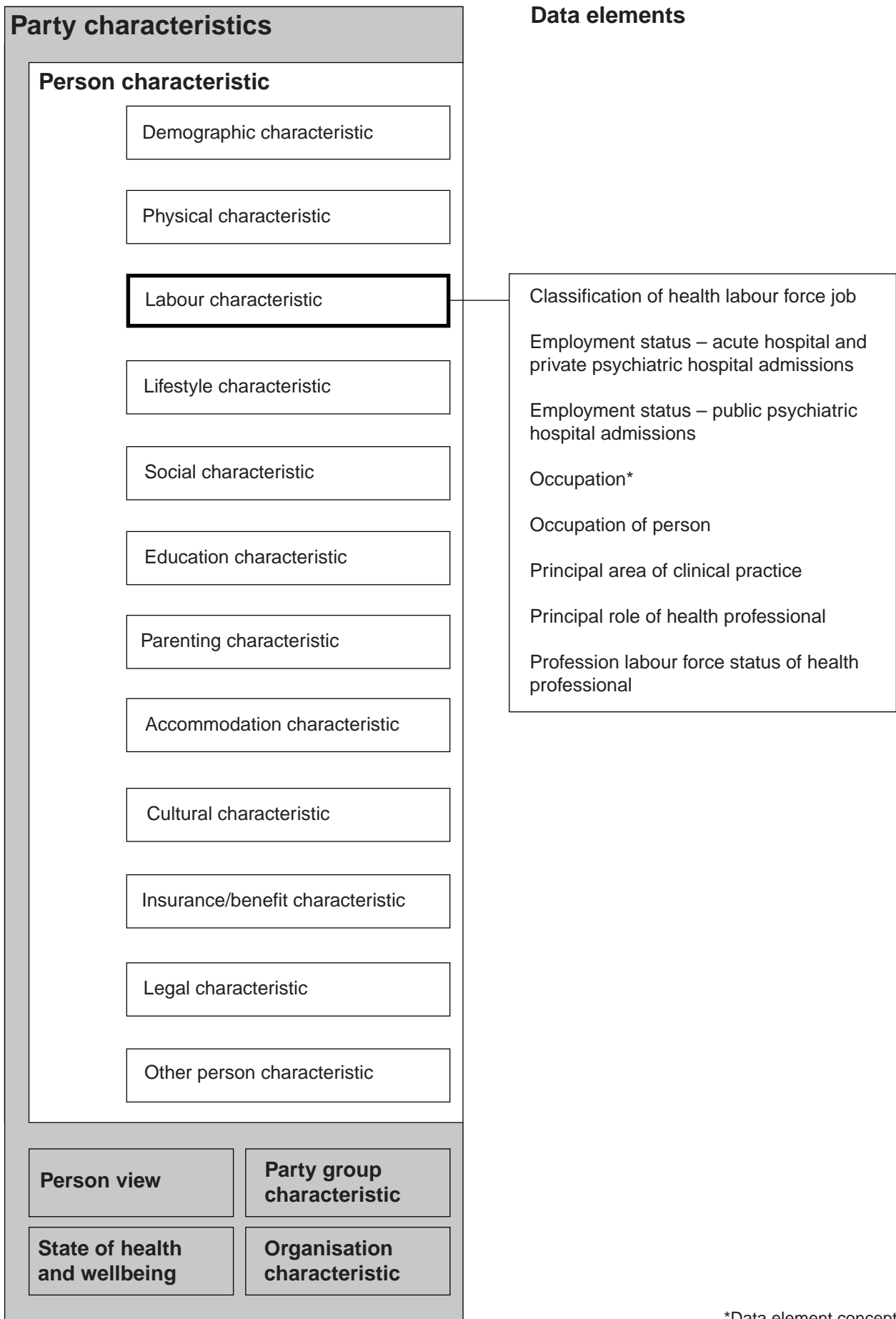
Wt < 30 kg  
 30 kg = Wt < 35 kg  
 35 kg = Wt < 40 kg  
 ... in 5 kg categories  
 135 kg = Wt < 140 kg  
 Wt = 140 kg

## Adult weight - self-reported (*continued*)

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**Comments (cont'd):** On average, body mass (weight) tends to be underestimated when self-reported by respondents. Data for men and women aged 20-69 years in 1989 indicated that men underestimated by an average of 0.2 kg (sem of 0.05 kg) and women by an average of 0.4 kg (sem of 0.04 kg) (Waters 1993). The extent of underestimation varied with age.

**National Health Information Model entities**



\*Data element concept

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## Classification of health labour force job

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**Admin. status:** CURRENT 1/07/95

### Identifying and definitional attributes

**NHIK identifier:** 000023 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** Position or job classification is a broad description of the roles and levels within a general organisational or industrial structure for health professions, and classifications vary among the professions according to organisational arrangements.

**Context:** Health labour force: distribution of a professional labour force across job classification categories cross classified with other variables allows analysis of:

- career progression
- age and gender distribution
- imputed salary/wage distribution

### Relational and representational attributes

**Datatype:** Alphanumeric **Representational form:** CODE

**Field size:** **Min.** 3 **Max.** 3 **Representational layout:** ANN

**Data domain:**

A01	Medicine - General practitioner working mainly in general practice
A02	Medicine - General practitioner working mainly in a special interest area
A03	Medicine - Salaried non-specialist hospital practitioner: RMO or intern
A04	Medicine - Salaried non-specialist hospital practitioner: other hospital career medical officer
A05	Medicine - Specialist
A06	Medicine - Specialist in training (e.g. registrar)
B01	Dentistry (private practice only) - Solo practitioner
B02	Dentistry (private practice only) - Solo principal with assistant(s)
B03	Dentistry (private practice only) - Partnership
B04	Dentistry (private practice only) - Associateship
B05	Dentistry (private practice only) - Assistant
B06	Dentistry (private practice only) - Locum
C01	Nursing - Enrolled nurse
C02	Nursing - Registered nurse
C03	Nursing - Clinical nurse
C04	Nursing - Clinical nurse consultant/supervisor
C05	Nursing - Nurse manager
C06	Nursing - Nurse educator
C07	Nursing - Nurse researcher
C08	Nursing - Assistant director of nursing
C09	Nursing - Deputy director of nursing
C10	Nursing - Director of nursing
C11	Nursing - Tutor/lecturer/senior lecturer in nursing (tertiary institution)
C12	Nursing - Associate professor/professor in nursing (tertiary institution)

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## Classification of health labour force job (*continued*)

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<b>Data domain (cont'd):</b>	C98	Nursing - Other (specify)
	C99	Nursing - Unknown/inadequately described/not stated
	D01	Pharmacy (community pharmacist) - Sole proprietor
	D02	Pharmacy (community pharmacist) - Partner-proprietor
	D03	Pharmacy (community pharmacist) - Pharmacist-in-charge
	D04	Pharmacy (community pharmacist) - Permanent assistant
	D05	Pharmacy (community pharmacist) - Reliever, regular location
	D06	Pharmacy (community pharmacist) - Reliever, various locations
	E01	Pharmacy (Hospital/clinic pharmacist) - Director/deputy director
	E02	Pharmacy (Hospital/clinic pharmacist) - Grade III pharmacist
	E03	Pharmacy (Hospital/clinic pharmacist) - Grade II pharmacist
	E04	Pharmacy (Hospital/clinic pharmacist) - Grade I pharmacist
	E05	Pharmacy (Hospital/clinic pharmacist) - Sole pharmacist
	F01	Podiatry - Own practice (or partnership)
	F02	Podiatry - Own practice and sessional appointments elsewhere
	F03	Podiatry - Own practice and fee-for-service elsewhere
	F04	Podiatry - Own practice, sessional and fee-for-service appointments elsewhere
	F05	Podiatry - Salaried podiatrist
	F06	Podiatry - Locum, regular location
	F07	Podiatry - Locum, various locations
	F08	Podiatry - Other (specify)
	G01	Physiotherapy - Own practice (or partnership)
	G02	Physiotherapy - Own practice and sessional appointments elsewhere
	G03	Physiotherapy - Own practice and fee-for-service elsewhere
	G04	Physiotherapy - Own practice, sessional and fee-for-service appointments elsewhere
	G05	Physiotherapy - Salaried physiotherapist
	G06	Physiotherapy - Locum, regular location
	G07	Physiotherapy - Locum, various locations

**Guide for use:****Verification rules:****Collection methods:****Related data:****Administrative attributes****Source document:**

**Source organisation:** National Health Labour Force Data Working Group

**National minimum data sets:**

Health labourforce from 1/07/89 to

## Classification of health labour force job (*continued*)

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**Comments:**

Position or job classifications are specific to each profession and may differ by State or Territory. The classifications above are simplified so that comparable data presentation is possible and possible confounding effects of enterprise specific structures are avoided. For medicine, the job classification collected in the national health labour force collection is very broad. State/Territory health authorities have more detailed classifications for salaried medical practitioners in hospitals. These classifications separate interns, the Resident Medical Officer levels, Registrar levels, Career Medical Officer positions, and supervisory positions including clinical and medical superintendents. Space restrictions do not at present permit these classes to be included in the National Health Labour Force Collection questionnaire.



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## Employment status - acute hospital and private psychiatric hospital admissions

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**Admin. status:** CURRENT 1/07/97

### Identifying and definitional attributes

**NHIK identifier:** 000395 **Version number:** 2

**Data element type:** DATA ELEMENT

**Definition:** Self-reported employment status of a person, immediately prior to admission to an acute or private psychiatric hospital.

