Vascular and metabolic syndrome management clinical audit protocol

2015 Release

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Acknowledgments

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Summary of changes

Table 1 Record of changes to 2014release

Section/ Question	Description and reason for change
Introduction	Clients on kidney dialysis should be excluded from V&M audit, because care provided a specialised service, and varies to that provided to clients with earlier stages of CKD.
Tick boxes	Tick boxes are used to indicate which clinical audit report the record will be counted in. They are also used in the 'data input' page to show the number of records entered for each audit.
Units of measurement	Units of measurement for this audit have not been altered, however it is acknowledged that Australia now has standardised units of measurement for pathology results, and these are reflected in this protocol.
All	Updated references
Question 7.3	Inclusion of AIMhi discussion prompts as informal assessment of social, emotional wellbeing
Question 9.2	eGFR or GFR accepted measurement

Version control

Version	Release date	Description
2.0	17/05/2007	Type 2 diabetes only tool
2.1	16/02/2007	addition of other vascular and metabolic conditions
2.2	21/05/2007	minor formatting adjustments only; no content change
2.3	21/08/2007	minor formatting adjustments only; no content change
2.4	4/12/2007	minor formatting adjustments only; no content change
3.0	20/05/2009	
4.0	21/12/2011	Major formatting and content changes
4.0	29/04/2013	Protocol update only
2013 release	01/08/2013	Minor formatting adjustments, internal review of content
2014	8/9/2014	Internal protocol update only
2015 review	13/10/2015	Internal protocol update only
2015 Nov	6/11/2015	Medication names updated, added new medications in Appendix 2

Introduction

This protocol should be used in conjunction with *Improving the quality of primary health care: A training manual for the One21seventy CQI cycle*.

Vascular and metabolic syndrome (V&M) clinical audit(s)

A V&M audit can be for one or more of the following chronic diseases:

- type 2 diabetes (T2D)
- coronary heart disease (CHD)
- chronic heart failure (CHF)
- chronic kidney disease (CKD)
- hypertension

Your health service team decides which of these condition(s) will be the focus of your V&M audit(s).

Eligibility of clients

Assemble a list of clients for each of the condition(s) you want to audit. To be eligible for inclusion in a V&M clinical audit, a client must:

- have a clear, documented diagnosis of the condition(s) being audited
- be 15 years or older
- have been a resident in the community for six months or more in the last twelve months.

If auditing for type 2 diabetes care, exclude clients with:

- diabetes mellitus (type 1 diabetes)
- gestational diabetes
- nephropathy (excluded from this tool because of its link to type 1 diabetes and immunoglobulin A (IgA) nephropathy).

If auditing for chronic kidney disease care, exclude clients on haemodialysis or peritoneal dialysis because the care they receive varies from the care audited in the CKD audit tool. In the majority of cases, care is provided by a specialised service, and not the primary health care service.

Sample size and confidence interval

Refer to *Improving the quality of primary health care: A training manual for the One21seventy cycle*, version 2, Section 5, for more information on determining the sample size with regard to the population size for this audit, and the confidence interval required for the reported indicators.

The 'eligible population' referred to in this protocol is the number of clients with a documented chronic disease as listed above.

Recommendations for sample size

- For services with up to 100 clients in the eligible population, we recommend a sample size of *at least 30 client records* per audit. This sample will provide an adequate estimate (for quality improvement purposes) of the proportion of clients receiving specific services.
- Health services with large eligible populations may wish to increase the sample size to reduce the confidence intervals around the sample estimates. Health services with smaller eligible populations (less than 30) should audit all client records and be cautious when using and comparing reported data.
- Be aware of the confidence interval for your results — this is important when interpreting the data in your reports.

Sampling for more than one V&M chronic disease

If your health centre decides to audit more than one condition, a client list will need to be generated for each condition and your sample for each condition should be determined separately. Some clients may be included in the client list for more than one audit. Those client records will only need to be audited once, but the information will contribute to multiple audits. If auditing a record for more than one condition, ensure you tick the appropriate boxes at the top of the first page, and answer the questions in section 2 appropriately.

Steps in sampling for multiple audits is described in the *example* below:
1. T2D

Eligible population of 50 clients

Sample size of 29 audits to give a 90% confidence interval of 10% accuracy in reported results.

Eligible population list is randomly sampled to provide a list of 29 clients to be audited.

2. CHD

Eligible population of 45 clients

Sample size of 30 audits to give a 95% confidence interval of 10% accuracy in reported results.

Eligible population list is randomly sampled to provide a list of 30 clients to be audited.

3. Each eligible population list is randomly sampled separately to provide a list of 29 clients to be audited for T2D and 30 clients to be audited for CHD. (Total of 59)

4. Compare your lists before you begin auditing — some clients may be on both lists, and information from these clients can contribute to both audits. For example,

the total number of records examined may be 19 (T2D only) + 20 (CHD only) + 10 (T2D and CHD) = 49 records to be audited, instead of 59 (that would be audited without combining the records common to both lists)

The 10 client records that appear on both sample lists need only be audited once, as long as tick boxes at top of audit indicate the appropriate audit tool, and section 2 is answered appropriately.

Generate a master list of clients that includes each client's name and medical record number, and a client identification number that has been manually assigned as part of the audit process. To ensure the clients' privacy and confidentiality, these documents should be kept in a locked filing cabinet with other secure data.

The clinical audit reports present the results from each chronic disease audit in a separate report.

(Source: *Improving the quality of primary health care: a training manual for the One21seventy CQI cycle*, 2011)

Using the vascular and metabolic syndrome management clinical audit tool and protocol

This protocol provides:

- the rationale behind the questions in the audit tool and how they relate to best practice or current guidelines
- the questions to ask and a description of what to look for in client's record, including timeframes around when certain services are scheduled
- an explanation of the options for selection.

The protocol will be valuable for useful interpretation of the reports.

The audit tool identifies which condition the client record is being audited against by the tick boxes at the beginning of the paper tool, and data entry page.

Some questions are specific to one or more of the chronic diseases that can be audited with this tool; these questions are tagged, as shown below. During an audit, answer all questions without tags, as well as questions with tags associated with the condition being audited:

- T2D Only complete if auditing type 2 diabetes care
- CHD Only complete if auditing coronary heart disease care
- CHF Only complete if auditing chronic heart failure care
- CKD Only complete if auditing chronic kidney disease care
- HT Only complete if auditing hypertension care.

The tags are generated for each question according to the answers in section 2 about what type of audit this is. **One record may be audited for more than one condition (see steps in sampling for multiple audits).**

If you are not auditing for chronic diseases with tagged questions, some questions will be automatically coded to 9-N/A during data input.

This protocol should be followed closely. The data collected on each question are validated when entered on the One21seventy website. Invalid entries will prevent progression to the next section.

Reporting

Using the tick boxes at the top of the data input page, indicate which report this record is to be counted in. You may indicate more than one audit type, if that client record is being audited for the care of more than one condition.

Section 1 General information

This section describes the characteristics of the clients in the sample, including age, sex and Indigenous status.

1.1 Client ID

Assign a unique three-digit identification (ID) number for each client audited. At data input, this three-digit number will be automatically prefixed with the tool and health centre IDs.

To ensure each medical record is only audited once in each cycle, the auditor should refer to the list of clients generated during sampling that includes each client's name, date of birth and client ID number. See example in the Introduction on sampling multiple audits on page 2 of this protocol.

The *Medicare Australia Act 1973* states that government-funded health services should be provided to people with a valid Medicare card. People who do not have a Medicare card (for example, overseas visitors) are usually charged for their health care.

Much of the funding for community controlled health services is via Medicare (general practitioners or allied health). If a client's Medicare number is not on file or has expired, the claim for the service may be rejected. It is important to have up-to-date Medicare numbers on file to ensure that claims are processed quickly.

1.2 Medicare number

Much of the funding for community controlled health services is via Medicare (general practitioners or allied health). If the Medicare number is not on file or has expired then the claim for the service may be rejected. It is important to have up to date Medicare numbers on file to ensure claims are processed quickly.

Is a **current** Medicare number documented in the client's medical record?

Indicate **1-Yes** or **0-No**

1.3 Date of birth

Record the client's date of birth as dd/mm/yyyy.

1.4 Sex

Record the sex of the client.

Indicate **1-Male** or **2-Female**.

1.5 Indigenous status

Record the client's Indigenous status as stated in their medical/health record. Indicate **one** of the following:

1-Aboriginal

2-Torres Strait Islander

3-Both Aboriginal and Torres Strait Islander

4- Neither Aboriginal nor Torres Strait Islander

5-Not stated if there is no clear record of the client's Indigenous status

1.6 Auditor

Record the name (initial and surname) of the person doing the audit. You may want make a stamp if you are a regular auditor.

(e.g. J Smith).

1.7 Audit date

You may wish to use a date stamp. Record the date as dd/mm/yyyy.

Note that the audit date will be the same for all medical records being audited for all vascular and metabolic conditions in this cycle. Even if the auditing cannot be completed in a single day, continue to use the same audit date for all clients and audit the medical records retrospectively from this date.

Section 2 Diagnosis information and audits of care

Summary documents

A medical summary may also be called a health summary or problem list. RACGP (2013) suggest that health summaries are useful to quickly access important client information. An up to date medical summary would contain valid information at the date of last attendance, and may have been updated since the client last attended. Health summaries reduce the risk of inappropriate management including medicines interactions, and side effects (particularly when allergies are recorded)

Ideally, diagnoses are recorded on summaries, however, for the purpose of eligibility for this audit, a diagnosis of type 2 diabetes (T2D), coronary heart disease (CHD), chronic heart failure (CHF), chronic kidney disease (CKD) or hypertension (HT) may be recorded anywhere in the client's medical record, including in the medical summary record, integrated notes or discharge summary to ensure maximum number of eligible clients.

Type 2 diabetes

T2D is the most common form of diabetes, characterised by hyperinsulinaemia and insulin resistance. Over time, insulin production decreases, further contributing to hyperglycaemia (Queensland Health 2010). T2D affects 85–90% of all people diagnosed with diabetes, usually older adults, and occurs because the pancreas is not producing enough insulin.

T2D results from a combination of genetic and environmental factors. Although genetics play a major role, the risk of developing T2D greatly increases when associated with lifestyle factors such as high blood pressure, overweight or obesity (particularly where extra weight is carried around the waist), insufficient physical activity and poor diet.

Aboriginal and Torres Strait Islander are 3 times more likely to have type 2 diabetes than the general population (Diabetes Australia, 2014).

T2D can often be managed initially with healthy eating and regular physical activity. However, over time, some people with T2D may also need oral hypoglycaemic tablets or insulin. This may be the natural progression of the disease, and taking tablets or insulin as soon as they are required may result in fewer complications in the long term.

2.1 Audit of T2D care

Is this an audit of T2D care? Refer to eligibility criteria on page 1.

Indicate **1-Yes** or **0-No**.

2.2 T2D diagnosis and date of diagnosis

Diagnosis of all medical conditions should be recorded in the client's medical summary to help identify co-morbidities.

Is T2D diagnosis and date of diagnosis recorded on the client's medical summary?

Indicate **1-Yes or 0-No** if there is no diagnosis of T2D recorded on the client's medical summary **or** if the diagnosis is recorded elsewhere in the medical notes.

Record the earliest **date** of a diagnosis of T2D is recorded in the client's medical summary. Record as **dd/mm/yyyy.** If the date is not recorded, leave blank.

Note: If only the year is documented, record as 01/01/yyyy; if only the month and year are documented, record as 01/mm/yyyy.

Note: If this is not an audit of T2D care, this record of diagnosis on the medical summary is used to report co-morbidities (see Section 3); it is not essential to record the date if not auditing T2D.

Coronary heart disease

CHD is an inflammatory disorder involving the build-up of fatty, cholesterol-containing deposits (called plaque) in the inner wall of one or more of the coronary (heart) arteries (Queensland Health 2015).

