Person—height (measured), total centimetres NN[N].N

Exported from METEOR (AIHW's Metadata Online Registry)

Person—height (measured), total centimetres NN[N].N

Identifying and definitional attributes

Metadata item type:	Data Element
Short name:	Height (measured)
METEOR identifier:	270361
Registration status:	Health!, Standard 01/03/2005
Definition:	The height of a person measured in centimetres.
Context:	Public health and health care

Data element concept attributes

Identifying and definitional attributes

Data element concept:	Person—height
METEOR identifier:	269792
Registration status:	Health!, Standard 01/03/2005 Tasmanian Health, Standard 20/12/2016
Definition:	The height of a person.
Context:	Public health and health care: Stature is a major indicator of general body size and of bone length and of nutritional and health status of the individual and the community at large. 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). Self-reported or parentally reported height for children and adolescents should be used cautiously if at all. It enables the calculation of body mass index which requires the measurement of height and weight (body mass) for adults.
Object class:	Person
Property:	Height

Value domain attributes

Identifying and definitional attributes

Value domain:	Total centimetres NN[N].N
METEOR identifier:	270714
Registration status:	Health!, Standard 01/03/2005 Tasmanian Health, Standard 20/12/2016
Definition:	Total number of centimetres.

Representational attributes

Representation class:	Total
Data type:	Number
Format:	NN[N].N

Maximum character length: 4

	Value	Meaning
Supplementary values:	999.9	Not measured

Unit of measure: Centimetre (cm)

Data element attributes

Collection and usage attributes

Guide for use:

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

Measurements of height should be assessed in relation to children and adolescents' age and pubertal status.

Collection methods:

The measurement protocol described below are 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).

Measurement protocol:

Height measurements can be based on recumbent length or standing height. In general, length measurements are recommended for children under 2 years of age and height measurements for others.

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.

Adults and children who can stand:

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). 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 plan (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-observer 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 & 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.

Infants:

For the measurement of supine length of children up to and including 2 years of age, two observers are required. One observer positions the head correctly while the other ensures the remaining position is correct and brings the measuring board in contact with the feet. The subject lies in a supine position on a recumbent length table or measuring board. The crown of the head must touch the stationary, vertical headboard. The subject's head is held with the line of vision aligned perpendicular to the plane of the measuring surface. The shoulders and buttocks must be flat against the table top, with the shoulders and hips aligned at right angles to the long axis of the body. The legs must be extended at the hips and knees and lie flat against the table top and the arms rest against the sides of the trunk. The measurer must ensure that the legs remain flat on the table and must shift the movable board against the heels. In infants care has to be taken to extend the legs gently. In some older children two observers may also be required.

In general, length or height is measured and reported to the nearest 0.1 cm. For any child, the length measurement is approximately 0.5–1.5 cm greater than the height measurement. It is therefore recommended that when a length measurement is applied to a height-based reference for children over 24 months of age (or over 85 cm if age is not known), 1.0 cm be subtracted before the length measurement is compared with the reference. It is also recommended that as a matter of procedure and data recording accuracy, the date be recorded when the change is made from supine to standing height measure.

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)) 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.

Comments:

This metadata item applies to persons of all ages. It is recommended for use in population surveys and health care settings.

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.

Metadata items currently exist for sex, date of birth, country of birth, Indigenous status and smoking. Metadata items are being developed for physical activity.

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. However 5-year age groups are not generally suitable for children and adolescents. 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, women, children and adolescents although the range will depend on the population:

Height < 70 cm

70 cm = Height < 75 cm

75 cm = Height < 80 cm

... in 5 cm categories

185 cm = Height < 190 cm

Height => 190 cm

Relational attributes

Related metadata references:

Is used in the formation of Adult—body mass index (measured), ratio NN[N].N[N]
Health!, Standard 01/03/2005

Is used in the formation of Adult—body mass index (self-reported), ratio NN[N].N[N]
Health!, Standard 01/03/2005
National Health Performance Authority (retired), Retired 01/07/2016

Is used in the formation of Child—body mass index (measured), ratio NN[N].N[N]
Health!, Standard 01/03/2005

Is used in the formation of Child—body mass index (self-reported), ratio NN[N].N[N]
Health!, Standard 01/03/2005

Is re-engineered from Height - measured, version 2, DE, NHDD, NHIMG, Superseded 01/03/2005.pdf (28.7 KB)
No registration status

Implementation in Data Set Specifications:

Acute coronary syndrome (clinical) DSS
Health!, Superseded 01/09/2012

Acute coronary syndrome (clinical) DSS
Health!, Superseded 02/05/2013

Acute coronary syndrome (clinical) NBPDS 2013-
Health!, Standard 02/05/2013
Implementation start date: 01/07/2013

Cardiovascular disease (clinical) DSS
Health!, Superseded 15/02/2006

Cardiovascular disease (clinical) DSS
Health!, Superseded 04/07/2007

Cardiovascular disease (clinical) DSS
Health!, Superseded 22/12/2009

Cardiovascular disease (clinical) DSS
Health!, Superseded 01/09/2012

Cardiovascular disease (clinical) NBPDS
Health!, Superseded 17/10/2018

Cardiovascular disease (clinical) NBPDS
Health!, Standard 17/10/2018

Diabetes (clinical) DSS
Health!, Superseded 21/09/2005

Diabetes (clinical) NBPDS
Health!, Standard 21/09/2005

DSS specific information:

Disease, nutritional, genetic and environmental factors all exert an influence on the height of an individual, hence this variable, together with its related variable weight, is of unique value in health surveillance. It enables the calculation of body mass index which requires the measurement of height and weight (body mass) for adults as well as sex and date of birth for children and adolescents.