**Context:** The Australian Health Ministers' Advisory Council Health Targets and Implementation Committee (1988) identified socioeconomic status as the most important factor explaining health differentials in the Australian population. The committee recommended that national health statistics routinely identify the various groups of concern. This requires routine recording in all collections of indicators of socioeconomic status. In order of priority, these would be: employment status, income, occupation and education.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 1 **Representational layout:** N

**Data domain:**  
 1 Unemployed / pensioner  
 2 Other

#### **Guide for use:**

#### **Verification rules:**

**Collection methods:** In practice, this data item and current or last occupation could probably be collected with a single question, as is done in Western Australia:

Occupation?

For example:

- housewife or home duties
- pensioner miner
- tree feller
- retired electrician
- unemployed trades assistant
- child
- student
- accountant

However, for national reporting purposes it is preferable to distinguish these two data items logically.

**Related data:** relates to the data element Employment status - public psychiatric hospital admissions, version 2

supersedes previous data element Employment status, version 1

## Employment status - acute hospital and private psychiatric hospital admissions (*continued*)

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### Administrative attributes

**Source document:**

**Source organisation:** National minimum data set working parties

**National minimum data sets:**

Institutional mental health care from 1/07/97 to

**Comments:** Employment status is currently collected in South Australia but is never used. South Australia considered this item very low priority for national reporting, and felt that it should be reviewed at a later stage. Tasmania collects all categories of employment status.

The Morbidity Working Party considered the following categories of employment status:

- Child not at school: includes preschool children and handicapped children under 16 not otherwise engaged;
- Student: full-time or with study occupying 20 hours per week, child at school;
- Employed: employed, self-employed or employer;
- Unemployed: unemployed but looking for work or on unemployment benefit;
- Home duties;
- Retired and/or pensioner; (if the pensioner works in paid employment more than 1 hour per week, employed status should be recorded);
- Other/unknown.

The Morbidity Working Party expressed interest in a feasible and collectable socioeconomic data item but considered that the proposed employment status item had too many categories and would not be possible to implement on already crowded discharge forms. The working party recommended in the first instance that a single category for unemployed/pensioner be included in the National minimum data set - institutional health care, and that this be reviewed after a few years.

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## Employment status - public psychiatric hospital admissions

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**Admin. status:** CURRENT 1/07/97

### Identifying and definitional attributes

**NHIK identifier:** 000317 **Version number:** 2

**Data element type:** DATA ELEMENT

**Definition:** Self-reported employment status of a person, immediately prior to admission to a public psychiatric hospital.

**Context:** The Australian Health Ministers' Advisory Council Health Targets and Implementation Committee (1988) identified socioeconomic status as the most important factor explaining health differentials in the Australian population.

The committee recommended that national health statistics routinely identify the various groups of concern. This requires routine recording in all collections of indicators of socioeconomic status. In order of priority, these would be: employment status, income, occupation and education.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 1 **Representational layout:** N

**Data domain:**

1	Child not at school
2	Student
3	Employed
4	Unemployed
5	Home duties
6	Other

**Guide for use:**

**Verification rules:**

**Collection methods:** In practice, this data item and current or last occupation could probably be collected with a single question, as is done in Western Australia:

Occupation?

For example:

- housewife or home duties
- pensioner miner
- tree feller
- retired electrician
- unemployed trades assistant
- child
- student
- accountant

However, for national reporting purposes it is preferable to distinguish these two data items logically.

## Employment status - public psychiatric hospital admissions (*continued*)

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**Related data:** relates to the data element Employment status - acute hospital and private psychiatric hospital admissions, version 2  
supersedes previous data element Employment status, version 1

### Administrative attributes

**Source document:**

**Source organisation:** National minimum data set working parties

**National minimum data sets:**

Institutional mental health care from 1/07/97 to

**Comments:** Victorian data for public psychiatric hospitals (Office of Psychiatric Services 1987) shows that the majority (62 per cent) of admissions are of people who are unemployed or pensioners at the time of admission. Relatively few admission episodes are of people whose occupational backgrounds are in the middle and upper socioeconomic groupings.

The Psychiatric Working Party felt that pension status (see data element 'Pension status') was more relevant for psychiatric patients. However, in order to collect occupation (see data element concept 'Occupation'), it is important to include employment status. This data element is included for psychiatric hospitals, although it may in practice be collected as a category of data element 'Occupation of person'.

For example, Victoria intends to add the following codes to the 2-digit Australian Standard Classification of Occupations groups:

- child not yet attending school
- student
- home duties
- other

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## Occupation

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**Admin. status:** CURRENT 1/07/97

### Identifying and definitional attributes

**NHIK identifier:** 000229 **Version number:** 1

**Data element type:** DATA ELEMENT CONCEPT

**Definition:** The current occupation of the person is the current job or duties which the person is principally engaged in. This occupation may be in the context of:

- a person as a client or patient, or
- a person as a service provider.

This concept relates specifically to current occupation. A related concept, ie. of lifetime occupation, is of relevance to epidemiological analysis.

**Context:**

### Relational and representational attributes

**Datatype:** **Representational form:**

**Field size:** **Min.** **Max.** **Representational layout:**

**Data domain:**

**Guide for use:** Occupation is currently recorded on hospital morbidity forms or hospital admission forms in all States and Territories except Victoria. It is coded only in Western Australia and Tasmania.

Hall et al. (1986) recommended to the National Committee on Health and Vital Statistics that occupation be collected in both mortality and hospital morbidity data and that there should be a pilot study of the validity and reliability of occupational coding. They noted that occupation is recognised as an important factor in studying disease (Mathews 1983). Principal occupation during lifetime for males is recorded on death certificates. It has been common practice not to record occupation, but only marital status, of females.

However, in the Census, current occupation is recorded. Hence, the Census and mortality registers use different operational definitions of occupation. This makes it impossible to calculate proportional mortality rates by occupation groups by combining mortality and Census data.

The National Committee on Health and Vital Statistics (1979) asked all government health authorities to provide comments on the inclusion of occupation in hospital morbidity collections. The consensus at that time was that, while occupational data would be a useful addition to the database and was collected by some authorities, it was recognised that a number of difficulties existed. For example, a number of older patients would have their occupation recorded as retired and, in the case of occupation-related illness, the current occupation may differ from the occupation responsible for the illness.

The National Occupational Health and Safety Commission has developed a minimum data set for the national monitoring of workplace injuries and diseases of rapid onset (Worksafe Australia 1987). Roder and Holman (1987) argued that complementary data collection mechanisms are needed to ensure

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## Occupation (*continued*)

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**Guide for use  
(cont'd):**

that Australia has comprehensive occupational health statistics. The importance of occupation-related ill health has been underlined by the Health Targets and Implementation Committee of the Australian Health Ministers' Advisory Council (1988). Roder and Holman (1987) noted that 'where the contribution of occupational factors is not self-evident, and there are delays of years or even decades between occupational exposure and manifestation of disease, it will not be possible to rely upon workplace reporting'. Rather, data will have to come from those places where diseases are diagnosed and deaths are notified.

Workers compensation data will not be suitable for the surveillance and discovery of diseases not yet known to be work-related. Moreover, the validity of these data for epidemiological surveillance will be suspect in those areas subject to changes in compensation policy.

'Sometimes there are circumstances where workers are fearful of special health risks in their workplaces. Routine data systems can be useful to assess whether prevailing mortality and morbidity rates offer justification for these concerns'.

In such applications, data would be used at a superficial level to ensure that there are sufficient grounds for committing resources to more in-depth studies. Waddell and Holman (1985) have shown the potential value of collecting occupational data in hospital morbidity collections in a preliminary analysis of Western Australian data.

Roder and Holman (1987) made the following recommendations in relation to hospital morbidity collections:

- hospital admission clerks record industry and occupation on discharge forms for all patients aged 15 years and over, as pertaining to the main lifetime job and, where different, the present job;
- the National Occupational Health and Safety Commission prepare guideline manuals to assist hospital admission clerks to record occupational information;
- pilot programs precede the introduction of these initiatives to ensure that the methodology proposed is practical. Thereafter, recording should be introduced incrementally by regions of Australia, with a progressive resolution of any unexpected difficulties;
- occupation be coded using the Australia and New Zealand Standard Industrial Classification and Australian Standard Classification of Occupations, as for Census data.

In relation to the first recommendation, it was noted that a Victorian pilot study (Working Party on Feasibility of Collecting Occupational Data Relevant to Cancer, 1983) had shown that hospital admission clerks can obtain information of a reasonable accuracy on patients' present jobs and industries, and their main lifetime jobs and industries. The misclassification of occupational information obtained in routine collections such as hospital morbidity collections is of the order of 30 per cent (Roder and Holman 1987). This is considered sufficient for initial analyses of trends. Validation checks of USA death registration data have indicated that misclassifications tend to occur at random, thereby effecting an attenuation of correlations with occupational factors, but not a systematic bias (Schumacher 1986). Perhaps

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## Occupation (*continued*)

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### **Guide for use (cont'd):**

more important than the question of accuracy is the tendency in Australia and many other countries to:

- record only the last occupation, not the longest lifetime occupation, as would be more appropriate for long-latency diseases;
- record only retired or pensioner for those age groups contributing most to death statistics;
- provide too vague a description of occupation for specific classification;
- give too little attention to the occupations of women, a legacy from the days when women were seldom part of the paid work force;
- provide no information on industry.