CHD is the most common cause of death in Australia. Disorders include angina, ischaemic heart disease and heart attacks (myocardial infarctions). (Heart Foundation)

The main symptom of CHD is chest pain. Although many women report an ache, tightness, pressure or fatigue, not pain. Other symptoms may include shortness of breath, swollen ankles, palpitations, dizziness, nausea or vomiting, panic, and an overwhelming fear of dying. (Queensland Health 2015)

2.3 Audit of CHD care

Is this an audit of CHD care? Refer to eligibility criteria on page 1.

Indicate **1-Yes** or **0-No**.

2.4 CHD diagnosis and date of diagnosis

Diagnosis of all medical conditions should be recorded in the client's medical summary to help identify co-morbidities.

Is CHD diagnosis and date of diagnosis recorded on the client's medical summary?

Indicate **1-Yes or**

0-No if there is no diagnosis of CHD recorded on the client's medical summary **or** if the diagnosis is recorded elsewhere in the medical notes.

Record the earliest **date** of a diagnosis of CHD is recorded in the client's medical summary. Record as **dd/mm/yyyy.** If the date is not recorded, leave blank.

Note: If only the year is documented, record as 01/01/yyyy; if only the month and year are documented, record as 01/mm/yyyy.

Note: If this is not an audit of CHD care, this record of diagnosis on the medical summary is used to report co-morbidities (see Section 3); it is not essential to record the date if not auditing CHD.

Chronic heart failure (CHF)

CHF is a complex clinical syndrome with typical symptoms that can occur at rest or on effort. It is diagnosed from a number of symptoms and an echocardiograph (NHF, 2014). Symptoms of CHF include shortness of breath, fatigue, fluid retention and wheezing (CARPA 2014, NHF 2014).

2.5 Audit of CHF

Is this an audit of CHF care? Refer to eligibility criteria on page 1.

Indicate **1-Yes** or **0-No**.

2.6 CHF diagnosis and date of diagnosis

Diagnosis of all medical conditions should be recorded in the client's medical summary to help identify co-morbidities.

Is CHF diagnosis and date of diagnosis recorded on the client's medical summary?

Indicate **1-Yes or**

0-No if there is no diagnosis of CHF recorded on the client's medical summary **or** if the diagnosis is recorded elsewhere in the medical notes.

Record the earliest **date** of a diagnosis of CHF is recorded in the client's medical summary. Record as **dd/mm/yyyy.** If the date is not recorded, leave blank.

Note: If only the year is documented, record as 01/01/yyyy; if only the month and year are documented, record as 01/mm/yyyy.

Note: If this is not an audit of CHF care, this record of diagnosis on the medical summary is used to report co-morbidities (see Section 3); it is not essential to record the date if not auditing CHF.

Chronic kidney disease

Indigenous Australians are six times more likely than other Australians to receive dialysis or a kidney transplant. Mortality rates from CKD were 7 times and 11 times higher than for non-Indigenous males and females, respectively (AIHW 2009a).

CKD is diagnosed when a person has:

an estimated or measured glomerular filtration rate (GFR) < 60 ml/min/1.73m^2 that is present for ≥3 months, with or without evidence of kidney damage;

or

evidence of kidney damage with or without decreased GFR that is present for ≥3 months, as evidenced by the following irrespective of the underlying cause:

- *albuminuria,*
- *haematuria after exclusion of urological causes*
- *structural abnormalities (e.g., on kidney imaging tests)*
- *pathological abnormalities (e.g., renal biopsy*) (Kidney Health Australia, 2012)

Diagnosis is made by blood or urine tests. Management of the client includes diagnosing the stage of kidney disease, assessing absolute cardiovascular risk, preventing anaemia and maintaining normal

blood pressure and body mass index (BMI) (CARPA 2014). Diabetes and high blood pressure are often co-morbidities of CKD.

2.7 Audit of CKD care

Is this an audit of CKD care? Refer to eligibility criteria on page 5.

Indicate **1-Yes** or **0-No**.

2.8 CKD diagnosis and date of diagnosis recorded

Diagnosis of all medical conditions should be recorded in the client's medical summary to help identify co-morbidities.

Is CKD diagnosis and date of diagnosis recorded on the client's medical summary?

Indicate **1-Yes or**

0-No if there is no diagnosis of CKD recorded on the client's medical summary **or** if the diagnosis is recorded elsewhere in the medical notes.

Record the earliest **date** of a diagnosis of CKD is recorded in the client's medical summary. Record as **dd/mm/yyyy.** If the date is not recorded, leave blank.

Note: If only the year is documented, record as 01/01/yyyy; if only the month and year are documented, record as 01/mm/yyyy.

Note: If this is not an audit of CKD care, this record of diagnosis on the medical summary is used to report co-morbidities (see Section 3); it is not essential to record the date if not auditing CKD.

Hypertension

A diagnosis of hypertension (high blood pressure) is based on multiple blood pressure measurements taken on several separate occasions (Queensland Health 2015). CARPA (2014) state that a diagnosis of hypertension needs BP to be high on 4 separate measurements, on at least 2 different visits.

Hypertension is strongly associated with higher likelihood of cardiovascular disease, cardiovascular events and death. Studies show that the lower the blood pressure, the lower the risk of stroke, CHD, CKD, heart failure and death. Hypertension is a major risk factor for stroke and CHD, and is a major contributor to CHF, CKD, and the progression of these disorders (NHF 2008, 2011).

Aboriginal and Torres Strait Islander people have a high prevalence of risk factors for cardiovascular disease. Rates of death due to cardiovascular disease are markedly higher for Indigenous Australians than for non-Indigenous Australians, and have not shown the downward trend seen in non-Indigenous Australians during the past 40 years (NHF 2008).

Treating high BP lessens the risk of stroke, heart disease, kidney disease (CARPA 2014).

2.9 Audit of hypertension care

Is this an audit of hypertension care? Refer to eligibility criteria on page 1.

Indicate **1-Yes** or **0-No**.

2.10 Hypertension diagnosis and date of diagnosis

Diagnosis of all medical conditions should be recorded in the client's medical summary to help identify co-morbidities.

Is hypertension diagnosis and date of diagnosis recorded on the client's medical summary?

Indicate **1-Yes or**

0-No if there is no diagnosis of hypertension recorded on the client's medical summary **or** if the diagnosis is recorded elsewhere in the medical notes.

Record the earliest **date** of a diagnosis of hypertension is recorded in the client's medical summary. Record as **dd/mm/yyyy.** If the date is not recorded, leave blank.

Note: If only the year is documented, record as 01/01/yyyy; if only the month and year are documented, record as 01/mm/yyyy.

Note: If this is not an audit of hypertension care, this record of diagnosis on the medical summary is used to report co-morbidities (see Section 3); it is not essential to record the date if not auditing hypertension.

Section 3 Co-morbidities, complications and procedures

The purpose of recording information about co-morbidities, complications and procedures is to ensure that key information about a client's medical history is recorded in appropriate sites. This should be in the client's medical summary documents (e.g. medical summary, problem list or hospital discharge summaries).

Note: **A diagnosis must be recorded in medical summary documents.** A doctor's referral letter can be considered a medical summary. For the purpose of this audit, do not use abnormal pathology results to determine the presence of co-morbidities.

Time limits for co-morbidities and complications are not included because chronic disease management should take into account the client's past history of all these co-morbidities and complications.

3.1 Asthma/chronic obstructive pulmonary disease

If left untreated, the long-term inflammation of the airway can cause permanent damage and lead to chronic obstructive pulmonary disease (COPD).

In the medical summary, is there a record that the client has or has had a diagnosis of asthma or any other COPD?

Indicate **1-Yes** or **0-No**.

3.2 Dyslipidaemia

Dyslipidaemia (abnormally high levels of fat in the blood) is an important risk factor for cardiovascular disease. It is common in people with chronic diseases.

In the medical summary, is there a record that the client has or has had a diagnosis of dyslipidaemia?

Indicate **1-Yes** or **0-No**.

3.3 Depression

Depression is defined as an episode of persistent low mood and energy for at least two weeks.

In the medical summary, is there a record that the client has or has had a diagnosis of depression?

Indicate **1-Yes** or **0-No**.

3.4 Other mental illnesses

Other mental illnesses can include anxiety or other mood disorders, psychotic disorders, substance misuse disorders, eating disorders, or mental illness secondary to a medical cause.

In the medical summary, is there a record that the client has or has had a diagnosis of any other mental illness?

Indicate **1-Yes** or **0-No**.

3.5 Acute myocardial infarction

Acute myocardial infarction (AMI) is commonly known as a heart attack. This occurs when a blood clot completely blocks blood flow to the heart muscle. This is a life-threatening emergency that can cause severe chest pain, collapse and sudden death.

In the medical summary, is there a record that the client has had an AMI?

Indicate **1-Yes** or **0-No**.

3.6 Gastroparesis

T2D Complete if auditing T2D care.

Gastroparesis is a common complication of diabetes that reduces the ability of the stomach to empty its contents, but there is no blockage (obstruction).The cause of gastroparesis is unknown, but it may be due to a disruption of nerve signals to the stomach. Symptoms may include abdominal distension, hypoglycaemia, nausea, feeling of fullness after only a few bites of food, unexplained weight loss and vomiting.

In the medical summary, is there a record that the client has had a diagnosis of gastroparesis?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of T2D care.

3.7 Retinopathy

T2D Complete if auditing T2D care.

Retinopathy refers to damage to the retina of the eye and can eventually lead to blindness. It is a common complication of diabetes. If diagnosed and treated promptly, further damage to the eye and blindness can be prevented.

In the medical summary, is there a record that the client has or has had a diagnosis of retinopathy related to diabetes?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of T2D care.

3.8 Neuropathy

T2D Complete if auditing T2D care.

Diabetic neuropathy refers to damage to the nerves caused by diabetes. Diabetic neuropathy may affect several parts of the body or a specific part of the body, and can cause numbness and sometimes pain and weakness in the hands, arms, feet and legs.

In the medical summary, is there a record that the client has or has had a diagnosis of neuropathy related to diabetes?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of T2D care.

3.9 Foot ulcer

T2D Complete if auditing T2D care.

People with diabetes who develop peripheral neuropathy and vascular disease are at risk of developing foot infections or ulceration; sometimes this can lead to amputation of the affected foot.

In the medical summary, is there a record that the client has or has had any foot ulcers?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of T2D care.

3.10 Amputation(s) (toe, partial foot, whole foot, leg)

T2D Complete if auditing T2D care.

People with diabetes who develop peripheral neuropathy and vascular disease are at risk of developing foot infections or ulceration; sometimes this can lead to amputation of the affected area. For the purpose of this audit, do not include traumatic amputation such as a car accident.

In the medical summary, is there a record that the client has had an amputation of part or all of their toes, feet or legs due to a chronic condition (e.g. diabetes)?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of T2D care.

3.11 Anaemia

CKD Complete if auditing CKD care.

Anaemia in clients with CKD is related to a reduction in erythropoietin production by the kidney and resistance to the action of erythropoietin and the reduced absorption of iron. Symptoms of anaemia can include fatigue (tiredness), shortness of breath and chest pain (Kidney Health Australia, 2015).

In the medical summary, is there a record that the client has or has had anaemia?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of CKD care.

3.12 Cerebrovascular accident

CHD HT Complete if auditing CHD or hypertension care.

Cerebrovascular accident (CVA), or stroke, is a blockage or haemorrhage of a blood vessel leading to the brain, causing inadequate oxygen supply. Depending on the extent and location of the abnormality, stroke causes symptoms such as weakness, paralysis of parts of the body, speech difficulties and, if severe, loss of consciousness or death.

In the medical summary, is there a record that the client has suffered from CVA?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of CHD **or** hypertension care.

3.13 Coronary artery bypass graft

CHD ***Complete if auditing CHD care.***

Coronary artery bypass is a surgical procedure to relieve angina and reduce the risk of death from coronary artery disease.

