Cholesterol-HDL - measured

Important note: This is an archived metadata standard from the AIHW Knowledgebase. For current metadata standards and related information please access METeOR, the AIHW's Metadata Online Registry at http://meteor.aihw.gov.au

Identifying and Definitional Attributes

Data Dictionary:	NHDD		
Knowledgebase ID:	000651	Version number:	1
Metadata type:	DATA ELEMENT		
Registration Authority:	NHIMG	Admin status:	SUPERSEDED
		Effective date:	01-MAR-05

Definition: A person's measured high-density lipoprotein cholesterol (HDL-C).

Context: Public health, health care and clinical settings:
The evidence is strong that HDL- C has a direct protective effect against the development of arteriosclerosis.

Relational and Representational Attributes

Datatype: Numeric

Representational form: QUANTITATIVE VALUE

Representation layout: N.NN

Minimum Size: 2

Maximum Size: 3

Data Domain:		
	9.99	Not measured / inadequately described
	NOVAL	measured in mmol / L to 2 decimal places

Guide For Use: When reporting, record whether or not the measurement of HDL Cholesterol was performed in a fasting specimen.
In settings where the monitoring of a person's health is ongoing and where a measure can change over time (such as general practice), the date of assessment should be recorded.
Diabetes (clinical):
When reporting, record absolute result of the most recent HDL Cholesterol measurement in the last 12 months to the nearest 0.01 mmol / L.

Collection Methods: Measurement of lipid levels should be carried out by laboratories, or practices, which have been accredited to perform these tests by the National Association of Testing Authorities.
-To be collected as a single venous blood sample, preferably following a 12-hour fast where only water and medications have

been consumed.
-Prolonged tourniquet use can artefactually increase levels by up to 20%.

Related metadata: is used in conjunction with Service contact date version 1
is used in the calculation of Cholesterol-LDL calculated version 1
relates to the data element Cholesterol-total - measured version 1
relates to the data element Triglycerides - measured version 1
relates to the data element Dyslipidaemia - treatment version 1
is used in conjunction with Fasting status version 1

Administrative Attributes

Source Document: National Heart Foundation of Australia and the Cardiac Society of Australia and New Zealand, Lipid Management Guidelines - 2001, MJA 2001; 175: S57-S88.

Source Organisation: CV-Data Working Group
National Diabetes Data Working Group

Comments: DSS - Cardiovascular disease (clinical):
HDL-C is easily measured and has been shown to be a negative predictor of future coronary events.

An inverse relationship between the level of HDL-C and the risk of developing premature coronary heart disease (CHD) has been a consistent finding in a large number of prospective population studies. In many of these studies, the level of HDL-C has been the single most powerful predictor of future coronary events. Key studies of the relationship between HDLs and CHD include the Framingham Heart Study (Castelli et al. 1986), the PROCAM Study (Assman et al 1998), the Helsinki Heart Study (Manninen et al. 1992) and the MRFIT study (Stamler et al. 1986; Neaton et al 1992).

There are several well-documented functions of HDLs that may explain the ability of these lipoproteins to protect against arteriosclerosis (Barter and Rye 1996). The best recognised of these is the cholesterol efflux from cells promoted by HDLs in a process that may minimise the accumulation of foam cells in the artery wall. The major proteins of HDLs and also other proteins (e.g. paraoxonase) that co-transport with HDLs in plasma have anti-oxidant properties. Thus, HDLs have the ability to inhibit the oxidative modification of LDLs and may therefore reduce the atherogenicity of these lipoproteins.

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number of prospective population studies. In many of these studies, the level of HDL-C has been the single most powerful predictor of future coronary events.

Overall, it has been concluded from the prospective population studies that for every 0.025 mmol / L increase in HDL-C, the coronary risk is reduced by 2-5%. For a review of the relationship between HDL-C and CHD, see Barter and Rye (1996).

A level below 1.0 mmol / L increases risk approximately 2-fold (Gordon et al. 1989; Assmann et al. 1998). (Lipid Management Guidelines - 2001, MJA 2001; 175: S57-S88.

In settings such as general practice where the monitoring of a person's health is ongoing and where a measure can change over time, the Service contact date should be recorded.

DSS - Diabetes (clinical):
Lowered HDL-C, with increased serum triglyceride and increased low-density lipoprotein cholesterol are important risk factors for vascular disease in type 2 diabetes.

In the NSW Principles of Care and Guidelines for the Clinical Management of Diabetes Mellitus, recommendations are that HDL, total cholesterol, triglycerides are to be measured:
-every 1-2 years (if normal)
-every 3-6 months (if abnormal or on treatment)
and the target is:
-to increase HDL Cholesterol to more than or equal to 1.0 mmol / L
-to reduce total Cholesterol to less than 5.5 mmol / L
-to reduce triglyceride levels to less than 2.0 mmol / L.

If pre-existing cardiovascular disease (bypass surgery or myocardial infarction) total cholesterol should be less than 4.5 mmol / L. A level below 1.0 mmol / L increases risk approximately 2-fold (Gordon et al. 1989; Assmann et al, 1998), (Draft NHF Lipid Guidelines Paper 2001). It has been concluded from prospective population studies that for every 0.025 mmol / L increase in HDL-C, the coronary risk is reduced by 2-5%.

In settings such as general practice where the monitoring of a person's health is ongoing and where a measure can change over time, the date of assessment should be recorded.

References:

Draft National Heart Foundation of Australia - Lipid Management Guidelines 2001.

Data Element Links

Information Model Entities linked to this Data Element

NHIM	Service provision event

Data Agreements which include this Data Element

DSS - Cardiovascular disease (clinical)	From 01-Jan-03 to
DSS - Diabetes (clinical)	From 01-Jan-03 to
DSS - Acute coronary syndrome (clinical)	From 04-Jun-04 to