This latter deficiency is important because jobs in individual occupation categories are often heterogeneous across industries. Combined industry-occupation codes provide a much greater specificity and the opportunity to infer exposures by applying job exposure matrices (Roder 1986).

Roder and Holman recommended a style of questioning similar to that used by the Australian Bureau of Census and Statistics in censuses, and to that advocated for the minimum data set for workers compensation statistics. The following aspects should be included:

- the name of the occupation;
- the tasks and duties performed by the decedent;
- the trading name of the employer and, where feasible, the employer's main address;
- the kind of business or service carried out by that business.

The 1991 Australian Census asked the following questions relating to occupation and industry:

29. In the main job held LAST WEEK, what was the person's occupation?

- Give full title.
- For example, Civil Engineer, Draftsman, Accounts Clerk, Fast Foods Cook, 1st Class Welder, Extruding Machine Operator, Coal Miner.
- Armed Service personnel state rank as well as occupation.

30. What are the main tasks or duties that the person usually performs in that occupation?

- Describe as fully as possible.
- For example, preparing drawings for dam construction, recording and paying accounts, cooking hamburgers and chips, welding of high pressure steam pipes, operating plastic extruding machine, operating continuous mining machine.

Occupation is coded using Australian Standard Classification of Occupations (ABS 1986a). This classification is based on a type of work criterion with an emphasis on skill level (length and type of training) and skill specialisation (for

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## Occupation (*continued*)

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### **Guide for use (cont'd):**

example, subject matter knowledge). The structure of the Australian Standard Classification of Occupations has four levels:

8	Major groups	1-digit codes
52	Minor groups	2-digit codes
282	Unit groups	4-digit codes
1079	Occupations	6-digit codes

For example:

Level	Code	Title
Major group	2	Professionals
Minor group	28	Artists and related professionals
Unit group	2805	Designers and illustrators
Occupation	2805-13	Graphic designer

A Computer Assisted Coding system is available from the Australian Bureau of Statistics to assist in coding occupational data to Australian Standard Classification of Occupations codes.

The Commonwealth Department of Community Services and Health informed the working party that it supported the collection of occupation data based on a 2-digit Australian Standard Classification of Occupations code.

Five of the eight morbidity systems currently collect current occupation but, apart from Western Australia, do not code it. The Morbidity Working Party examined the proposal to include current occupation in the National Minimum Data Set - Institutional Health Care and noted the following:

- Most States felt that it was difficult to code, had low level of accuracy and required substantial resources. The Commonwealth Department of Community Services and Health argued that its accuracy was comparable to that of collected items such as principal diagnosis.
- The ABS noted that the limitations of collecting health data in sample surveys were much greater than those of collecting occupational data in administrative collections.
- New South Wales was sympathetic to the concept of collecting socioeconomic data but felt that the resources needed were not available. Several States expressed interest in collecting socioeconomic data if funded by the Commonwealth.
- Victoria has done a study which suggested it might be of limited use at the hospital level, but this would require asking several questions.
- South Australia uses a 2-digit Australian Standard Classification of Occupations code in psychiatric hospitals.
- Western Australia has collected it for years but regards it as neither reliable nor useful (big gaps in data).

The Morbidity Working Party decided not to recommend that occupation be included in the National Minimum Data Set - Institutional Health Care at its first meeting. However, following the request of the Department of



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## Occupation (*continued*)

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**Guide for use  
(cont'd):**

Community Services and Health to reconsider this item for inclusion as it is already collected in a majority of systems, the working party subsequently agreed in principle to endorse the inclusion of occupation in the National Minimum Data Set - Institutional Health Care. It also recommended that the collection of occupational data for in-patients of acute hospitals be tested in trials, using in-hospital surveys (linked to morbidity data) for six- or twelve-month periods in a selected sample of hospitals. Such trials should evaluate the costs and benefits of sampling options versus routine collection for all in-patients.

With regard to psychiatric hospitals, all States collect occupation except New South Wales. The Psychiatric Working Party felt that, given the emphasis on socioeconomic differentials in health, occupation data would be worthwhile collecting and recommended that occupation be included in the National Minimum Data Set - Institutional Health Care for psychiatric hospitals.

In Victoria, lifetime occupation is currently collected on admission to State psychiatric hospitals and upon registration with outpatient and other community services. Codes currently used are a modification of ABS standard codes but revision of the outpatient collection system is now under way, and Victoria will adopt the Australian Standard Classification of Occupations framework (2-digit codes). Revision of the in-patient system will soon follow. The justification for this item is based on the important role that vocational rehabilitation plays in improving outcomes for people with psychiatric disability. Data on the lifetime occupation of clients of psychiatric services assist in the identification of rehabilitation needs and the development of service options. The collection of such data is generally accepted by providers and clients.

Principal lifetime occupation is defined as the occupation the patient has engaged in that accounts for the greatest number of working years.

Collection of lifetime occupation in routine morbidity data collections is likely to be more difficult than current occupation. This should also be evaluated as part of the trial recommended above, and a final decision on which definition to use should then follow.

**Verification rules:**

**Collection methods:**

**Related data:** relates to the data element Profession labour force status of health professional, version 1  
relates to the data element Occupation of person, version 1

### Administrative attributes

**Source document:**

**Source organisation:**

**National minimum data sets:**

**Comments:** There is considerable user demand for data on occupation-related injury and illness, including from Worksafe Australia and from industry, where unnecessary production costs are known in some areas and suspected to be

## Occupation (*continued*)

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**Comments (cont'd):** related to others in work-related illness, injury and disability. The report Health for all Australians also identifies occupational related ill health as a focus for health promotion and illness prevention activities.

Lack of morbidity data is severely hampering the development of preventive interventions in this area. User demand can be expected to grow.

There is an increasing commitment by governments to reducing inequalities in health status between population subgroups. There is already some evidence of higher incidence of morbidity and mortality in particular occupations, but greater knowledge in this area is required.

The minimum data set is a crucial development but the associated data collection system will not cover the whole work force nor all work-related diseases. Complementary data-collection mechanisms will therefore be needed and should be based on death records, hospital records, cancer registries, perinatal and birth defect statistics, communicable disease notifications, sentinel medical practice reporting and household surveys.

It is recognised that the resulting occupational information, while much improved, will still be limited in quality and detail. However, it will suffice for general analyses of mortality and morbidity in the Australian work force and for developing and initially checking hypotheses of occupational causes of disease. The data will not be adequate for rigorous in-depth studies. Because in-depth studies usually require extensive resources, preliminary analyses of general death and morbidity record systems would be appropriate to ensure that there are sufficient grounds for committing resources to these projects.

The Australian Health Ministers' Advisory Council Health Targets and Implementation Committee (1988) identified socioeconomic status as the most important factor explaining health differentials in the Australian population. The committee recommended that national health statistics routinely identify the various groups of concern. This requires routine recording in all collections of indicators of socioeconomic status.

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## Occupation of person

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**Admin. status:** CURRENT 1/07/89

### Identifying and definitional attributes

**NHIK identifier:** 000230 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** The current occupation of the person is the current job or duties which the person is principally engaged in.

**Context:** Injury surveillance: there is considerable user demand for data on occupation-related injury and illness, including from Worksafe Australia and from industry, where unnecessary production costs are known in some areas and suspected to be related to others in work-related illness, injury and disability. The report Health for all Australians also identifies occupational related ill health as a focus for health promotion and illness prevention activities.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 2 **Max.** 2 **Representational layout:** NN

**Data domain:**

10	Managers and administrators
11	Legislators and government appointed officials
12	General managers
13	Specialist managers
14	Farmers and farm managers
15	Managing supervisors (sales and service)
16	Managing supervisors (other business)
20	Professionals
21	Natural scientists
22	Building professionals and engineers
23	Health diagnosis and treatment practitioners
24	School teachers
25	Other teachers and instructors
26	Social professionals
27	Business professionals
28	Artist and related professionals
29	Miscellaneous professionals
30	Paraprofessionals
31	Medical and science technical officers and technicians
32	Engineering and building associates and technicians
33	Air and sea transport technical workers
34	Registered nurses
35	Police
36	Miscellaneous paraprofessionals
40	Tradespersons
41	Metal fitting and machining
42	Other metal tradespersons
43	Electrical and electronics tradespersons
44	Building tradespersons

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## Occupation of person (*continued*)

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<b>Data domain</b>	45	Printing tradespersons
<b>(cont'd):</b>	46	Vehicle tradespersons
	47	Food tradespersons
	48	Amenity horticultural tradespersons
	49	Miscellaneous tradespersons
	50	Clerks
	51	Stenographers and typists
	52	Data processing and business machine operators
	53	Numerical clerks
	54	Filing, sorting and copying clerks
	55	Material recording and despatching clerks
	56	Receptionists, telephonists and messengers
	59	Miscellaneous clerks
	60	Salespersons and personal service workers
	61	Investment, insurance and real estate salespersons
	62	Sales representatives
	63	Sales assistants
	64	Tellers, cashiers and ticket salespersons
	65	Miscellaneous salespersons
	66	Personal service workers
	70	Plant and machine operators and drivers
	71	Road and rail transport drivers
	72	Mobile plant operators (except transport)
	73	Stationary plant operators
	74	Machine operators
	80	Labourers and related workers
	81	Trades assistants and factory hands
	82	Agricultural labourers and related workers
	83	Cleaners
	84	Construction and mining labourers
	89	Miscellaneous workers

**Guide for use:** 2-digit Australian Standard Classification of Occupations code.

Occupation is coded using Australian Standard Classification of Occupations (ABS 1986a). This classification is based on a type of work criterion with an emphasis on skill level (length and type of training) and skill specialisation (for example, subject matter knowledge). The structure of the Australian Standard Classification of Occupations has four levels:

8	Major groups	1-digit codes
52	Minor groups	2-digit codes
282	Unit groups	4-digit codes
1079	Occupations	6-digit codes

For example:

Level	Code	Title
Major group	2	Professionals
Minor group	28	Artists and related professionals
Unit group	2805	Designers and illustrators
Occupation	2805-13	Graphic designer

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## Occupation of person (*continued*)

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**Guide for use (cont'd):** A Computer Assisted Coding system is available from the Australian Bureau of Statistics to assist in coding occupational data to Australian Standard Classification of Occupations codes.