In the medical summary, is there a record that the client has or has had repair to the coronary arteries?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of CHD care.

3.14 Percutaneous coronary intervention

CHD ***Complete if auditing CHD care.***

Percutaneous coronary intervention (PCI), or coronary angioplasty, is a procedure to treat narrowed arteries in the heart caused by CHD. The procedure can include angioplasty (balloon angioplasty, coronary angioplasty, coronary artery angioplasty, heart artery dilation) or a stent (used to hold open an artery that has become too narrow due to atherosclerosis).

In the medical summary, is there a record that the client has or has had a PCI?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of CHD care.

3.15 Pulmonary oedema

CHF CKD ***Complete if auditing CHF or CKD care.***

Pulmonary oedema refers to fluid in the lungs and occurs as a result of exacerbation of CHF. Symptoms of pulmonary oedema are breathlessness, pale skin, hypotension or hypertension, tachycardia, and central or peripheral cyanosis.

In the medical summary, is there a record that the client has or has had pulmonary oedema?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of CHF **or** CKD care.

Section 4 Attendance at health centre

By attending a health service, Aboriginal and Torres Strait Islander people can help to ensure they receive primary health care that is matched to their needs, and encourages early detection, diagnosis and intervention for common and treatable conditions such as chronic diseases.

Time since last attendance is a useful indicator of the level of client engagement with the health service. Identifying which staff member was the first point of contact for the client at their last attendance can be used to measure clinic processes and Aboriginal and Torres Strait Islander health worker involvement with program delivery.

Studies show that advice from health professionals to Aboriginal clients is often the key reason the clients change their risky behaviours. The health centre is often the major source of health advice, particularly in remote areas (Couzos and Murray 2008).

4.1 Date of last attendance

A record of attendance includes a record that the client was seen by a health care worker (refer to Question 4.4 for types of health workers). Individual care plans or chronic disease management plans will dictate the how often a client should be reviewed by a health care worker, however, for clients with chronic disease, this is probably every 3-6 months. If the client made a visit to the health centre but left without being assessed by a health worker, this should *not* be recorded as having attended the health centre.

It is acknowledged that some clients never visit the health service itself. If a regular service is provided (e.g. home visits by community nurses to attend to leg ulcers or perform occupational therapy in the home), this can be included as attendance. It should be recorded in the systems assessment tool (SAT) in the appropriate component or item to show that this service is provided.

The date last attended must not be the same as the audit date. Record the **date** the client last attended the health centre for care. Record as **dd/mm/yyyy**.

4.2 Unsuccessful follow up

All clients who have a health check should be followed up and provided with feedback (Queensland Health 2010). Health services may have a system in place to remind staff when a client is due to be seen again. If this system has been activated, or if there is documentation to show that the client has been notified of an appointment but has not presented to the health centre, this is classified as an unsuccessful follow up attempt.

If a client has **not** attended the health centre in the last six months, record any documentation of attempts by health centre staff to contact the client for follow up within those six months.

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the date last attended is within six months of the audit date.

4.3 Reason for last attendance

The reason for last attendance can shed light on the client's level of engagement in the ongoing management of their condition, as well as identify opportunities for routine checks and tests that might arise in the context of other visits to the health centre.

Table 2 Reasons why clients may attend the health centre

Reason	Examples
1- Chronic disease	Review, follow up, treatment, medication dispensing, family meeting, self-management discussion
2- Acute care	Infections, trauma
7- Other	Review or treatment by a specialist, allied health, social worker, etc. **not** related to the condition(s) being audited

If 'Other', provide a brief description of reason for last attendance.

Aboriginal Health Workers/Practitioners (AHW/ATSIHP)

Involvement of an Aboriginal Health Worker/Aboriginal and/or Torres Strait Islander Health Practitioner, an Aboriginal Liaison Officer, Indigenous Outreach worker or Care Coordinator is essential in the care of Aboriginal and Torres Strait Islander peoples (RACGP/Diabetes Australia, 2014).

4.4 First seen by

It is acknowledged that sometimes a health professional will meet more than one criteria, eg an Aboriginal nurse. Correct interpretation of the report is important for usefulness at the health service where the information was collected. Some health services may have a clear policy on which type of health worker should be the first to see clients.

When the client last attended the health service, which health professional did the client see **first**?

Table 2 Types of health workers who may be the first person a client sees

Type of health worker	Example
1- Aboriginal or Torres Strait Islander health worker	Aboriginal and/or Torres Strait Islander health workers working in tertiary institutions, local hospitals, health centres or any primary health care services. Depending on the area of work, some health workers may need to obtain a licence or registration from their local authority in the state or territory where they wish to work
2- Nurse	Registered nurses, enrolled nurses and/or endorsed nurses who are registered/enrolled and/ or endorsed by the Australian Health Practitioner Regulation Agency (AHPRA)
3- General practitioner	Doctors registered with the Royal Australian College of General Practitioners
4- Specialist	A doctor who has specialised in a particular field and is registered with the appropriate specialist college (e.g. an ophthalmologist registered with the Royal Australian and New Zealand College of Ophthalmologists (RANZCO)
5- Allied health professional	Audiologists, chiropractors, dieticians, occupational therapists, podiatrists, psychologists, radiographers, radiation technicians, sonographers, social workers, speech pathologists, physiotherapists, diabetes educators, cardiac rehabilitation therapists, pathologists
6- Other	Any health professional not identified above
7- No record	No record of which health professional the client first saw at the last visit

Section 5 Management plan and scheduled services

Chronic Disease Management

Patients who have a chronic or terminal medical condition (with or without multidisciplinary care needs) can have a GP Management Plan (GPMP) service. Chronic disease management plans are used to plan and track the management of a client's wellbeing.

Patients with a chronic or terminal medical condition and complex care needs requiring care from a multidisciplinary team can have a GPMP and Team Care Arrangements (TCAs).

These items are designed for patients who require a structured approach to their care. (DoHA, 2014)

5.1 MBS item 721 general practitioner management plan (GPMP) or MBS item 732

GPMP MBS item 721:

- Provides a rebate for a GP to prepare a management plan for a patient who has a chronic or terminal medical condition with or without multidisciplinary care needs.
- The minimum claiming period is once every twelve months, supported by regular review services.
- Involves the GP assessing the patient, agreeing management goals with the patient, identifying actions to be taken by the patient, identifying treatment and ongoing services to be provided, and documenting these and a review date in the GPMP

MBS item 732:

- Provides a rebate for a GP to review a GP Management Plan (see above).
- The minimum claiming period is once every three months; can be earlier if clinically required.
- Involves reviewing the patient's GP Management Plan, documenting any changes and setting the next review date.

(DoHA 2014)

A GPMP must be dated within the last 12 months to be considered current.

Is there a record that the client has a current GPMP?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended within the last 12 months.

5.2 Alternative GPMP

Alternative GPMPs are chronic disease management plans that are similar to MBS item 721 and that cannot be claimed.

An alternative GPMP chronic disease management plan must be dated within the last 12 months to be considered current.

Is there a record that the client has a current alternative GPMP?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended within the last 12 months.

5.3 MBS item 723 team care arrangements (TCA) or MBS item 732

Chronic disease management plans that include team care arrangements are for patients who:

- have at least one medical condition that has been (or is likely to be) present for at least 6 months , or is terminal.
- require ongoing care from at least three collaborating health or care providers, each of whom provides a different kind of treatment or service to the patient, and at least one of whom is a medical practitioner.

MBS item 732 refers to the review of a TCA (as per review of GPMP). A TCA must be dated within the last 12 months to be considered current.

Is there a record that the client has a current TCA?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended within the last 12 months.

5.4 Alternative TCA

An alternative TCA is a chronic disease management plan that involves more than one health service provider or equivalent that is similar to MBS item 723 and that cannot be claimed.

An alternative TCA chronic disease management plan must be dated within the last 12 months to be considered current.

Is there a record that the client has a current alternative TCA?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended within the last 12 months.

5.5 Clinical goals

Examples of clinical goals include a reduction in a client's blood pressure, lipid values or weight, or any change in a clinical measurement. Clinical goals can be recorded anywhere in the client's notes, including on a chronic disease management plan.

Is there a record of clinical goals for this client within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended within the last 12 months.

Self-management

Self- management is not only health management, it is life management — the ability to manage our own lives according to individual wants and needs. Sometimes this management must incorporate a chronic disease (Queensland Health 2015). Educating clients about self-management may improve their motivation and confidence to manage disease (Couzos and Murray 2008).

5.6 Self-management goals

Examples of self-management goals include planning to increase physical activity; entering into a quit program for smoking, alcohol or drug use; joining a weight loss program; and making changes to diet or lifestyle. Self-management goals can be recorded anywhere in the client's notes including in chronic disease management plans.

Is there a record of self-management goals for this client within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended within the last 12 months.

5.7 Chronic disease management and medications

The goal of discussing management plans and medications with clients who have a chronic disease is to improve long-term health outcomes and quality of life. An example is medication compliance for a client with CKD who has hypertension. If a client is prescribed medication to control hypertension, it will be beneficial to discuss the reason for and importance of taking this medication (i.e. to control hypertension, which can contribute to co-morbidities and complications of chronic disease).

Is there a record that chronic disease management and medications have been discussed with the client within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended in the last 12 months.

Absolute cardiovascular risk (CVR)

Absolute CVR is the numerical probability of a cardiovascular event such as an acute myocardial infarction (AMI) or stroke occurring in a five-year period (Framingham risk equation). It is expressed as a percentage and reflects a person's 'individualised' risk of cardiovascular disease (CVD), as opposed to the traditional method that considers various risk factors, such as high cholesterol or high blood pressure, in isolation (NVDPA, 2012). More widely used calculators are available from the following sites:

Absolute cardiovascular risk calculators
www.cvdcheck.org.au (accessed 12 October 2015)

National Heart Foundation
www.heartfoundation.org.au/Professional_Information/Clinical_Practice/Pages/default.aspx (accessed 12 October 2015)

Framingham
www.framinghamheartstudy.org (accessed 12 October 2015)

New Zealand Guidelines Group
www.nzgg.org.nz/resources/96/CVD_handbook_june_2009_update.pdf (accessed 19 March 2013)

CARPA (2014) ***Standard treatment manual***
http://www.remotephcmanuals.com.au/home.html

It is important that a standardised tool or calculator is used.

5.8 Absolute cardiovascular risk assessment

All clients should have an absolute CVR assessment at the beginning of the care plan cycle (unless they are already known to be clinically determined high risk (NVDPA, 2012). The current care plan schedule relates to the CVR, and this can change over time depending on a change in risk factors. Clients with diagnosed chronic disease are more likely to be at least moderate risk.

Is there a record that an absolute CVR assessment has been performed within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **8- N/D** if the client is not due for assessment.

Indicate **9-N/A** if the client has not attended in the last 12 months.

5.9 Visual acuity

T2D Complete if auditing T2D care.

Visual acuity refers to the ability to see normally. A test of visual acuity is an important part of assessing visual impairment that may have resulted from a chronic disease such as T2D.

Is there a record that the client has had an examination for visual acuity within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended in the last 12 months **or** if this is not an audit of T2D care.

5.10 Dilated eye check

T2D HT Complete if auditing T2D care or hypertension care.

A dilated eye check should be conducted by an optometrist or ophthalmologist or using a retinal camera with grading by a trained assessor. To thoroughly examine the eye, optometrists or ophthalmologists use eye drops to dilate the client's pupils. This allows a good view of the retina when checking for retinopathy due to microvascular complications of T2D or hypertension. Aboriginal and Torres Strait Islander peoples with diabetes should be screened annually (RACGP/Diabetes Australia, 2014)

Is there a record that the client has had a dilated eye check within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended in the last 12 months **or** if this is not an audit of T2D **or** hypertension care.

5.11 Foot check

T2D Complete if auditing T2D care.

A foot check includes checking the pulses and circulation, skin condition (including signs of infection) and sensation in the feet, as per local protocol. For the purpose of this audit, a foot check can be performed by any health professional.