Stature is a major indicator of general body size and of bone length and of nutritional and health status of the individual and the community at large. 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).

Perinatal DSS 2014-15
Health!, Superseded 13/11/2014
Implementation start date: 01/07/2014
Implementation end date: 30/06/2015
Conditional obligation:

It is preferable to collect and record a pregnant woman's height as a measured height. Where a measured height has not been provided or it is not possible to ascertain whether the height has been measured or self-reported, the value 999.9 should be recorded against this data item to indicate this. Data should then be recorded against the conditional self-report height item.

DSS specific information:

It is acceptable for measured height to be rounded to the nearest centimetre.

Perinatal DSS 2015-16
Health!, Superseded 04/09/2015
Implementation start date: 01/07/2015
Implementation end date: 30/06/2016
Conditional obligation:

It is preferable to collect and record a pregnant woman's height as a measured height. Where a measured height has not been provided or it is not possible to ascertain whether the height has been measured or self-reported, the value 999.9 should be recorded against this data item to indicate this. Data should then be recorded against the conditional self-reported height item.

DSS specific information:

It is acceptable for measured height to be rounded to the nearest centimetre.

Perinatal NBEDS 2016-17
Health!, Superseded 05/10/2016
Implementation start date: 01/07/2016
Implementation end date: 30/06/2017

Conditional obligation:

It is preferable to collect and record a pregnant woman's height as a measured height. Where a measured height has not been provided or it is not possible to ascertain whether the height has been measured or self-reported, the value 999.9 should be recorded against this data item to indicate this. Data should then be recorded against the conditional self-reported height item.

DSS specific information:

It is acceptable for measured height to be rounded to the nearest centimetre.

Perinatal NBEDS 2017-18
Health!, Superseded 02/08/2017
Implementation start date: 01/07/2017
Implementation end date: 30/06/2018
Conditional obligation:

It is preferable to collect and record a pregnant woman's height as a measured height. Where a measured height has not been provided or it is not possible to ascertain whether the height has been measured or self-reported, the value 999.9 should be recorded against this data item to indicate this. Data should then be recorded against the conditional self-reported height item.

DSS specific information:

It is acceptable for measured height to be rounded to the nearest centimetre.

Perinatal NBEDS 2018-19
Health!, Superseded 12/12/2018
Implementation start date: 01/07/2018
Implementation end date: 30/06/2019
Conditional obligation:

It is preferable to collect and record a pregnant woman's height as a measured height. Where a measured height has not been provided or it is not possible to ascertain whether the height has been measured or self-reported, the value 999.9 should be recorded against this data item to indicate this. Data should then be recorded against the conditional self-reported height item.

DSS specific information:

It is acceptable for measured height to be rounded to the nearest centimetre.

Perinatal NBEDS 2019–20
Health!, Superseded 20/11/2019
Implementation start date: 01/07/2019
Implementation end date: 30/06/2020
DSS specific information:

It is acceptable for measured height to be rounded to the nearest centimetre.

It is preferable to collect and record a pregnant female's height as a measured height. Where a measured height has not been provided or it is not possible to ascertain whether the height has been measured or self-reported, the value 999.9 should be recorded against this data element. Data should then be recorded against the Person—height (self-reported), total centimetres NN[N] data element.

Perinatal NBEDS 2020–21
Health!, Superseded 03/12/2020
Implementation start date: 01/07/2020
Implementation end date: 30/06/2021
DSS specific information:

It is acceptable for measured height to be rounded to the nearest centimetre.

It is preferable to collect and record a pregnant female's height as a measured height. Where a measured height has not been provided or it is not possible to ascertain whether the height has been measured or self-reported, the value 999.9

should be recorded against this data element. Data should then be recorded against the Person—height (self-reported), total centimetres NN[N] data element.

Perinatal NBEDS 2021–22
Health!, Superseded 17/12/2021
Implementation start date: 01/07/2021
Implementation end date: 30/06/2022
DSS specific information:

This data element is recorded for the mother only.

It is preferable to collect and record a pregnant female's height as a measured height. Where a measured height has not been provided or it is not possible to ascertain whether the height has been measured or self-reported, the value 999.9 should be recorded against this data element. Data should then be recorded against the Person—height (self-reported), total centimetres NN[N] data element.

It is acceptable for measured height to be rounded to the nearest centimetre.

Perinatal NBEDS 2022–23
Health!, Standard 17/12/2021
Implementation start date: 01/07/2022
Implementation end date: 30/06/2023
DSS specific information:

This data element is recorded for the mother only.

It is preferable to collect and record a pregnant female's height as a measured height. Where a measured height has not been provided or it is not possible to ascertain whether the height has been measured or self-reported, the value 999.9 should be recorded against this data element. Data should then be recorded against the Person—height (self-reported), total centimetres NN[N] data element.

It is acceptable for measured height to be rounded to the nearest centimetre.