**Verification rules:**

**Collection methods:** Occupation is currently recorded on hospital morbidity forms or hospital admission forms in all States and Territories except Victoria. It is coded only in Western Australia and Tasmania.

The 1991 Australian Census asked the following questions relating to occupation and industry:

29. In the main job held LAST WEEK, what was the person's occupation?

- Give full title.
- For example, Civil Engineer, Draftsman, Accounts Clerk, Fast Foods Cook, 1st Class Welder, Extruding Machine Operator, Coal Miner.
- Armed Service personnel state rank as well as occupation.

30. What are the main tasks or duties that the person usually performs in that occupation?

- Describe as fully as possible.
- For example, preparing drawings for dam construction, recording and paying accounts, cooking hamburgers and chips, welding of high pressure steam pipes, operating plastic extruding machine, operating continuous mining machine.

**Related data:** relates to the data element concept Occupation, version 1

### Administrative attributes

**Source document:**

**Source organisation:** National minimum data set working parties

**National minimum data sets:**

**Comments:** Five of the eight morbidity systems currently collect current occupation but, apart from Western Australia, do not code it. The Morbidity Working Party examined the proposal to include current occupation in the National Minimum Data Set - Institutional Health Care and noted the following:

- Most States felt that it was difficult to code, had low level of accuracy and required substantial resources. The Commonwealth Department of Community Services and Health argued that its accuracy was comparable to that of collected items such as principal diagnosis.
- The ABS noted that the limitations of collecting health data in sample surveys were much greater than those of collecting occupational data in administrative collections.
- New South Wales was sympathetic to the concept of collecting socioeconomic data but felt that the resources needed were not available. Several States expressed interest in collecting socioeconomic data if funded by the Commonwealth.

## Occupation of person (*continued*)

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- Comments (cont'd):**
- Victoria has done a study which suggested it might be of limited use at the hospital level, but this would require asking several questions.
  - South Australia uses a 2-digit Australian Standard Classification of Occupations code in psychiatric hospitals.
  - Western Australia has collected it for years but regards it as neither reliable nor useful (big gaps in data).

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## Principal area of clinical practice

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**Admin. status:** CURRENT 1/07/95

### Identifying and definitional attributes

**NHIK identifier:** 000135 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** Principal area of clinical practice is defined as either the field of principal professional clinical activity or the primary area of responsibility, depending on the profession. It may be described in terms of the particular discipline, skills or knowledge field of the profession, whether general or specialised; or described in terms of the principal client group; or described by the principal activity of an institution, or section of an institution, where clinical practice takes place.

**Context:** Health labour force: to analyse distribution of clinical service providers by the area of their principal clinical practice. Cross-classified with other data, this item allows analysis of geographic distribution and profiles of population subsets. Required for health labour force modelling.

### Relational and representational attributes

**Datatype:** Alphanumeric **Representational form:** CODE

**Field size:** **Min.** 3 **Max.** 3 **Representational layout:** ANN

**Data domain:**

A11	GP/primary medical care practitioner - general practice
A12	GP/primary medical care practitioner - a special interest area (specified)
A21	GP/primary medical care practitioner - vocationally registered
A22	GP/primary medical care practitioner - holder of fellowship of RACGP
A23	GP/primary medical care practitioner - RACGP trainee
A24	GP/primary medical care practitioner - other
B31	Non-specialist hospital (salaried) - RMO/intern
B32	Non-specialist hospital (salaried) - other hospital career
B41	Non-specialist hospital (salaried) - holder of Certificate of Satisfactory Completion of Training
B42	Non-specialist hospital (salaried) - RACGP trainee
B44	Non-specialist hospital (salaried) - other
B51	Non-specialist hospital (salaried) - specialist (includes private and hospital)
B52	Non-specialist hospital (salaried) - specialist in training (e.g. registrar)
B90	Non-specialist hospital (salaried) - not applicable
C	The following nursing codes are subject to revision because of changes in the profession and should be read in the context of the comments below:
C01	Nurse labour force - mixed medical/surgical nursing
C02	Nurse labour force - medical nursing
C03	Nurse labour force - surgical nursing
C04	Nurse labour force - operating theatre nursing
C05	Nurse labour force - intensive care nursing

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## Principal area of clinical practice (*continued*)

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<b>Data domain</b>	C06	Nurse labour force - paediatric nursing
<b>(cont'd):</b>	C07	Nurse labour force - maternity and obstetric nursing
	C08	Nurse labour force - psychiatric/mental health nursing
	C09	Nurse labour force - developmental disability nursing
	C10	Nurse labour force - gerontology/geriatric nursing
	C11	Nurse labour force - accident and emergency nursing
	C12	Nurse labour force - community health nursing
	C13	Nurse labour force - child health nursing
	C14	Nurse labour force - school nursing
	C15	Nurse labour force - district/domiciliary nursing
	C16	Nurse labour force - occupational health nursing
	C17	Nurse labour force - private medical practice nursing
	C18	Nurse labour force - independent practice
	C19	Nurse labour force - independent midwifery practice
	C20	Nurse labour force - no one principal area of practice
	C98	Nurse labour force - other (specify)
	C99	Nurse labour force - unknown/inadequately described/not stated

**Guide for use:** Specifics will vary for each profession as appropriate and will be reflected in the classification/coding that is applied. Classification within the National Health Labour Force Collection is profession-specific.

**Verification rules:**

**Collection methods:**

**Related data:**

### Administrative attributes

**Source document:**

**Source organisation:** National Health Labour Force Data Working Group

**National minimum data sets:**

Health labourforce from 1/07/89 to

**Comments:** The comments that follow apply to the nurse labour force specifically.

It is strongly recommended that, in the case of the nurse labour force, further disaggregation be avoided as much as possible. The reason for this recommendation is that any expansion of the classification to include specific specialty areas (e.g. cardiology, otorhinolaryngology, gynaecology etc.) will only capture data from hospitals with dedicated wards or units; persons whose clinical practice includes a mix of cases within a single ward setting (as in the majority of country and minor metropolitan hospitals) will not be included in any single specialty count, leading to a risk of the data being misinterpreted. The data would show a far lower number of practitioners involved in providing services to patients with some of the listed specialty conditions than is the case.

This data element may need reviewing in the light of the changes and developments in the structure of service delivery to ensure that it retains explanatory power. There may be a case for restricting the classification to the



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## Principal area of clinical practice (*continued*)

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**Comments (cont'd):** clinical areas that require differentiated registration, and capture the target client group and setting. Such a classification would appear as follows:

(Single choice option)

01 - general (comprehensive) nursing

02 - psychiatric nursing\*

03 - intellectual disability nursing\*\*

04 - gerontology nursing

05 - midwifery nursing

06 - child health nursing

07 - mothercraft

08 - child welfare

09 - infant nursing

10 - other (specified)

\* mental health

\*\* mental deficiency, mental retardation

An associated item should capture information on the client group/setting.

The selected clinical activity takes place principally in:

(Multiple choice option)

01 - Hospital or institution setting

02 - Client's/patient's home

03 - Community residential facility (including group house)

04 - Outpatient/day only hospital, clinic or centre

05 - Other (specified)

Item LFS 12 'Type and sector of employment establishment' supplements the two above items with information on the employer's industry.

---

## Principal role of health professional

---

**Admin. status:** CURRENT 1/07/95

### Identifying and definitional attributes

**NHIK identifier:** 000138 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** The principal role of a health professional is that in which the person usually works the most hours each week.

**Context:** Health labour force: this data element provides information on the principal professional role of respondents who currently work within the broad context/discipline field of their profession (as determined by data element Professional labour force status). Identification of clinicians provides comparability with other labour force collections that just include clinicians.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 1 **Representational layout:** N

**Data domain:**

1	Clinician
2	Administrator
3	Teacher/educator
4	Researcher
5	Public health/health promotion
6	Occupational health
7	Environmental health
8	Other (specify)
9	Unknown/inadequately described/not stated

**Guide for use:** Code 1. A clinician is a person mainly involved in the area of clinical practice, i.e. diagnosis, care and treatment, including recommended preventative action, to patients or clients. Clinical practice may involve direct client contact or may be practised indirectly through individual case material (as in radiology and laboratory medicine).

Code 2. An administrator in a health profession is a person whose main job is in an administrative capacity in the profession, e.g. directors of nursing, medical superintendents, medical advisors in government health authorities, health profession union administrators (e.g. Australian Medical Association, Australian Nurses Federation).

Code 3. A teacher/educator in a health profession is a person whose main job is employment by tertiary institutions or health institutions to provide education and training in the profession.