Is there a record that the client's feet have been checked within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended in the last 12 months **or** if this is not an audit of T2D care.

5.12 Influenza vaccination

Annual influenza vaccine is particularly recommended for Indigenous persons ≥15 years of age due to the substantially increased risk of hospitalisation and death from influenza and pneumonia in this age group (DoHA 2013).

Is there a record that the client has had an influenza vaccination within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **8-Decl** if there is a record that the client has been offered the flu vaccination and has declined.

Indicate **9-N/A** if the client has not attended in the last 12 months.

Note: 'Declined' in Question 5.12 means there is clear documentation of the client being offered the vaccination and clear documentation that the client declined this service. It should not be assumed that a client has declined if it is not clearly documented as such.

Pneumovax

The age at which Pneumovax is recommended varies by Indigenous status and between states and territories.

The reports generated by your health care service will show a breakdown in age ranges such as those shown below.

If the client is:

— 15 to 49 years old: record the three most recent vaccinations, most recent date first. The most recent should be since age 15.

— 50 to 64 years old: record the three most recent vaccinations, most recent date first. The most recent should be since age 50.

— 65 years or older: record the three most recent vaccinations, most recent date first. The most recent should be since age 65.

5.13 Pneumococcal vaccination

Pneumococcal polysaccharide vaccine is recommended for all Indigenous adults aged ≥50 years, and those aged 15–49 years who have conditions associated with an increased risk of IPD (invasive pneumococcal disease). The broader age-based recommendation for Indigenous adults is due to the high rates of pneumococcal disease and higher prevalence of risk factors (certain medical conditions and tobacco smoking) in Indigenous adults, compared to non-Indigenous adults.

Revaccination is recommended 5 years after the 1st dose for those first vaccinated at ≥50 years of age, and a further revaccination is recommended in some circumstances. In the Northern Territory, 23-valent pneumococcal polysaccharide vaccine (23vPPV) is provided for all Indigenous persons aged ≥15 years. This can be counted as a 1st adult dose of 23vPPV. Jurisdictional health authorities should also be contacted to confirm local practices as they may vary, especially regarding revaccination. (DoHA 2013).

Is there a record of the client having pneumococcal vaccinations?

Indicate **1-Yes** or **0-No**.

Indicate **8-Decl** if there is a record that the client has been offered the pneumococcal vaccination and has declined.

If yes, record the dates of the *three most recent vaccinations, listing the most recent date first*. Record as **dd/mm/yyyy**.

Note: If only the year is documented, record as 01/01/yyyy; if only the month and year are documented, record as 01/mm/yyyy.

Note: 'Declined' in Question 5.13 means there is clear documentation of the client being offered the vaccination and clear documentation the client declined this service. It should not be assumed that a client has declined if it is not clearly documented as such.

Blood pressure (BP)

Blood pressure refers to the pressure of the blood in the arteries as the heart pumps it around the body.

Mercury sphygmomanometers give the most accurate, non-invasive BP readings. Accuracy varies widely between other available devices. If a non-mercury (e.g. digital) sphygmomanometer is used, it should be checked and validated every six months to maintain accuracy. All sphygmomanometers require servicing at least once each year (NHF 2010).

When a person has a high BP reading, it is important that appropriate follow up action is taken. At a minimum, this should involve counselling the client about BP control and frequent monitoring. A repeated or especially high reading requires referral to a doctor for assessment and appropriate action, which may involve adjustment of medications and should include advice about lifestyle modification (NHF, 2010).

5.14 Blood pressure (BP) (within the last six months)

Once control is achieved, BP should be measured every 3-6 months (RACGP/Diabetes Australia, 2014). CARPA (2014) suggest that any recall cycle for combined check for chronic diseases includes a BP measurement.

Is there a BP reading recorded within the last six months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended in the last six months.

5.15 BP (between 6 and 12 months)

Is there a BP reading recorded between 6 and 12 months ago?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended in the last 12 months.

5.16 Most recent BP reading and date

Record the most recent BP reading within the last 12 months.

Record the date of the reading as **dd/mm/yyyy**. If the full date is not shown (e.g. if the date is listed as '2011'), leave blank.

5.17 Most recent BP reading abnormal

For the purpose of the CKD audit, a BP greater than 125/75 is considered abnormal. When auditing for other chronic diseases a BP greater than 130/80 is abnormal (RACGP/Diabetes Australia 2014 CARPA 2014 QH 2013).

Is the most recent BP reading recorded in Question 5.16 abnormal?

Indicate **1-Yes** if the reading is abnormal.

Indicate **0-No** if the reading is normal.

Indicate **9-N/A** if there is no BP reading present or if the client has not attended in the last 12 months.

5.18 Plan made for follow up within 2–4 weeks of abnormal result

Queensland Health (2015) recommends that high BP is followed up after 2, 4 and 6 weeks, then every three months. (CARPA (2014) recommends that high BP is reviewed at every recall cycle for combined check for chronic disease.

If the most recent BP reading was abnormal in Question 5.17, is there a record of a plan made for follow up within 2–4 weeks of the abnormal result?

Indicate **1-Yes** or **0-No**.

Indicate **9- N/A** if there is no BP reading **or** if the reading was normal.

5.19 Medication adjustment

Antihypertensive drug therapy should be initiated immediately in Aboriginal and Torres Strait Islander adults with confirmed hypertension (NHF 2008).

If the most recent BP reading was abnormal in Question 5.17, is there a record of medication being adjusted?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if there is no BP reading or if the reading was normal.

5.20 Medication reviewed but not adjusted

For all patients, regular follow up is recommended to reassess drug treatment and adjust the management plan to achieve targets for BP and other modifiable risk factors (NHF 2010).

If the most recent BP reading was abnormal in Question 5.17, is there a record of medication being reviewed but not adjusted?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if no there is BP reading **or** if the reading was normal **or** if medication was adjusted.

Section 6 Risk factors, brief intervention and referral

Brief intervention

A brief intervention means a discussion about healthy lifestyle or other health business that takes very little time (CARPA, 2014).

Risk factors

A risk factor is a characteristic that is statistically associated with, although not necessarily causally related to, increased morbidity or mortality (e.g. smoking is a risk factor for heart disease)

If a client's risk factors are documented, opportunities may arise during regular tests and checks to talk about the possible effect of the risk factors on their health (i.e. brief interventions).

Studies show that advice from health professionals to Aboriginal and Torres Strait Islander clients is often the key reason the clients change their risky behaviours. The health centre is often the major source of health advice, particularly in remote areas.

Brief interventions that address smoking, nutrition, alcohol intake and physical activity are recommended for all clients with chronic disease as part of routine care. These actions should be recorded in the client's record.

Client education is an important aspect of chronic disease management. Educational activities should be documented in the client's record (NHF, 2012)

6.1 Tobacco use

For the purposes of this audit, 'tobacco use' refers to the smoking or chewing of tobacco only, and does not refer to smoking or chewing of any other substance.

What is the client's current tobacco use, as recorded within the last 12 months?

Indicate **1-Smokes tobacco** if there is a record of the client smoking tobacco.

Indicate **2- Chews tobacco** if there is a record of the client chewing tobacco.

Indicate **3- No tobacco use** if there is a record that the client does not either smoke or chew tobacco.

Indicate **4- No record** if there is no record of the client's tobacco use in the last 12 months.

6.2 Brief intervention for tobacco use

For the purpose of the audit, the record of brief interventions for tobacco use should at least indicate either that a brief intervention has been delivered, or that the client has been asked about their use of tobacco and their intentions or interest in quitting.

If the client smokes or chews tobacco in Question 6.1, is there a record that the client has received a brief intervention for tobacco use within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client does not use tobacco or tobacco status is not recorded in Question 6.1.

6.3 Referral to a quit program

The 2011 National Heart Foundation national tobacco campaign recommends referring clients to their Quitline. They suggest nicotine replacement therapy or oral therapy (bupropion or varenicline) for appropriate clients.

If the client smokes or chews tobacco in Question 6.1, is there a record that the client has been referred to a quit program for tobacco use within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **8-Decl** if there is a record that the client has been offered a referral to a quit program but they have declined the service.

Indicate **9-N/A** if the client does not use tobacco or tobacco use is not recorded in Question 6.1.

Note: 'Declined' means that there is a record of the client being offered a referral to a quit program by a health professional *and* there being a record that the client declined this referral.

It should not be assumed that the client has declined if there is no supporting documented evidence.

Alcohol

It is acknowledged that discussion about recorded alcohol use is difficult to assess in some populations.

To define a client's level of risk for alcohol consumption, it is suggested that health personnel ask and record a description of the client's stated general alcohol consumption. This can then be measured against the NHMRC guidelines, NHMRC (2009a).

6.4 Alcohol use

For healthy men and women, drinking no more than two standard drinks on any day does not increase the lifetime risk of harm from alcohol related disease or injury, every drink above this level continues to increase the lifetime risk of both disease and injury (NHMRC 2009a).

What is the client's current use of alcohol, as recorded within the last 12 months?

Indicate **1-Higher risk** if recorded as more than two standard drinks in any one day.

Indicate **2-Low risk** if recorded as two standard drinks or less in any one day.

Indicate **3-Alcohol use but risk level not stated** if alcohol use is recorded but the amount of alcohol use is not stated.

Indicate **4-No alcohol use** if it is recorded that the client does not use alcohol.

Indicate **5-No record** if there is no record of the client's alcohol use.

6.5 Brief intervention for higher risk alcohol use

For the purpose of the audit, the record of brief interventions for reducing alcohol related harm should at least indicate either that a brief intervention has been delivered, or that the client has been asked about their use of alcohol and their intentions or interest in reducing their alcohol consumption.

If 'higher risk' alcohol use was recorded in Question 6.4, is there a record that the client has received a brief intervention for higher risk alcohol use within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client's alcohol use is not recorded as 'higher risk' in Question 6.4.

6.6 Referral to an alcohol program

Referral could be to a local alcohol support group, drug and alcohol service, Alcoholics Anonymous or counsellor.

If 'higher risk' alcohol use is recorded in Question 6.4, is there a record that the client has been referred to an alcohol program within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **8-Decl** if there is a record that the client has been offered referral to a quit program but they declined the service.

Indicate **9-N/A** if the client's alcohol use is not recorded as 'higher risk' in Question 6.4.

Note: 'Declined' means there is a clear record of the client being offered a referral, and there is a clear record that the client declined this service. It should not be assumed that a client has declined if it is not clearly documented as such.

Drugs

For the purposes of this audit, 'drug' refers to any legal, illegal, prescription or non-prescription drug or substance used inappropriately and may include one or more of the following: marijuana/cannabis; pharmaceutical drugs such as pain killers, analgesics, tranquilisers or sleeping pills; inhalants; steroids; barbiturates; amphetamines or methamphetamines (speed); heroin; methadone; other opiates (opioids); cocaine; LSD or other synthetic hallucinogens; natural hallucinogens; ecstasy; ketamine; GHB; any injected drugs.

6.7 Drug use

There is considerable evidence on the harm caused by illicit substance use. Illicit substance use is a contributing factor to illness and disease, accident and injury, and workplace problems. It is also a risk factor for ill health, such as HIV/AIDS, hepatitis C, malnutrition, low birth weight, poisoning, suicide, infective endocarditis, self-inflicted injury and death by overdose. The use of inhalants (for example, petrol sniffing or solvent abuse) can lead to serious health consequences, including brain damage, disability or even death.

Illicit drug use may also have severe social and economic impacts on communities, including issues associated with family and social disruption, such as domestic violence, crime and assaults, which can be more apparent in smaller remote and rural Aboriginal and Torres Strait Islander communities.

(AIHW, 2011)

What is the client's current recorded drug use within the last 12 months?

Indicate **1-Current use** if the client is recorded as having used drugs within the last 12 months.

Indicate **2-No use** if there is a record that the client has not used drugs within the last 12 months.

Indicate **3-No record** if there is no record of the client's drug use in the last 12 months.

6.8 Brief intervention for drug use

For the purpose of the audit, the record of brief interventions for reducing drug use should at least indicate either that a brief intervention has been delivered, or that the client has been asked about their use of drugs and their intention to or interest in reducing their drug intake.

If current drug use is recorded in Question 6.7, is there a record that the client has received a brief intervention for drug use within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client does not use drugs or their drug use is not recorded in Question 6.7.

6.9 Referral to a drug program

Referral could be to a local drug use support group, drug and alcohol service or counsellor.

If current drug use is recorded in Question 6.7, is there a record that the client has been referred to a drug program within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **8-Decl** if there is a record that the client has been offered referral to a quit or alcohol and drug program but they declined the service.

Indicate **9-N/A** if the client does not use drugs or their drug use is not in Question 6.7.

Note: 'Declined' in Question 6.6 means that there is clear documentation of the client being offered a referral and there is clear documentation that the client declined this service. It should not be assumed that a client has declined if it is not clearly documented as such.

6.10 Weight (within the last six months)

A person's weight is used to calculate BMI. Carrying excess weight around your middle is riskier than carrying excess weight around your hips and thighs because it is linked with cardiac disease and the co-morbidities of cardiac disease. Diabetes Australia (2014) and CARPA (2014) suggest that weight is measured at each recall cycle.

Is the client's weight recorded within the last six months?

Indicate **1-Yes** or **0-No**.

Indicate 9-N/A if the client has not attended in the last six months.

Waist measurement

This table shows the recommended waist circumference measurements for Caucasian men, and Caucasian and Asian women. Recommended waist measurements have not been determined for all ethnic groups, or for children. The limited data that are currently available indicate that the risk factors for cardiovascular disease in Aboriginal populations with waist circumferences greater than recommended guidelines appear to be similar to those in Asian populations, and the risk factors for cardiovascular disease in Torres Strait Islander populations with waist circumferences greater than recommended guidelines appear to be similar to those in Pacific Islander populations.

Table 6.1 Waist circumference interpretation

Waist circumference	Result	Action
Male <94 centimetres Female <80 centimetres	Normal	Advise to maintain healthy weight
Male 94–102 centimetres Female 80–88 centimetres	Increased risk of chronic disease	Advise to keep active Advise not to gain more weight
Male >102 centimetres Female >88 cm centimetres	Greatly increased risk of chronic disease	Advise to lose weight

(CARPA, 2014)

6.11 Waist circumference (within the last six months)

Waist measurement compares closely with body mass index (BMI), and is often seen as a better way of checking the risk of developing a chronic disease. It is a simple check to tell how much body fat is present, and where it is placed around the body. Where the fat is located can be an important sign of the risk of developing an ongoing health problem (Heart Foundation, no date)

CARPA (2014) suggest that waist circumference is measured as part of any recall cycle for combined check for chronic disease.

Waist measurement guidelines are used to increase clients' understanding of their likelihood of developing lifestyle-related chronic diseases, including cardiovascular disease, stroke, type 2 diabetes and some cancers. An 'at-risk' waist circumference for an adult **male** is more than 94 centimetres. An 'at-risk' waist circumference for an adult **female** is more than 80 centimetres.

Is the client's waist circumference measurement recorded within the last six months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if client has not attended within the last six months.

If yes, record the waist circumference **measurement** in centimetres and the **date** of this measurement (as **dd/mm/yyyy**).

If the full date is not shown (e.g. if the date is listed as '2011'), leave date field blank.

If the waist circumference is not recorded, enter '0' into measurement field

BMI

Body mass index (BMI) determines if a client has a healthy weight for their height. BMI is calculated by dividing the weight (in kilograms) by the square of the height (in metres). Table 6.2 shows BMI interpretation categories.

6.12 BMI (body mass index)

Table 6.2 Body mass index interpretation with normal waist circumference from CARPA (2014)

Body mass index	Result	Action
Less than 18.5	Underweight	Medical consultation Advise healthy eating
18.5–24.9	Healthy weight	Advise to keep active
25.0–29.9	Overweight	Advise to lose weight or not gain more weight
30.0 or greater	Obese	Medical consultation Advise to lose weight

BMI is based on a person's weight and height and is calculated to determine whether a person is in a healthy weight range. Note that BMI does not distinguish between the weight of fat and the weight of muscle, so there can be some exceptions to this guideline. Note that some people have normal BMI but larger-than-normal waist circumference; these people are at risk and should be advised to lose weight and increase physical activity.

Is the client's BMI recorded within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if client has not attended within the last 12 months.

If yes, record the BMI value, (must be greater than 10 and less than 60) and date of calculation.

If BMI is not recorded, enter '**0**'.

6.13 Brief intervention for overweight/obesity

For the purpose of the audit, the record of brief interventions for reducing overweight or obesity should at least indicate either that a brief intervention has been delivered, or that the client has been asked about their weight and their intentions or interest in reducing their weight.

If the client's BMI is ≥25 or if waist circumference is ≥94 cm for a male or ≥80 cm for a female, is there a record that the client has received a brief intervention for overweight/obesity within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9- N/A** if the client's BMI is <25 **and** if the client's waist circumference is <94 cm (male) **or** <80 cm (female) **or** if the BMI and waist circumference are not recorded **or** if the client has not attended in the last 12 months.

6.14 Referral for weight management advice/support

Referrals could be to a dietician, nutritionist, or other service for advice or support on weight loss, physical activity or diet.

If the client's BMI is ≥25 **or** if waist circumference is ≥94 cm for a male **or** ≥80 cm for a female, is there a record that the client has been referred for weight management advice/support within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **8-Decl** if there is a record the client has been offered referral to weight management advice/support but they declined the service.

Indicate **9- N/A** if the client's BMI is <25 **or** if the client's waist circumference is <94 cm (male) **or** <80 cm (female) **or** if the client has not attended in the last 12 months.

Note: 'Declined' in Question 6.14 means that there is clear documentation of the client being offered a referral and there is clear documentation that the client declined this service. It should not be assumed that a client has declined if it is not clearly documented as such.

6.15 Nutrition

There is evidence that Aboriginal and Torres Strait Islander communities in rural and remote regions face significant access barriers to nutritious and affordable food.; cost may be an issue in low socio-economic groups. Food choices can be significantly altered when people have access to appropriate foods and education about nutrition (RACGP/Diabetes Australia, 2014).

Regardless of weight or waist circumference, is there a record of brief intervention regarding nutrition discussed with the client within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended in the last 12 months.

6.16 Physical activity

The National Heart Foundation, (2014) and CARPA (2014) recommends that everyone include 30 minutes or more of moderate-intensity physical activity on most, if not all days of the week. This can be accumulated in short bouts, such as by doing three 10-minute exercise sessions each day.

Regardless of weight or waist circumference, is there a record of brief intervention regarding physical activity discussed with the client within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended in the last 12 months.

Section 7 Emotional wellbeing screening and care

Emotional well being

Depression is common, serious and treatable, despite this, it is poorly recognised and treated in people with chronic disease (QH, 2015). Depression can affect 1 in 5 people with CKD, and has detrimental effects on mortality, rates of hospitalisation, medication and treatment adherence, nutrition, and overall quality of life (Kidney Health Australia, 2015). All patients with CHD should be assessed for comorbid depression using a validated tool and treated accordingly (NHF, CSANZ, 2012). Research shows that having diabetes more than doubles the risk of developing depression. Depression can increase the likelihood of developing diabetes complications (Diabetes Australia, 2015)

Risk factors for mental illness are also on the rise. Substance misuse, trauma, physical illness and mental illness combine with social disadvantage to heighten community concern about the emotional wellbeing of Indigenous families. This provides compelling reasons to screen for emotional wellbeing at every opportunity, and to follow up those at risk using established best practice pathways.

7.1 Screening for emotional wellbeing using a standard tool

Standard (validated) screening tools for emotional wellbeing (EWB) can include:

— Kessler 5 (K5)

— Kessler 6 (K6)

— Kessler 10 (K10)

— Patient health questionnaire 2 (PHQ2)

— Patient health questionnaire 9 (PHQ9)

— Edinburgh postnatal depression scale (EPDS)

— another tool routinely used in your health service.

See Appendix 1 for more detailed explanation of EWB screening tools.

Is there a record of the client being screened using a standard tool within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended in the last 12 months.

7.2 Score of the most recent screening

Record the client's **score** for the relevant screening tool used and indicate if the client was classified as 'at risk' (see Table 7.1).

NB: If a standard tool is not used, ie, the answer to Q7.1 is '0-no', the score will default to a negative value (-1).

Table 7.1 Guide for data entry of standard screening tools for emotional wellbeing

Screening tool	Not used	Score range if used	Score indicating client is at risk
Kessler 5 (K5)	-1	5 to 25	≥12
Kessler 6 (K6)	-1	6 to 30	≥12
Kessler 10 (K10)	-1	10 to 50	≥22
Patient health questionnaire 2 (PHQ2)	-1	0 to 3	Client answered yes to either 1 or 2, *plus* Yes to 3
Patient health questionnaire 9 (PHQ9)	-1	0 to 27	>5
Edinburgh postnatal depression scale (EPDS)	-1	0 to 30	>10
Other tool	-1	0-100	Dependant on tool used, see specific screening tool guidelines

If the client has been screened using a standard tool in Question 7.1, record the client's **score** against the relevant screening tool used.

If a different tool was used for screening, record the **name** of the tool and the score.

- Enter '**-1**' for scores of tools not used.

Is the client 'at risk'?

Indicate **1-Yes** or **0-No** to indicate if the client's score indicates they are at risk (refer to Table 7.1).

Indicate **9-N/A** if the client was not screened in Question 7.1 and for each of the screening tools not used in Question 7.2.

7.3 Discussion about emotional wellbeing

This can be a record of a formal or informal discussion about emotional wellbeing written in the client's medical record, as opposed to a formal screening tool used in Question 7.1. It may include the use of discussion prompts produced by AIMhi (for example, the AIMhi Stay Strong App), ATODS workforce, or other local or national programs.

If the client has not been screened using a standard tool in Question 7.1, is there a record of discussion about emotional wellbeing in the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has been screened in Question 7.1 **or** if the client has not attended in the last 12 months.

7.4 Other recorded concern about emotional wellbeing

This question refers to concern about emotional wellbeing as a result of the discussion in Question 7.3 and is linked to impairment of social and occupational functioning.

If there is a record of discussion about emotional wellbeing in Question 7.3, is there any record of concern regarding the client's emotional wellbeing within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if no discussion about emotional wellbeing is recorded in Question 7.3.

7.5 Actions within three months of assessment/recorded concern

If the client was assessed as at risk in Question 7.2 or if there is recorded concern about emotional wellbeing in Question 7.4, indicate if the client was **referred to an external service** within three months of being identified as at risk.

An external service could be a psychologist, psychiatrist, culturally related person, social worker, or hospital-related inpatient or outpatient service.

Indicate **1-Yes** or **0-No**.

Indicate **8- Decl** if there is a record that the client has been offered referral to an external service for social and emotional wellbeing advice/support but the client declined this service.

Indicate **9-N/A** if the client was not assessed at risk in Question 7.2 or if there was no recorded concern in Question 7.4.

If the client was assessed at risk in Question 7.2 or there is recorded concern about emotional wellbeing in Question 7.4, indicate if the client has received any of the following **actions by the health centre team** within three months of being identified as at risk:

- Brief intervention — includes problem solving, goal setting or information sharing.
- Counselling — includes problem solving, goal setting or information sharing, and/or motivational interviewing or a range of other therapeutic approaches.
- Cognitive behavioural therapy — includes exploration of thoughts and feelings linked with behaviours.
- Medication — includes any medication prescribed for depression or other mental illness.
- Other action — provide a description of this action (e.g. link with other service, such as housing or employment).

Indicate **1-Yes** or **0-No** for each action.