Code 4. A researcher in a health profession is a person whose main job is to conduct research in the field of the profession, especially in the area of clinical activity. Researchers are employed by tertiary institutions, medical research bodies, health institutions, health authorities, drug companies and other bodies.

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## Principal role of health professional (*continued*)

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**Guide for use (cont'd):** Codes 5, 6 and 7. Public health/health promotion, occupational health and environmental health are specialties in medicine, and fields of practice for some other health professions. They are public health rather than clinical practice, and hence are excluded from clinical practice.

**Verification rules:**

**Collection methods:** For respondents indicating that their principal professional role is in clinical practice, a more detailed identification of that role is established according to profession-specific categories.

**Related data:**

### Administrative attributes

**Source document:**

**Source organisation:** National Health Labour Force Data Working Group

**National minimum data sets:**

Health labourforce from 1/07/89 to

**Comments:** Category 8 may be disaggregated, depending on the distribution of responses, i.e. if the category contains significant distinct occupational groups, these can be identified and described through data analysis, or can be included as part of an expanded classification. These broad classification categories also make up subpopulations that can be described through cross-classification by other variables.

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## Profession labour force status of health professional

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**Admin. status:** CURRENT 1/07/95

### Identifying and definitional attributes

**NHIK identifier:** 000140 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** For the national health labour force collections, profession labour force status of a health professional in a particular profession is defined by employment status according to the classification/coding frame below at the time of renewal of registration.

Employment in a particular health profession is defined by practice of that profession or work that is principally concerned with the discipline of the profession (for example, research in the field of the profession, administration of the profession, teaching of the profession or health promotion through public dissemination of the professional knowledge of the profession).

**Context:** Health labour force: this data element provides essential data for estimating the size and distribution of the health labour force, monitoring growth, forecasting future supply, and addressing work force planning issues. It was developed by the National Committee for Health and Vital Statistics during the 1980s and endorsed by the Australian Health Ministers Advisory Council in 1990 as a national minimum data set item for development of the national health labour force collections.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 3 **Representational layout:** N or N.N

**Data domain:**

1	Employed in the profession: working in/practising the reference profession - in reference State
2	Employed in the profession: working in/practising the reference profession - mainly in other State(s) but also in reference State
3	Employed in the profession: working in/practising the reference profession - mainly in reference State but also in other State(s)
4	Employed in the profession: working in/practising the reference profession - only in State(s) other than reference State
5.1	Employed elsewhere, looking for work in the profession: in paid work not in the field of profession but looking for paid work/practice in the profession - seeking either full-time or part-time work
5.2	Employed elsewhere, looking for work in the profession: in paid work not in the field of profession but looking for paid work/practice in the profession - seeking full-time work
5.3	Employed elsewhere, looking for work in the profession: in paid work not in the field of profession but looking for paid work/practice in the profession - seeking part-time work
5.9	Employed elsewhere, looking for work in the profession: in paid work not in the field of profession but looking for paid work/practice in the profession - seeking work (not stated)

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## Profession labour force status of health professional (continued)

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<b>Data domain (cont'd):</b>	6.1	Unemployed, looking for work in the profession: not in paid work but looking for work in the field of profession - seeking either full-time or part-time work
	6.2	Unemployed, looking for work in the profession: not in paid work but looking for work in the field of profession - seeking full-time work
	6.3	Unemployed, looking for work in the profession: not in paid work but looking for work in the field of profession - seeking part-time work
	6.9	Unemployed, looking for work in the profession: not in paid work but looking for work in the field of profession - seeking work (not stated)
	7	Not in the labour force for the profession: not in work/practice in the profession and not looking for work/practice in the profession
	8	Not in the labour force for the profession: working overseas
	9	Unknown/not stated

**Guide for use:** The term 'employed in the profession' equates to persons who have a job in Australia in the field of the reference profession.

A person who is normally employed in the profession but is on leave at the time of the annual survey is defined as being employed.

A health professional who is not employed but is eligible to work in, and is seeking employment in the profession, is defined as unemployed in the profession.

A health professional looking for work in the profession, and not currently employed in the profession, may be either unemployed or employed in an occupation other than the profession.

A registered health professional who is not employed in the profession, nor is looking for work in the profession, is defined as not in the labour force for the profession.

Registered health professionals not in the labour force for the profession may be either not employed and not looking for work, or employed in another occupation and not looking for work in the profession.

### Verification rules:

**Collection methods:** For the national health labour force collection survey questionnaire, this is the key filter question. It excludes from further survey questions at this point:

- persons working overseas although working/practising in the reference profession
- respondents working only in States other than the reference state
- respondents not working in the reference profession and not looking for work in the reference profession

It also directs respondents working in the reference State and other States to respond to subsequent questions only in respect of work in the reference State. These distinctions are necessary in order to eliminate multiple counting for respondents renewing licenses to practise in more than one State.

## Profession labour force status of health professional (continued)

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- Collection methods (cont'd):** The definitions of employed and unemployed in this data item differ from ABS definitions for these categories defined in LFA2 'Employed persons', LFA8 'Labour force status', LFA9 'Looking for full-time work', LFA10 'Looking for part-time work', LFA12 'Not in the labour force', LFA13 'Status in employment', and LFA14 'Unemployed persons'. The main differences are:
- The National Health Labour Force Collection includes persons other than clinicians working in the profession as persons employed in the profession. ABS uses the Australian Standard Classification of Occupations where, in general, classes for health occupations do not cover non-clinicians. The main exception to this is nursing where, because of the size of the profession, there are classes for nursing administrators and educators.
  - The labour force collection includes health professionals working in the Defence Forces; ABS does not, with the exception of the population census.
  - ABS uses a tightly defined reference period for employment and unemployment; the labour force collection reference period is self-defined by the respondent as his/her usual status at the time of completion of the survey questionnaire.
  - The labour force collection includes, among persons looking for work in the profession, those persons who are registered health professionals but employed in another occupation and looking for work in the profession; ABS does not.
  - The labour force collection includes in the category not in the labour force health professionals registered in Australia but working overseas; such persons are excluded from the scope of ABS censuses and surveys.

**Related data:** relates to the data element concept Health labour force, version 1  
relates to the data element concept Occupation, version 1

### Administrative attributes

**Source document:**

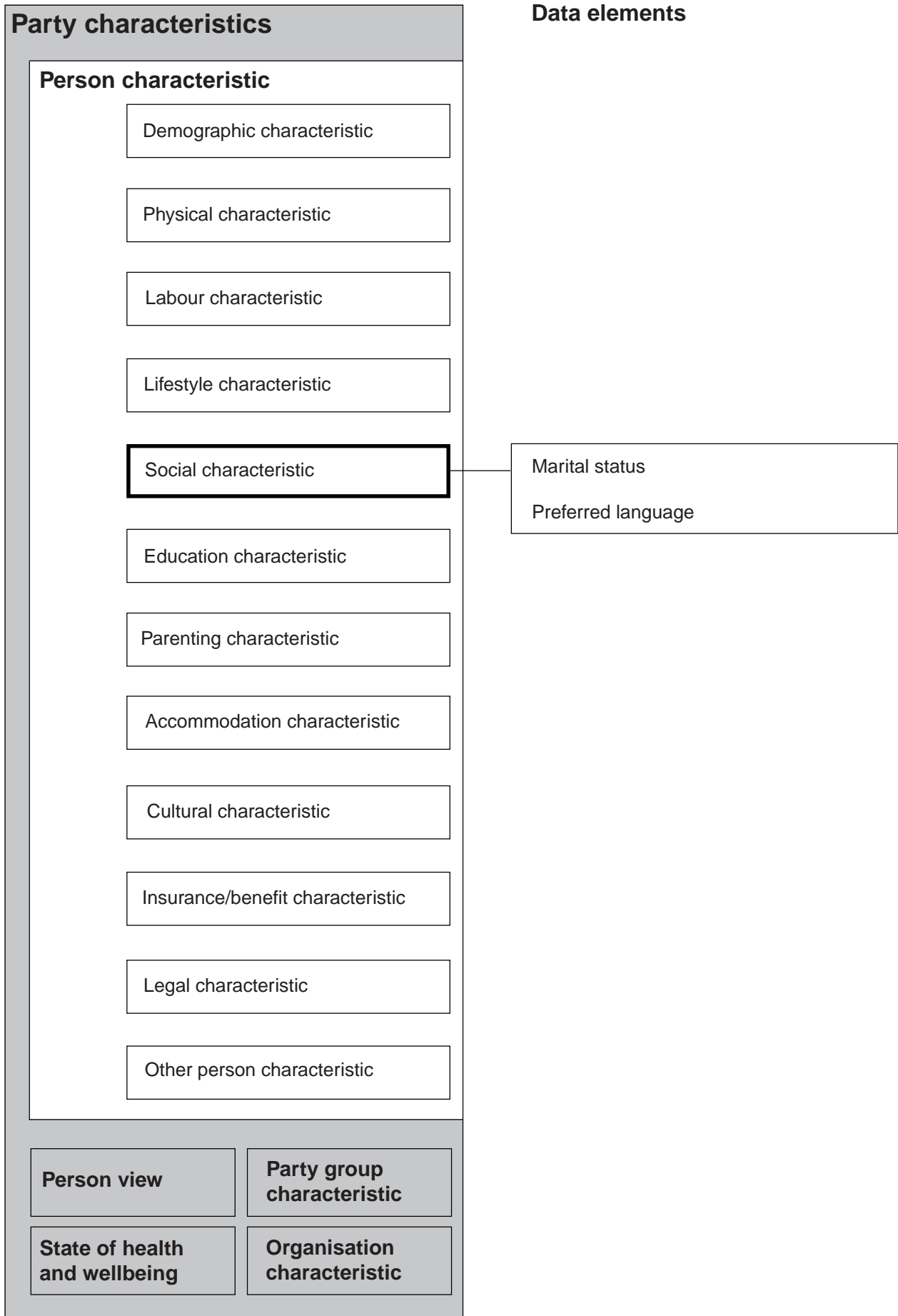
**Source organisation:** National Health Labour Force Data Working Group

**National minimum data sets:**

Health labourforce from 1/07/89 to

**Comments:**

**National Health Information Model entities**



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## Marital status

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**Admin. status:** CURRENT 1/07/94

### Identifying and definitional attributes

**NHIK identifier:** 000089 **Version number:** 2

**Data element type:** DATA ELEMENT

**Definition:** Current marital status of the person.

**Context:** Marital status is a core data element in a wide range of social, labour and demographic statistics. Its main purpose is to establish the living arrangements of individuals, to facilitate analysis of the association of marital status with the need for and use of services and for epidemiological analysis.