Indicate **9-N/A** if the client was not assessed at risk in Question 7.2 **or** there was no recorded concern in Question 7.4.

Note: 'Declined' in Question 6.14 means that there is clear documentation of the client being offered a referral and there is clear documentation that the client declined this service. It should not be assumed that a client has declined if it is not clearly documented as such.

7.6 Subsequent review within one month of action taken

If action was taken by the health centre team in Question 7.5, is there a record of a subsequent review within one month of the action taken?

Indicate **1-Yes** or **0-No**.

Indicate **8-N/R** if there is no record of report and the time since the action is less than one month.

Indicate **9-N/A** if the client was not assessed as at risk in Question 7.2 **or** there was no recorded concern in Question 7.4 **or** if no actions were taken by the health centre team in Question 7.5.

7.7 Report from the external service within six months of referral

If the client was referred to an external service in Question 7.5, is there a record of a report from the external service within six months of the referral?

Indicate **1-Yes** or **0-No**.

Indicate **8- N/R** if there is no record of report and the time since the referral is less than six months.

Indicate **9-N/A** if the client was not assessed as at risk in Question 7.2 **or** there was no recorded concern in Question 7.4 **or** if no referral was provided in Question 7.5.

Section 8 Current treatment

Medication

For clients with diabetes, medications are used to reduce blood glucose level, body mass index, triglycerides, low-density lipoprotein cholesterol, fasting glucose and glycosylated haemoglobin. Clients with coronary heart disease, chronic heart failure, chronic kidney disease and hypertension may be prescribed other medications that are specific to their particular chronic disease to improve the wellbeing of clients.

Note: This section does not include an exhaustive list of medications. Some clients may be taking medication that does not appear in this section or appears under a different name. For the purpose of this audit, it is only necessary to answer questions about the medication groups commonly used to treat the audited condition. The aim is to gain information about the treatment of a chronically ill population by auditing care delivered to some individuals. Some medications may appear in more than one question.

One21seventy encourage use of the current MIMS handbook or the MIMS website for current medication information. See Table A in Appendix 2 lists some medications.

8.1 Metformin

T2D ***Only complete if auditing T2D care.***

Metformin is the medication of first choice in people with diabetes (RACGP/Diabetes Australia, 2014). It is an oral medication that lowers the blood sugar. Trade names for metformin include:

Apo-metformin	Metforbell
Diabex	Metformin-BC
Diabex XR	Metformin GA
Diaformin	Metformin (Genefarm)
Formet	Metformin (Generic health)
Glucohexal	Metformin (Ranbaxy)
Glucomet	Metformin (Sandoz)
Glucophage	Pharmacor Metformin
Genrx metformin	

Is there a current prescription for metformin?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of T2D care **or** if the client has not attended within the last 12 months.

8.2 Other oral hypoglycaemic drugs

T2D Only complete if auditing T2D care.

A number of oral medications other than metformin are also used to lower blood glucose level. As a group, these medications are referred to as oral hypoglycaemic drugs.

Trade name/ examples of oral hypoglycaemic drugs		
Actos	Galvus	Nidem
Alogliptin	Gliclazide	Novonorm
Amaryl	Glimel	Onglyza
Avandia	Janumet	Oziclide MR
Aylide	Januvia	Saxagliptin
Byetta (injectable)	Linagliptin	Sitagliptin
Daonil	Minidiab	Trajenta
Diamicron	Melizide	Vildagliptin
Diapride	Mellihexal	
Dimirel	Nesina	

Is there a current prescription for oral hypoglycaemic drugs other than metformin?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of T2D care **or** if the client has not attended within the last 12 months.

8.3 Insulin

T2D Only complete if auditing T2D care.

Insulin is a naturally occurring hormone produced by the pancreas that is important in the regulation of blood sugar levels. Failure to produce enough insulin is the key problem in the disease process of diabetes. Insulin is used as a treatment for diabetes to control blood glucose levels and is given subcutaneously. Insulin can be short-acting, intermediate or long-acting.

Trade name/ examples of insulin		
Actrapid	Humulin NPH	Mixtard 30/70
Apidra	Humulin R	Mixtard 50/50
Humalog	Hypurin isophane	NovoMix 30
Humalog mix 25	Hypurin neutral	Novorapid
Humalog mix 50	Lantus	Protophane.
Humulin 30/70	Levemir flexpen	
(RACGP/Diabetes Australia, 2014)		

Does the client have a current prescription for insulin?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of T2D care **or** if the client has not attended within the last 12 months.

8.4 Angiotensin-converting enzyme (ACE) inhibitor drugs

ACE inhibitors are one of the first line medications in the treatment of moderate to severe hypertension in patients with diabetes (RACGP/Diabetes Australia, 2014). NHF, CSANZ (2012) recommend prescribing ACE inhibitor drugs for everyone with CHD, especially patients at high risk of recurrent events, unless contraindicated.

Examples of angiotensin-converting enzyme (ACE) inhibitor drugs and trade names

Drug	Trade names
Amlodipine + quinapril	Accupril, Acquin, Amlo, Coveram, Filpril
Captopril	Acenorm, Capoten, Captohexal,
Enalapril	Alphapril, Amprace, Auspril, Enahexal, Enalabell, Renitec
Fosinopril	Fosipril, Monace, Monopril,
Lisinopril	Fibsol, Liprace, Lisinobell, Lisodur, Prinivil, Zestril
Perindopril	Coversyl, Indopril, Ozapace, Perindo
Ramipril	Prilace, Ramace, Triasyn, Tritace, Tryzan
Trandolapril	Dolapril, Gopten, Odrik, Tranalpha

Does the client have a current prescription for ACE inhibitor drugs?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended in the last 12 months.

8.5 Angiotensin II receptor blocker drugs

T2D CHD CKD HT ***Only complete if auditing T2D, CHD, CKD or hypertension care.***

Angiotensin II receptor blocker drugs are used to treat high blood pressure and heart failure, and help prevent development of chronic kidney disease in people with diabetes. Table 8.2 shows some common angiotensin II receptor blocker medications.

Examples of angiotensin II receptor blocker drugs and trade names

Drug	Trade names
Candesartan	Atacand
Eprosartan	Teveten
Irbesartan	Avapro, Karvea
Losartan	Cozar
Olmesartan	Olmetec
Telmisartan	Micardis
Valsartan	Diovan
Valsartan + amlodipine	Exforge

Does the client have a current prescription for angiotensin II receptor blocker drugs?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of T2D**,** CHD, CKD or hypertension care **or** if the client has not attended within the last 12 months.

8.6 Number of other antihypertensive drugs

Count the total number (if any) of other antihypertensive medications (i.e. medications to reduce blood pressure) the client has a current prescription for. Do not include angiotensin-converting enzyme inhibitor drugs or angiotensin II receptor blocker drugs; these should be counted in Questions 8.4 and 8.5.

Examples of 'other' antihypertensive drugs and trade names

Drug	Trade names
Clonidine	Catapres
Methyldopa	Aldomet, Hydopa
Phenoxybenzamine	Dibenyline, Dibenzyline
Phentolamine	Regitine
Prazosin	Minipress, Pressin
Terazosin	Hytrin
Verapamil	Tarka

Indicate the number of current prescriptions for other antihypertensive drugs.

Indicate **0** if no other antihypertensive drugs are prescribed.

Indicate **1, 2** or **3** for the number of other antihypertensive drugs prescribed.

8.7 Lipid-lowering drugs

Lipid-lowering drugs are used to reduce blood lipids, including cholesterol. NHF, CSANZ (2012) recommend statin therapy for all patients with CHD (apart from in exceptional circumstances).

Examples of lipid-lowering drugs and trade names

Drug	Trade name
Atorvastatin	Lipitor, Atorvachol
Fenofibrate	Lipidil
Fluvastatin	Lescol, Vastin
Gemfibrozil	Ausgem, Gemhexal, Jezil, Lipazil, Lopid
Pravastatin	Lipostat, Liprachol, Pravachol, Vastoran
Rosuvastatin	Crestor
Simvastatin	Lipex, Ransim, Simvabell, Simvahexal, Simvar, Simvasyn, Zimstat, Zocor

Does the client have a current prescription for lipid-lowering drugs?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended within the last 12 months.

8.8 Aspirin or anticoagulant drugs

Aspirin and anticoagulant drugs are used to prevent complications in cardiovascular disease and dyslipidaemia. All patients with CHD should take aspirin daily (unless contraindicated) (NHF, CSANZ, 2012). Anti-clotting drugs include:

Trade name/ examples of aspirin or anti coagulant drugs
aspirin (acetylsalicylic acid, trade names Aspec, Aspro, Disprin, Spren)
clopidogrel
heparin
prasugrel
warfarin

Does the client have a current prescription for aspirin or anticlotting drugs?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended within the last 12 months.

8.9 Antidepressant drugs

Antidepressant drugs are used to treat mood disorders such as depression. Depression is common, serious and treatable, despite this, it is poorly recognised and treated in people with chronic disease (QH, 2015). Depression can affect 1 in 5 people with CKD, and has detrimental effects on mortality, rates of hospitalisation, medication and treatment adherence, nutrition, and overall quality of life (Kidney Health Australia, 2015). Depression is approximately 3 times more common in patients after an MI than in the rest of the population, and it worsens the prognosis for clients with CHD (NHF, CSANZ, 2012).

Examples of antidepressant drugs and trade names

Drug	Trade names
Amitriptyline	Endep
Citalopram	Celapram, Celica, Ciazil, Cipramil, Citalobell, Talam, Talohexal
Clomipramine	Anafranil, Placil
Desvenlafaxine	Pristiq
Dothiepin	Dothep, Prothiaden
Doxepin	Deptran, Sinequan
Duloxetine	Cymbalta, Vanlafaxine, Efexor
Escitalopram	Esipram, Esitalo, Lexan, Lexapro, Loxalate
Fluoxetine	Auscap, Fluohexal, Fluoxebell, Lovan, Prozac, Zactin
Fluvoxamine	Faverin, Luvox, Movox, Voxam
Imipramine	Tofranil, Tolerdade
Mianserin	Lumin, Tolvon
Mirtazapine	Avanza, Axit, Mirtazon, Remeron
Moclobemide	Amira, Aurorix, Clobemix, Maosig, Mohexal
Nortriptyline	Allegron
Paroxetine	Aropax, Extine, Paxtine
Phenelzine	Nardil,
Reboxetine	Edronax
Sertraline	Concorz, Eleva, Setrona, Xydep, Zoloft
Tranylcypramine	Parnate, Jatrosom
Trimipramine	Surmontil
Venlafaxine	Effexor

Does the client have a current prescription for antidepressant drugs?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if the client has not attended within the last 12 months.

8.10 Beta blockers

CHD CHF HT ***Only complete if auditing CHD, CHF or hypertension care.***

Beta blocker drugs are used to manage hypertension and cardiac arrhythmias, and to prevent recurrent myocardial infarctions (heart attacks). Symptomatic benefits are also observed with beta-blockers, particularly in those with advanced heart disease (NHF, 2014).

Examples of beta blocker drugs and trade names

Drug	Trade name
Atenolol	Anselol, Atehexal, Noten, Tenormin, Tensig
Bisoprolol	Zebeta Ziac
Carvedilol	Coreg
Metoprolol	Betaloc, Lopressor, Metohexal, Minax, Metrol
Nebivolol	Nebilet
Oxprenolol	Corbeton
Pindolol	Barbloc, Visken
Propranolol	Deralin, Inderal
Timolol	[Blocadren]

Does the client have a current prescription for beta blocker drugs?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of CHD, CHF or hypertension care **or** if the client has not attended within the last 12 months.

8.11 Digoxin

CHF ***Only complete if auditing CHF care.***

Digoxin is used to manage chronic heart failure by maintaining clinical stability and exercise capacity.

Drug	Trade name
Digoxin	Lanoxin Sigmaxin

Does the client have a current prescription for digoxin?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of CHF care **or** if the client has not attended within the last 12 months.

8.12 Diuretics

CHF CKD ***Only complete if auditing CHF or CKD care.***

Diuretics are used to manage chronic heart failure, chronic kidney disease and, in some cases, hypertension. Diuretics include several different categories and are generally used to reduce fluid retention in the body. Diuretics may be included as an antihypertensive if **not** auditing for CHF **or** CKD.

Examples of diuretic drugs and trade names

Drug	Trade names
Amiloride	Kaluril
Chlorthalidone	Hygroton
Frusemide	Lasix, Uremide, Urex preparations
Hydrochlorothiazide	Dithiazide
Hydrochlorothiazide +amiloride	Amizide, Moduretic
Indapamide	Dapa tabs, Indahexal, Insig, Napamide, Natrilix
Spironolactone	Aldactone, Spiractin
Other drugs	Accuretic, Atacand Plus, Avapro HCT, Co-Diovan, Co-Renitec, Coversyl Plus, Fosetic, Hydrene, Hyforil, Inhibace Plus, Karveside, Micadis Plus, Monoplus, Olmetec Plus, Perindo Combi, Renitec Plus, Teveten Plus

Does the client have a current prescription for diuretics?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of CHF or CKD care **or** if the client has not attended within the last 12 months.

8.13 Nitrates: short-acting

CHD CHF CKD ***Only complete if auditing CHD, CHF or CKD care.***

Short-acting nitrates (peripheral vasodilators) are used to relieve acute attacks of angina, and are generally taken as required when the person starts to feel chest pain. Everyone with CHD should be prescribed a short-acting nitrate, unless contraindicated, and follow an action plan in the event of warning signs of a heart attack (NHF, CSANZ, 2012).

Examples of short-acting nitrates	
Anginine	Minitran
Glyceral trintrate (GTN)	Nitrolingual spray
Lycinate	Nitrostat

Does the client have a current prescription for short-acting nitrates?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of CHD, CHF or CKD care **or** if the client has not attended within the last 12 months.

8.14 Nitrates: long-acting

CHD CHF CKD ***Only complete if auditing CHD, CHF or CKD care.***

Long-acting nitrates (peripheral vasodilators) are used for people who experience frequent attacks of angina and are taken regularly to prevent these attacks. Table 8.8 (in Question 8.13) shows some common peripheral vasodilators.

Some examples of peripheral vasodilator drugs (nitrates) and trade names

Drug	Trade names
Isosorbide dinitrate (sorbide nitrate)	Isordil, Sorbidin
Isosorbide-5-mononitrate	Corangin, Duride, Imdur, Imtrate SR, Isomonit, Monodur

Does the client have a current prescription for long-acting nitrates?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of CHD, CHF or CKD care **or** if the client has not attended within the last 12 months.

8.15 Erythropoietin

CKD ***Only complete if auditing CKD care.***

Treatment with erythropoietin is available for patients who have anaemia related to chronic kidney disease. Treatment must be commenced by or in consultation with a nephrologist. Three drugs are currently available for this indication in Australia: darbepoetin alfa (Aranesp), epoetin alfa (Eprex, Recormon) and epoetin beta (Neorecormon). These drugs are available as pre-filled syringes and are usually administered subcutaneously.

Does the client have a current prescription for erythropoietin?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of CKD care **or** if the client has not attended within the last 12 months.

Section 9 Investigations

Investigations

Results of investigations are often located in the pathology section of the client's record.

Regular clinical assessments for clients with known chronic diseases enable health services to follow up abnormal results. Noting risk factors and relevant clinical signs can indicate the need to refer clients to appropriate clinicians which, in the long term, can reduce co-morbidities associated with chronic diseases Queensland Health (2015).

9.1 Albumin: creatinine ratio (ACR)

ACR determination involves a urine test to monitor kidney function. Queensland Health (2015) and CARPA (2014) recommend an ACR test at least yearly for clients with chronic disease.

Is there a record that the client has had an ACR test within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if client has not attended within the last 12 months.

If yes, record the **result,** (enter number only between 0 and 1500, do not include mg/mmol) and the **date** of the most recent ACR collection. Date must be on or before the date of last attendance.

'CKD risk levels' are different for men and women, however, everyone with ACR≥3.5mg/mmol (assuming eGFR ≥60) should be followed up with at least 3 monthly recall cycle for combined check for chronic disease (CARPA, 2014)

9.2 Estimated glomerular filtration rate (eGFR)

Laboratories generally report eGFR whenever a serum creatinine level is reported (Kidney Health Australia, 2015), however, GFR may be recorded by some laboratories. Queensland Health (2010) and CARPA (2014) recommend eGFR test at least yearly for clients with chronic disease, more often for those with moderate to high risk of CKD.

Is there a record that the client has had an eGFR (or GFR) test within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if client has not attended within the last 12 months.

If yes, record the range that the eGFR category falls into:

1 — ≥60 mL/min/1.73m^2,

2 — 30–59 mL/min/1.73m^2,

3 — 15–29 mL/min/1.73m^2,

4 — <15 mL/min/1.73m^2

5 — No record (if no eGFR is recorded).

Note: The numbers 1–5, above, are not stages of chronic kidney disease or risk levels for CKD; they are options for choosing the range that the eGFR falls into.

Record the **date of collection** of the most recent eGFR (or GFR). Date must be on or before the date of last attendance.

9.3 Blood glucose level (BGL)

CHD CHF CKD HT ***Complete if auditing CHD, CHF, CKD or hypertension care.***

A BGL test refers to a test of blood sugar level in a finger-prick sample (capillary blood) or venous blood. BGL reflects blood sugar control at the time of the test.

Is there a record that the client has had a BGL test within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of CHD, CHF, CKD or hypertension care **or** if the client has not attended within the last 12 months.

ECG

Australian studies show that the care of people with CHF could be improved by greater use echocardiography – currently under used in diagnosis and ongoing assessment (NHF, 2011)

9.4 Echocardiogram

CHF ***Complete if auditing CHF.***

An echocardiogram is also known as a cardiac echo, echo or cardiac ultrasound, and is performed on clients with symptoms of CHF to confirm a diagnosis of CHF. This test investigates the cause of abnormal heart sounds (murmurs or clicks), an enlarged heart, cardiomyopathy, unexplained chest pains, shortness of breath or irregular heartbeats. It is also performed to check the thickness and movement of the heart wall, and to examine the heart valves (including artificial heart valves) and check how well they work.

Is there a record (usually in progress notes) that the client has had an echocardiogram within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of CHF care **or** if the client has not attended within the last 12 months.

LDL HDL

Cholesterol (also known as lipids) is a type of blood fat. There are two main types: LDL-C* or „bad" cholesterol which transports cholesterol from the liver to the arteries forming fatty deposits („plaques") which can narrow and sometimes block arteries triggering a heart attack or stroke; and HDL-C* or „good" cholesterol which helps remove excess cholesterol from the artery walls and back to the liver for processing or excretion, and thus may reduce plaques and risk of heart attack and stroke. (Baker Institute, 2011).
http://www.bakeridi.edu.au/Assets/Files/Cholesterol%20Study%20Preliminary%20Report_13%20August%202010.pdf

There is some evidence that there is a higher rate of dyslipidaemia in the Aboriginal and Torres Strait Islander population than in the general Australian population. It is important to note that the PBS guidelines include a lowered threshold for prescription of hypolipidaemic medications to Aboriginal people with diabetes. Aboriginality is itself a recognised risk factor for CVD, decreasing the thresholds for initiating medical management of other risk factors, such as hypertension and hyperlipidaemia. (RACGP/Diabetes Australia, 2014)

9.5 Full lipid profile

A full lipid profile includes measurement of total cholesterol, high-density lipoprotein (HDL), low-density lipoprotein (LDL) and triglycerides. This requires a blood sample to be taken.

Is there a record that the client has had a full lipid profile within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if client has not attended within the last 12 months.

TC:HDL ratio

Total cholesterol is measured to monitor blood cholesterol levels. High cholesterol contributes to cardiovascular disease, and treatment of high cholesterol is important to prevent the development and progression of cardiovascular disease. Regular monitoring is needed to ensure that cholesterol is controlled at an appropriate level.

High total cholesterol and low HDL increases the total cholesterol: HDL ratio, and is undesirable. Conversely, high HDL and low total cholesterol lowers the ratio, and is desirable National Heart Foundation (2011).

9.6 Total cholesterol:high-density lipoprotein (HDL) ratio

The total cholesterol: HDL ratio is used to calculate cardiovascular disease risk (NVDPA, 2012). The total cholesterol value is divided by the HDL value: a high ratio indicates higher risk of a heart attack; a low ratio indicates lower risk.

Total cholesterol: HDL ratio result is sufficient for risk analysis and, for the purpose of this audit, the result does not need to be found on the full lipid profile and can be entered separately.

Is there a record that the client has had a total cholesterol TC:HDL ratio within the last 12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if client has not attended within the last 12 months.

9.7 Most recent total cholesterol:HDL ratio and date

If a total cholesterol: HDL ratio is recorded in Question 9.6 (within the last 12 months), record the **ratio** (enter number only) and **date of collection** of the most recent test. Date must be on or before the date of last attendance.

Enter '**0**' and leave the date blank if no total cholesterol: HDL ratio is recorded in Question 9.6.

9.8 Most recent total cholesterol:HDL ratio abnormal

The ideal total cholesterol: HDL ratio is 4.

Is the most recent total cholesterol: HDL ratio recorded in Question 9.7 abnormal?

Indicate **1-Yes** if the reading is abnormal (≥4.5).

Indicate **0-No** if the reading is normal (<4.5).

Indicate **9-N/A** if no reading is present.

9.9 Plan for follow up

Appropriate follow up action should be taken for clients with high cholesterol readings. At a minimum, this should involve counselling regarding blood cholesterol. Repeated or especially high readings require referral to a doctor for assessment and appropriate action, which may involve adjustment of medications.

If the most recent TC;HDL reading is abnormal, is there a record that appropriate follow up action has been taken?

Indicate **1-Yes** if a follow up plan was made

Indicate **0-No** if no follow up plan was made.

Indicate **9-N/A** if no reading is present in Question 9.7 **or** if the reading was normal in Question 9.8.

9.10 Medication adjusted

Treatment of high cholesterol is important to prevent the development and progression of cardiovascular disease. Regular monitoring is needed to ensure that cholesterol is controlled at an appropriate level (National Heart Foundation Australia, National Blood Pressure and Vascular Disease Advisory Committee, 2012).

If the most recent TC:HDL reading is abnormal, is there a record that the client's medication was adjusted?

Indicate **1-Yes** if there is a record of medication being adjusted.

Indicate **0-No** if there is no record of medication being adjusted.

Indicate **9-N/A** if no total cholesterol: HDL reading is present **or** if the result was normal in Question 9.8.

9.11 Medication reviewed, but not adjusted

If the most recent TC:HDL reading is abnormal, is there a record that the client's medication was reviewed but not adjusted?

Indicate **1-Yes** if there is a record of medication being reviewed but not adjusted.

Indicate **0-No** if there is no record of medication being reviewed but not adjusted.

Indicate **9-N/A** if no total cholesterol: HDL reading is present **or** if the result was normal in Question 9.8 **or** if medication was adjusted in Question 9.10.

9.12 HbA1c within the last six months

T2D Complete if auditing T2D care.

HbA1c (glycosylated haemoglobin) is measured in clients with type 2 diabetes (T2D) to assess blood sugar levels over the past three months. Queensland Health (2015) and CARPA (2014) recommend HbA1c in clients with T2D is tested every 3 months.

Is there a record that the client has had HbA1c testing within the last six months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of T2D care **or** if the client has not attended within the last six months.

9.13 HbA1c (between 6 and 12 months)

T2D Complete if auditing T2D care.

Regular monitoring of T2D through HbA1c testing is important to ensure that blood sugar is controlled at an appropriate level to prevent complications.