The ABS has defined registered marital status based on a legal concept and social marital status, a social, marriage-like arrangement (i.e. de facto marriage). The ABS standards working party recommended that the ABS registered marital status be accepted (ABS 1993).

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 1 **Representational layout:** N

**Data domain:**

1	Never married
2	Widowed
3	Divorced
4	Separated
5	Married (including de facto)
6	Not stated / inadequately described

**Guide for use:** The category Married (registered and de facto) should be generally accepted as applicable to all de facto couples, including of the same sex.

#### Verification rules:

**Collection methods:** While marital status is an important factor in assessing the type and extent of support needs, such as for the elderly living in the home environment, marital status does not adequately address the need for information about social support and living arrangements and other data elements need to be formulated to capture this information.

**Related data:** supersedes previous data element Marital status, version 1

### Administrative attributes

**Source document:** ABS Directory of concepts and standards for social, labour and demographic statistics, 1993

**Source organisation:** Australian Bureau of Statistics

#### National minimum data sets:

Institutional mental health care from 1/07/97 to



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## Marital status (*continued*)

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**Comments:**

ABS standards (see ABS: Directory of Concepts and Standards for Social, Labour and Demographic statistics) identify two concepts of marital status:

- registered marital status-defined as whether a person has, or has had, a legally registered marriage;
- social marital status-based on a persons living arrangements (including de-facto marriages), as reported by the person.

ABS recommends that the social marital status concept be collected when information on marital status is sought, whereas the registered marital status concept need only be collected where it is specifically required for the purposes of the collection and only in areas of consent if necessary. Most community services data collections ask clients to self-report their marital status. Hence, the operative concept is one of social marital status.

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## Preferred language

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000132 **Version number:** 2

**Data element type:** DATA ELEMENT

**Definition:** The language (including sign language) most preferred by the person for communication. This may be a language other than English even where the person can speak fluent English.

**Context:** Health and welfare services: An important indicator of ethnicity, especially for persons born in non-English-speaking countries. Its collection will assist in the planning and provision of multilingual services and facilitate program and service delivery for migrants and other non-English speakers.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 2 **Max.** 2 **Representational layout:** NN

**Data domain:**

00	Afrikaans
01	Albanian
02	Alyawarr (Alyawarra)
03	Arabic (including Lebanese)
04	Armenian
05	Arernte (Aranda)
06	Assyrian (including Aramaic)
07	Australian Indigenous languages, not elsewhere classified
08	Bengali
09	Bisaya
10	Bosnian
11	Bulgarian
12	Burarra
13	Burmese
14	Cantonese
15	Cebuano
16	Croatian
17	Czech
18	Danish
19	English
20	Estonian
21	Fijian
22	Finnish
23	French
24	German
25	Gilbertese
26	Greek
27	Gujarati
28	Hakka
29	Hebrew

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## Preferred language (*continued*)

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<b>Data domain</b>	30	Hindi
<b>(cont'd):</b>	31	Hmong
	32	Hokkien
	33	Hungarian
	34	Indonesian
	35	Irish
	36	Italian
	37	Japanese
	38	Kannada
	39	Khmer
	40	Korean
	41	Kriol
	42	Kuurinji (Gurindji)
	43	Lao
	44	Latvian
	45	Lithuanian
	46	Macedonian
	47	Malay
	48	Maltese
	49	Mandarin
	50	Mauritian Creole
	51	Netherlandic
	52	Norwegian
	53	Persian
	54	Pintupi
	55	Pitjantjatjara
	56	Polish
	57	Portuguese
	58	Punjabi
	59	Romanian
	60	Russian
	61	Samoan
	62	Serbian
	63	Sinhalese
	64	Slovak
	65	Slovene
	66	Somali
	67	Spanish
	68	Swahili
	69	Swedish
	70	Tagalog (Filipino)
	71	Tamil
	72	Telugu
	73	Teochew
	74	Thai
	75	Timorese
	76	Tiwi
	77	Tongan

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## Preferred language (*continued*)

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<b>Data domain</b>	78	Turkish
<b>(cont'd):</b>	79	Ukrainian
	80	Urdu
	81	Vietnamese
	82	Walmajarri (Walmadjari)
	83	Warlpiri
	84	Welsh
	85	Wik-Mungkan
	86	Yiddish
	95	Other languages, nfd
	96	Inadequately described
	97	Non verbal, so described (including sign languages e.g. Auslan, Makaton)
	98	Not stated

**Guide for use:** All non-verbal means of communication, including sign languages, are to be coded to 97.

Code 96 should be used where some information, but insufficient, is provided.

Code 98 is to be used when no information is provided.

All Australian Indigenous languages not shown separately on the code list are to be coded to 86.

**Verification rules:**

**Collection methods:** This information may be collected in a variety of ways. It may be collected by using a predetermined shortlist of languages that are most likely to be encountered from the above code list accompanied by an open text field for 'Other language' or by using an open ended question that allows for recording of the language nominated by the person. Regardless of the method used for data collection the language nominated should be coded using the above codes.

**Related data:** supersedes previous data element Preferred language, version 1

**Administrative attributes**

**Source document:** Australian Standard Classification of Languages, (ASCL)  
Australian Bureau of Statistics, Catalogue number 1267.0

**Source organisation:** NHDC, Australian Bureau of Statistics

**National minimum data sets:**

**Comments:** The Australian Bureau of Statistics has developed a detailed four-digit language classification of 193 language units which was used in the 1996 Census. Although it is preferable to use the classification at a four-digit level, the requirements of administrative collections have been recognised and the ABS has developed a classification of 86 languages at a two-digit level from those most frequently spoken in Australia. Mapping of this 2 digit running code system to the 4 digit Australian Standard Classification of Language is available from ABS. The classification used in this data element is a modified version of the 2-digit level ABS classification. The National Health Data

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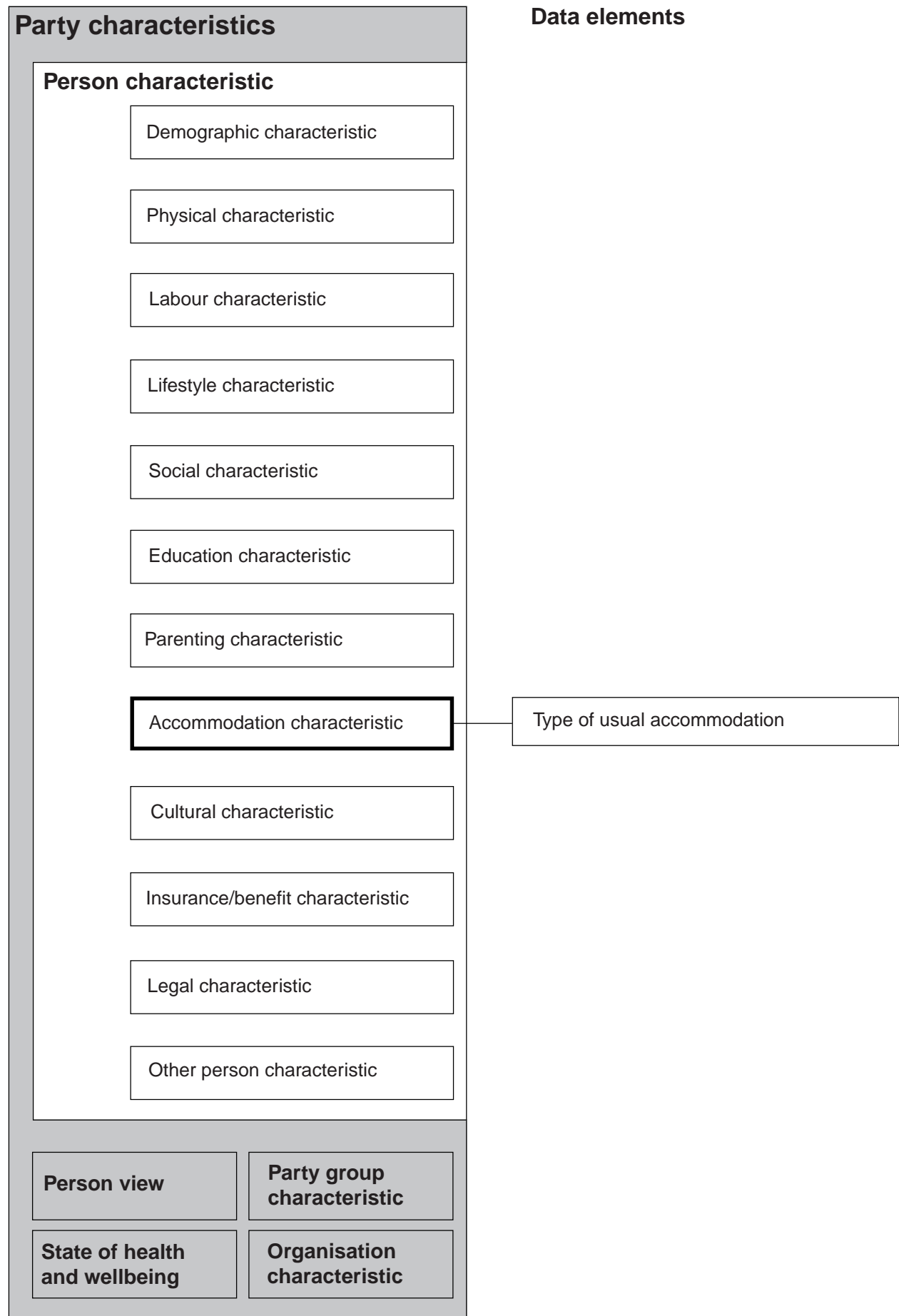
## Preferred language (*continued*)