Is there a record that the client has had HbA1c testing in the last 6–12 months?

Indicate **1-Yes** or **0-No**.

Indicate **9-N/A** if this is not an audit of T2D care **or** if the client has not attended within the last 12 months.

HbA1c reporting

Internationally, there is a move towards reporting HbA1c as mmol of HbA1c per mol of haemoglobin, rather than % (RACGP/Diabetes Australia, 2014)

For the purpose of this audit, record HbA1c as either mmol/mol or %, **not** both.

9.14 HbA1c readings (% and/or mmol/mol) and date

T2D Complete if auditing T2D care.

If an HbA1c is recorded in Question 9.12 or 9.13, record the results (% and/or mmol/mol) and **date** of collection of the *most recent* HbA1c test. Date must be on or before the date of last attendance.

If only % **or** mmol/mol is recorded, enter the correct value (number only) for result, and enter **'0'** for value not recorded.

If no HbA1c tests are recorded in Questions 9.12 or 9.13 enter **'0'** and leave date blank.

9.15 Most recent HbA1c readings abnormal

T2D Complete if auditing T2D care.

Good glycaemic control substantially reduces the risk of microvascular disease in diabetes, including kidney disease, retinopathy and neuropathy.

Target HbA1c is ≤ 7% (≤ 53mmol/mol) (RACGP/Diabetes Australia, 2014).

Is there a record that the client had an abnormal HbA1c reading in the last 12 months?

Indicate **1-Yes** if reading is abnormal (>7% and/or >53 mmol/mol)

Indicate **0-No** if the reading is normal (≤7% and/or ≤53 mmol/mol).

Indicate **9- N/A** if this is not an audit for T2D care **or** if there is no reading present **or** if the client has not attended in the last 12 months.

9.16 Plan for follow up made

T2D Complete if auditing T2D care.

High HbA1c indicates abnormally high blood glucose over the past three months, and it is important that appropriate follow up action is taken. At a minimum, this should involve counselling regarding blood sugar control and more frequent monitoring. A repeated or especially high reading requires referral to a doctor for assessment and appropriate action, which may involve multiple interventions and medications.

If there is a record of an abnormal HbA1c reading in the last 12 months, is there a record that appropriate follow up action has been taken?

Indicate **1-Yes** if a follow up plan was made

Indicate **0-No** if no follow up plan was made.

Indicate **9-N/A** if this is not an audit for T2D care **or** if no HbA1c reading is present **or** if the client has not attended in the last 12 months.

9.17 Medication adjustment

T2D Complete if auditing T2D care.Repeated or especially high HbA1c readings require referral to a doctor for assessment and appropriate action, which may involve adjustment of medication.

If there is a record of an abnormal HbA1c reading in the last 12 months, is there a record that the client's medication was adjusted?

Indicate **1-Yes** if there is a record of medication being adjusted.

Indicate **0-No** if there is no record of medication being adjusted.

Indicate **9-N/A** if this is not an audit for T2D care **or** if no HbA1c reading is present **or** if the result was normal.

9.18 Medication reviewed but not adjusted

T2D Complete if auditing T2D care..

If there is a record of an abnormal HbA1c reading in the last 12 months, is there a record that the client's medication was reviewed but not adjusted?

Indicate **1-Yes** if there is a record of medication being reviewed but not adjusted.

Indicate **0-No** if there is no record of medication being reviewed but not adjusted.

Indicate **9-N/A** if this is not an audit for T2D care **or** if no HbA1c reading if present **or** if the result was normal **or** if medication was adjusted.

Appendix 1

Kessler 5 (K5)

K5 is a measure of psychological distress that consists of a subset of five questions from the Kessler psychological distress scale 10 (K10, see below).

The 2008 *National Aboriginal and Torres Strait Islander social survey* (ABS 2009) included five questions from the K10, providing a measure of the social and emotional wellbeing of the Indigenous population. The K5 questions were:

— How often did you feel nervous?

— How often did you feel without hope?

— How often did you feel restless or jumpy?

— How often did you feel everything was an effort?

— How often did you feel so sad that nothing could cheer you up?

Responses to the five questions are scored and combined, resulting in a minimum possible score of 5 and a maximum possible score of 25. Low scores indicate low levels of psychological distress and high scores indicate high levels of psychological distress (Kessler 1996).

Kessler 6 (K6)

K6 is a six-question format that is also referred to as the Kessler high distress measure (AIHW 2009b). The K6 has been used in a number of international studies, including the United States National Health Interview Survey (NCHS 2007).

Kessler 10 (K10)

K10 is a nonspecific distress scale developed in 1992 by professors Ron Kessler and Dan Mroczek. K10 consists of 10 questions designed to measure levels of negative emotional states experienced in the four weeks prior to interview. It is a simple self-report measure of psychological distress that can be used to identify clients in need of further assessment for anxiety and depression (AIHW, 2009).

This measure was designed for use in the general population to detect high-prevalence mental health disorders. K10 comprises 10 questions that are answered using a five-point scale (where 5 = all of the time and 1 = none of the time).

For all questions, the client indicates the answer that best describes their feelings in the past four weeks. Scores are then summed: the maximum score of 50 indicates severe distress and the minimum score of 10 indicates no distress (AIHW, 2009).

The Victorian Population Health Survey (DHS 2001) adopted a set of cut-off scores for K10 as a guide for screening psychological distress and the likelihood of mental disorder. These are:

10–19 Likely to be well

20–24 Likely to have a mild disorder

25–29 Likely to have a moderate disorder

30–50 Likely to have a severe disorder

Patient health questionnaires 2 and 9 (PHQ2 and PHQ9)

The patient health questionnaire (PHQ) has two different formats. The PHQ9 is the complete questionnaire and screens for all nine symptoms of depression. If a client has any of the symptoms, the PHQ9 has an additional question (question 10) that assesses the impact of those symptoms on the client's ability to function on a day-to-day basis (APA 2009).

The PHQ2 comprises the first two items of the PHQ9 and inquires about the degree to which the client has experienced a depressed mood over the past two weeks, to screen for depression. Clients who screen positive should be further evaluated with the PHQ9 to determine whether they meet the criteria for a depressive disorder (APA 2009).

Edinburgh postnatal depression scale (EPDS)

The EPDS is a 10-item self-report measure that screens women for symptoms of emotional distress during pregnancy and the postnatal period. The EPDS includes one question about suicidal thoughts and should be scored before the client leaves the office to ensure this item has been checked. Further enquiry about the nature of any thoughts of self-harm is required to determine the level of risk.

The EPDS reflects the client's experience of the last seven days; it may therefore need to be repeated on later occasions if this is deemed clinically necessary (Black Dog Institute, 2010).

Appendix 2

Note: This is not an exhaustive list of medications. Some clients may be taking medication that does not appear in this table or appears under a different name. Some medications may appear under more than one heading. We encourage use of the current MIMS handbook or the MIMS website for current medication information.

Table A Common medications

Types of medications	Common names, brand names or trade names		
Metformin	Avandamet	Glucohexal	Metforbell
	Diabex	Glucomet	Metex XR
	Diaformin	Glucophage	
	Formet	Glucovance	
Oral hypoglycaemic drugs	Actos	Dimirel	Melizide
	Alogliptin	Galvus	MellihexalNesina
	Amaryl	Gliclazide	Nidem
	Avandamet	Glimel	Novonorm
	Avandia	Gliptin	Onglyza
	Aylide	Janumet	Oziclide MR
	Byetta - injection	Januvia	Sitgaliptin
	Daonil	Linagliptin	Saxagliptin
	Diamicron	Minidiab	Trajenta
	Diapride		
Insulin	Actrapid	Humulin R	Mixtard 30/70 or 50/50
	Apidra	Humulin 30/70	NovoMix 30
	Humalog	Hypurin Isophane	Novorapid
	Humalog Mix 25	Hypurin Neutral	Protophane
	Humalog Mix 50	Lantus	
	Humulin NPH	Levemir Flexpen	
Angiotensin-converting enzyme (ACE) inhibitors	Acenorm	Enalabell	Ozapace
	Accupril	Enalapril	Perindo
	Acquin	Fibsol	Perindopril
	Alphapril	Filpril	Prilace
	Amlodipine	Fosinopril	Prinivil
	+ Quinapril	Fosipril	Ramace
	Amlo	Gopten	Ramipril
	Amprace	Indosyl Mono	Renitec
	Auspril	Indopril	Tranalpha
	Capoten	Liprace	Trandolapril
	Captohexal	Lisinobell	Triasyn
	Captopril	Lisinopril	Tritace
	Coveram	Lisodur	Tryzan
	Coversyl	Monace	Zan-extra
	Dolapril	Monopril	Zestril
	Enahexal	Odrik	

Angiotensin II receptor blockers	Atacand Avapro Candesartan Cozaar Diovan Eprosartan	Exforge Iosartan Irbesartan Karvea Micardis Olmesartan	Olmetec Telmisartan Teveten Valsartan Valsartan + Amlodipine
'Other' antihypertensive drugs	Aldomet Catapres Clonidine Dibenzyline Hydopa	Hytrin Methyldopa Minipress Phenoxybenzamine Dibenyline Phentolamine	Prazosin Pressin Regitine Terazosin
Lipid-lowering drugs	Atorvachol Atorvastatin Ausgem Crestor Fenofibrate Fluvastatin Gemfibrozil Gemhexal	Jezil Lescol Lipazil Lipidil Lipitor Lipostat Liprachol	Lopid Pravachol Pravastatin Rosuvastatin Vastin Vastoran
Anti clotting drugs	Aspec Aspirin Aspro Clopidogrel Disprin	Heparin Prasugrel Spren Warfarin	
Antidepressants	Allegron Amitriptyline Anafranil Aropax Auscap Avanza Axit Celapram Celica Ciazil Cipramil Citalobel Citalopram Clomipramine Concorz Deptran Dothep Dothiepin Doxepin Eleva Endep	Escitalopram Esipram Esitalo Extine Faverin Fluohexal Fluoxebell Fluoxetine Fluvoxamine Imipramine Lexan Lexapro Lovan Loxalate Lumin Luvox Mianserin Mirtazapine Mirtazon Movox Nortriptyline	Paroxetine Paxtine Phenelzine tranylcypromine Placil Prothiaden Prozac Sertraline Setrona Sinequan Surmontil Talam Talohexal Tofranil Tolerdade Tolvon Trimipramine Voxam Xydep Zactin Zoloft

Beta blockers	Anselol Atehexal Atenolol Barbloc Betaloc Bisoprolol Corbeton Deralin	Inderal Lopressor Metohexal Metoprolol Minax Metrol Nebivolol Nebilet	Noten Oxprenolol Pindolol Propranolol Tenormin Tensig Timolol Visken
Cardiac glycosides	Digoxin Lanoxin Sigmaxin		
Diuretics	Accuretic Aldactone Amiloride Amizide Atacand Plus Avapro HCT Chlorthalidone Co-Diovan Co-Renitec Coversyl Plus Dapa tabs Dithiazide Fosetic	Frusemide Hydrene Hydrochlorothiazide Hydrochlorothiazide +amiloride Hyforil Hygroton Indapamide Indahexal Inhibace Plus Insig Kaluril Karveside Lasix	Micadis Plus Moduretic Monoplus Napamide Natrilix Olmetec Plus Perindo Combi Renitec Plus Spiractin Spironolactone Teveten Plus Uremide Urex preparations
Short acting nitrates	Anginine Glyceral trinitrate (GTN) Lycinate Nitrolingual spray Nitrostat		
Long acting nitrates	Corangin Duride Imdur Imtrate SR Ismo Isomonit	Isordil Isosorbide dinitrate (sorbide nitrate) Isosorbide-5-mononitrate Minitran	Monodur Nitrong SR Nitrodur Nitrogard Transderm nitro
Anti-anaemics (erythropoietin)	Aranesp Darbepoetin alfa Epoetin alfa	Epoetin Beta Eprex	Neorecormon Recormon

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