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**Comments (cont'd):** Committee considered that the grouping of languages by geographic region was not useful in administrative settings. Thus the data domain includes an alphabetical listing of the 86 languages from the ABS 2 digit level classification with only one code for 'Other languages, nfd'. By removing the geographic groupings from the classification information about the broad geographic region of languages that are not specifically coded is lost. However, the NHDC considered that the benefits to data collectors gained from simplifying the code listing outweighed this disadvantage.



**National Health Information Model entities**



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## Type of usual accommodation

---

**Admin. status:** CURRENT 1/07/89

### Identifying and definitional attributes

**NHIK identifier:** 000173 **Version number:** 1

**Data element type:** DATA ELEMENT

**Definition:** The type of physical accommodation the person lived in prior to admission.

**Context:** Institutional health care: permits analysis of the prior residential accommodation type of people admitted to nursing homes or other institutional care.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 1 **Representational layout:** N

**Data domain:**

1	House or flat
2	Independent unit as part of retirement village or similar
3	Hostel or hostel type accommodation
4	Psychiatric hospital
5	Acute hospital
6	Other accommodation
7	No usual residence

#### **Guide for use:**

#### **Verification rules:**

**Collection methods:** The above classifications have been based on Question 16 of Form NH5. This item is not available for New South Wales State nursing homes.

As this data item includes only details of physical accommodation before admission it was decided to have details of the relational basis of accommodation before admission collected as a separate data element (see data element 'Source of referral').

The Commonwealth Department of Health and Family Services has introduced a new Aged Care Application and Approval form which replaces the NH5. In the light of this and other changes to the nursing home and hostel sector, this data element will be reviewed during 1998.

#### **Related data:**

### Administrative attributes

#### **Source document:**

**Source organisation:** National minimum data set working parties

#### **National minimum data sets:**

Institutional mental health care from 1/07/97 to



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## Type of usual accommodation (*continued*)

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**Comments:**

Acute hospital is included as a type of usual accommodation although it is not typically a type of usual accommodation. 'Location immediately prior to admission', identifies those patients/residents who have an intervening episode in an acute hospital before leaving their usual residence and being admitted to a nursing home. Those who are still living in their own home, notwithstanding an acute admission, have a much better prospect of returning there, and the purpose of including acute hospital in the separate item 'Location immediately prior to admission' is to enable detection of acute admission as a precipitating event. This is potentially a very useful cross-tabulation as it should give some clues as to the need for better discharge planning in acute hospitals, and will also provide a key link to the acute hospital database.

The Queensland view is that the only practical way to collect this item is to ask, since any attempt to develop a classification system based on periods of residence in different locations is fraught with problems. If the patient's (or representative's) view is being sought, and they believe an acute hospital to be their usual residence, this must be accepted. Presumably those people who had experienced an acute hospital admission (of short duration) would not record hospital as their usual residence. Long-stay hospital patients may well have no other usual residence.

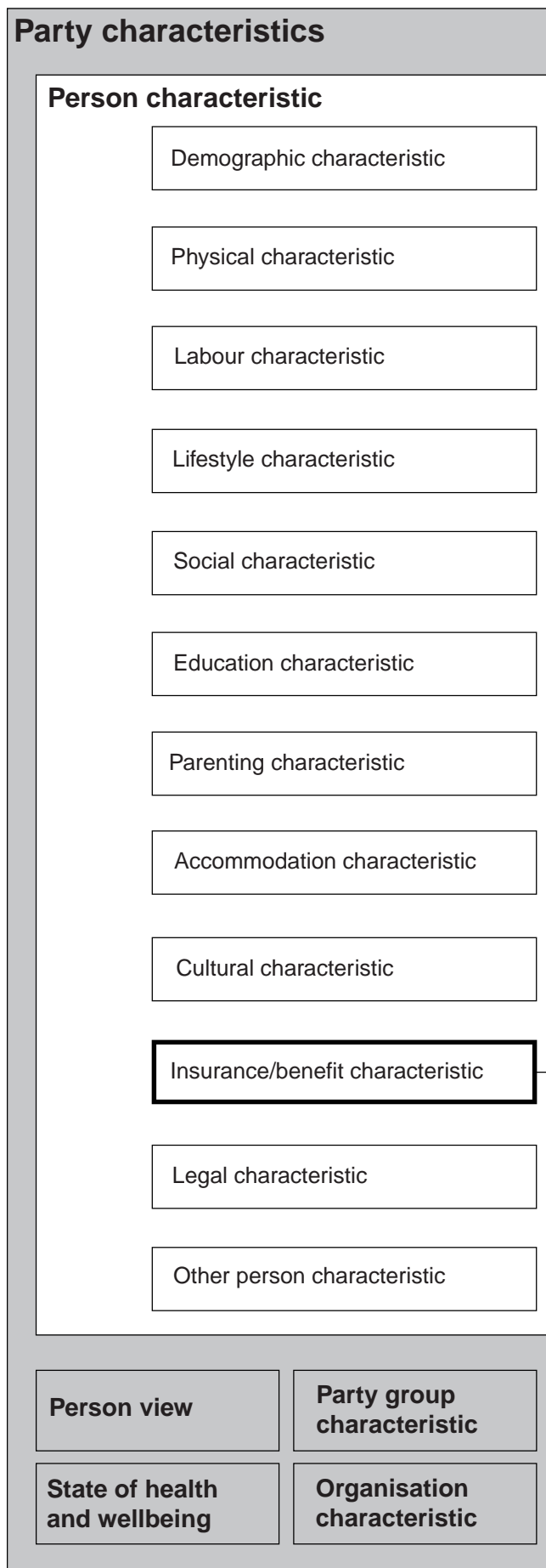
Queensland pointed out that many people do not have a usual residence, due either to homelessness or frequent shifting.

It should be noted that the recording of code only would mean that progress through levels of care (such as hostel) before admission to a nursing home would not be available.

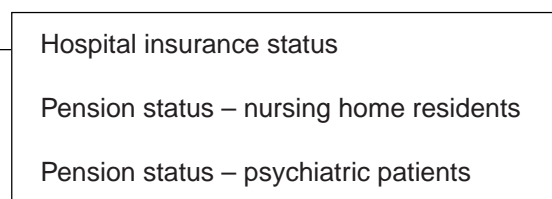
This data element is subject to review during 1998 in the light of recent structural reforms in nursing homes.



## National Health Information Model entities



## Data elements



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## Hospital insurance status

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**Admin. status:** CURRENT 1/07/97

### Identifying and definitional attributes

**NHIK identifier:** 000075 **Version number:** 3

**Data element type:** DATA ELEMENT

**Definition:** Hospital insurance under one of the following categories:

1. Registered insurance - hospital insurance with a health insurance fund registered under the National Health Act 1953 (C'wlth);
2. General insurance - hospital insurance with a general insurance company under a guaranteed renewable policy providing benefits similar to those available under registered insurance.

No hospital insurance or benefits coverage under the above.

**Context:** To assist in analysis of utilisation and health care financing

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 1 **Representational layout:** N

**Data domain:**

1	Hospital insurance
2	No hospital insurance
9	Unknown

**Guide for use:** Persons covered by insurance for benefits of ancillary services only are included in 2. no hospital insurance.

The 'unknown' category should not be used in primary collections but can be used to record unknown insurance status in databases.

This item is to determine whether the patient has hospital insurance, not their method of payment for the episode of care.

**Verification rules:**

**Collection methods:**

**Related data:** is used in conjunction with Patient accommodation eligibility status, version 2 supersedes previous data element Insurance status, version 2

### Administrative attributes

**Source document:**

**Source organisation:** National Health Data Committee

**National minimum data sets:**

Institutional health care from 1/07/89 to

Institutional mental health care from 1/07/97 to

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## Hospital insurance status (*continued*)

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**Comments:**

Insurance status was reviewed and modified to reflect changes to new private health insurance arrangements under the Health Legislation (Private Health Insurance Reform) Amendment Act 1995.

Employee health benefits schemes became illegal with the implementation of Schedule 2 of the private health insurance reforms, effective on 1 October 1995.

Under Schedule 4 of the private health insurance reforms, on 1 July 1997, the definition of the 'basic private table' or 'basic table', and 'supplementary hospital table' and any references to these definitions was omitted from the National Health Act 1953. All hospital tables offered by registered private health insurers since 29 May 1995 have been referred to as 'Applicable Benefits Arrangements' and marketed under the insurer's own product name.

## Pension status - nursing home residents

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**Admin. status:** CURRENT 1/07/97

### Identifying and definitional attributes

**NHIK identifier:** 000383 **Version number:** 2

**Data element type:** DATA ELEMENT

**Definition:** Whether or not a person is in receipt of a pension and the nature of that pension (note that this does not mean the pension is necessarily the recipient's main source of income).

**Context:** This data element is likely to be a factor in determining equity of services and could be a surrogate indicator of income.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 1 **Representational layout:** N

**Data domain:**

1	Aged pension - full pension without rent assistance
2	Aged pension - full pension plus rent assistance
3	Repatriation pension
4	Disability support pension
5	Other pension or benefit
6	No pension

**Guide for use:**

**Verification rules:**

**Collection methods:** The pension categories for nursing homes have been taken directly from Question 15 of the NH5 form. The Commonwealth Department of Health and Family Services has developed a new form to replace the NH5. This data element and its data domain will be reviewed during 1998.

**Related data:** supersedes previous data element Pension status, version 1

### Administrative attributes

**Source document:**

**Source organisation:**

**National minimum data sets:**

**Comments:** This data element will be reviewed during 1998 in the light of recent structural reform of nursing homes.

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## Pension status - psychiatric patients

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**Admin. status:** CURRENT 1/07/97

### Identifying and definitional attributes

**NHIK identifier:** 000121 **Version number:** 2

**Data element type:** DATA ELEMENT

**Definition:** Whether or not a person is in receipt of a pension or social security benefit and the nature of that pension or benefit (note that this does not mean the pension / benefit is necessarily the recipient's main source of income)

**Context:** This item is a factor in determining equity of services, community needs, a surrogate indicator of income, and useful in analysis of total resource allocation to psychiatric care in Australia.

A substantial proportion of the consumers of public psychiatric services are people whose sole or major source of income is some form of pension or Commonwealth benefit.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 1 **Representational layout:** N

**Data domain:**

1	Aged pension
2	Repatriation pension
3	Invalid pension
4	Unemployment benefit
5	Sickness benefit
6	Other pension / benefit

**Guide for use:**

**Verification rules:**

**Collection methods:**

**Related data:** supersedes previous data element Pension status, version 1

### Administrative attributes

**Source document:**

**Source organisation:**

**National minimum data sets:**

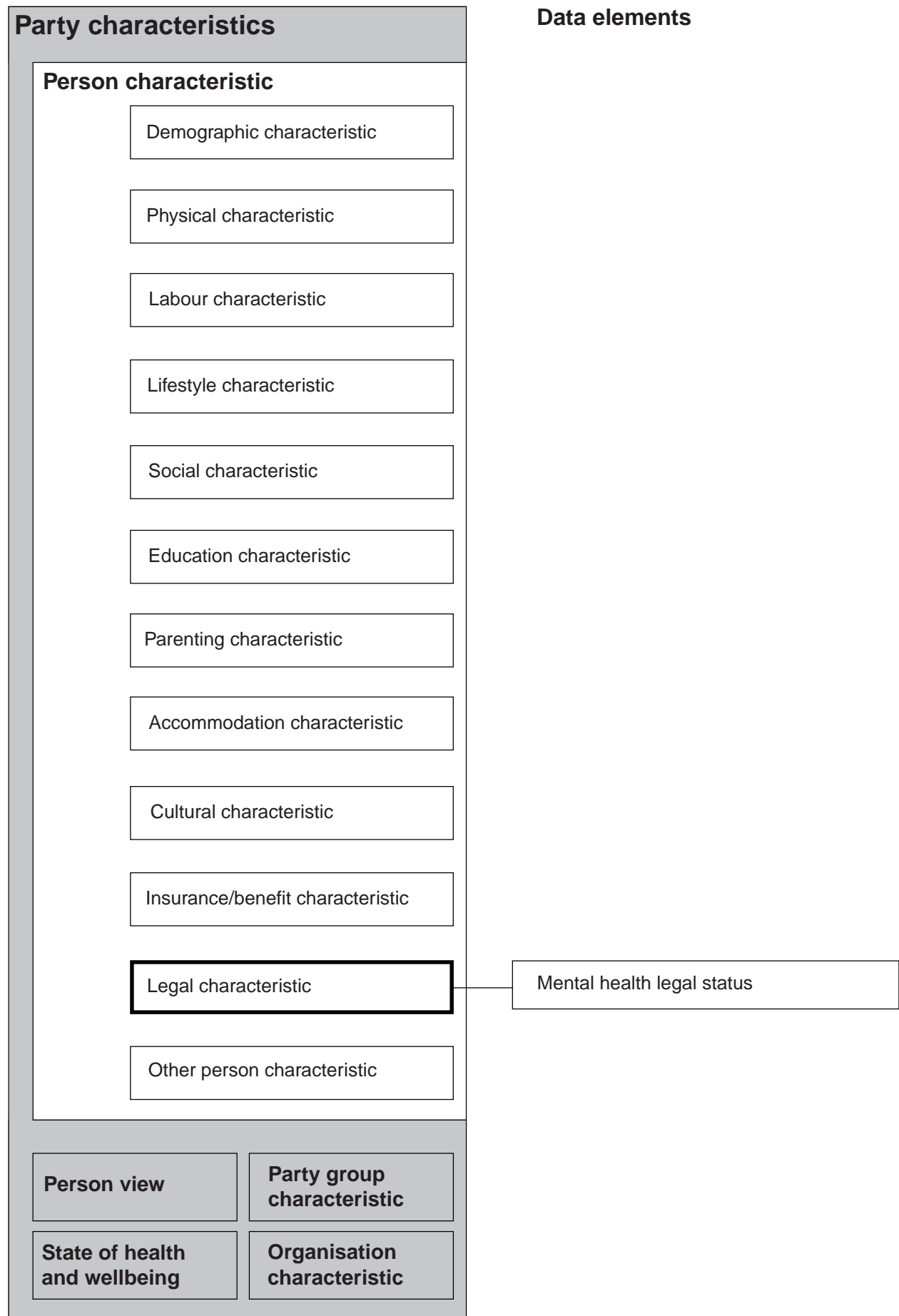
Institutional mental health care from 1/07/97 to

**Comments:**





## National Health Information Model entities



## Data elements

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## Mental health legal status

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**Admin. status:** CURRENT 1/07/98

### Identifying and definitional attributes

**NHIK identifier:** 000092 **Version number:** 3

**Data element type:** DATA ELEMENT

**Definition:** An indication that a person was treated on an involuntary basis under the relevant State or Territory mental health legislation, at some point during the hospital stay or treatment by a community based service.

Involuntary patients are persons who are detained in hospital or compulsorily treated in the community under mental health legislation for the purpose of assessment or provision of appropriate treatment or care.

**Context:** Mental health care: this data element is required to monitor trends in the use of compulsory treatment provisions under State and Territory mental health legislation by Australian hospitals and community health care facilities. It will also assist in the development of an appropriate casemix classification for mental health services.

For those hospitals and community mental health services which provide psychiatric treatment to involuntary patients, mental health legal status information is an essential data element within local record systems.

### Relational and representational attributes

**Datatype:** Numeric **Representational form:** CODE

**Field size:** **Min.** 1 **Max.** 1 **Representational layout:** N

**Data domain:**

1	Involuntary patient
2	Voluntary patient

**Guide for use:** Approval is required under the State or Territory mental health legislation in order to detain patients for the provision of mental health care or for patients to be treated compulsorily in the community. Code 1 involuntary status should only be used by facilities which are approved for this purpose. While each State and Territory mental health legislation differs in the number of categories of involuntary patient that are recognised, and the specific titles and legal conditions applying to each type, the legal status categories which provide for compulsory detention or compulsory treatment of the patient can be readily differentiated within each jurisdiction. These include special categories for forensic patients who are charged with or convicted of some form of criminal activity.

Each State/Territory health authority should identify which sections of their mental health legislation provide for detention or compulsory treatment of the patient and code these as involuntary status.

The mental health legal status of admitted patients treated within approved hospitals may change many times throughout the episode of care. Patients may be admitted to hospital on an involuntary basis and subsequently be changed to voluntary status; some patients are admitted as voluntary but are transferred to involuntary status during the hospital stay. Multiple changes between voluntary and involuntary status during an episode of care in hospital

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## Mental health legal status (*continued*)

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**Guide for use (cont'd):** or treatment in the community may occur depending on the patient's clinical condition and his/her capacity to consent to treatment.

**Verification rules:**

**Collection methods:**

1. Admitted patients: to be collected if the patient is involuntary at any time during the hospital stay .
2. Non-admitted patients: the date of each change of mental health legal status to be collected, so that length of duration of voluntary or involuntary status can be derived. The derived item can be compared with both dates of contact and number of contacts, thus providing an assessment of mental health legal status in relation to service intensity.

**Related data:** supersedes previous data element Mental health legal status, version 2

### Administrative attributes

**Source document:**

**Source organisation:**

**National minimum data sets:**

Institutional health care	from 1/07/89 to
Institutional mental health care	from 1/07/97 to
Community mental health care	from 1/07/98 to

**Comments:**

