CVD Risk Assessment & Management

Introduction and Background

Improving the accuracy and consistency of cardiovascular disease risk assessment (CVDRA) and management (CVDRM) is an opportunity for significant improvement in equitable health outcomes for New Zealanders.

Cardiovascular disease remains responsible for 40% of deaths in New Zealand, and research shows a substantial decline in ischaemic heart disease hospitalisations and mortality since systematic CVDRA and primary/secondary prevention was embedded into primary care.

In February 2018, the Ministry of Health released new locally developed, (for the NZ population) cardiovascular assessment and management Consensus statement.

CVD Assessment and Management in Primary Care

Following this, new risk equations called the "NZ Primary Prevention Equations" were developed based on New Zealand data from the New Zealand PREDICT Study, generated by the HRC-VIEW Research Group, and published in May 2019. As consequence, New Zealand will continue to use a 5-year CVD risk prediction model.

The Ministry of Health supported the implementation of the risk equations into primary care patient management system enablers, including Mōhio. Mōhio was externally verified, tested and quality assured against the HISO 10071:2019 Cardiovascular Disease Risk Assessment Data Standard. This Standard supports the implementation of cardiovascular disease risk assessment using the agreed primary prevention equations. It provides a data set specification for the inputs to the calculation and the algorithms used.

The previous New Zealand adjusted Framingham equation provided a proxy of Māori and Pacific people and overestimated risk (by approximately 5%) and CVDRA scores under the new equations will be generally lower for many patients.

Purpose

Auckland PHO aims to improve cardiovascular health for its enrolled and eligible population that supports evidence based best practice by funding screening and managing the “at risk” population, as identified by the MoH 2018 Consensus Statement.

Population Subgroups for Screening

Population Subgroup	Age (years)	
	Men	Women
Asymptomatic people without known risk factors	45 - 74	55 - 74
• Māori and Pacific • Indo-Asian peoples Indian (including Fijian Indian) Sri Lankan Afghani	30 - 74	40 - 74

Bangladeshi Nepalese Pakistani Tibetan		
People with personal or family risk factors • diabetes in first-degree relative (parent, brother, or sister) • hospitalisation for or death from heart attack or stroke in a first-degree relative before the age of 50 years (father or brother, mother, or sister) • familial hypercholesterolaemia • people who smoke • gestational diabetes • HbA1c 41-49 mmol/mol • BMI more than 30 or truncal obesity (waist circumference more than 102 cm in men or > 88 cm in women) • eGFR <60 but >45 ml/min/1.73 m2 • atrial fibrillation	35 - 74	45 - 74
People with diabetes (type 1 or 2)	From the time of diagnosis	From the time of diagnosis
People with severe mental illness	From 25	From 25

Heart Rate and Rhythm

To improve the detection of atrial fibrillation, and in line with the Australian and New Zealand Guidelines (2018), two additional fields are included in the Risk Assessment template:

- Resting heart rate (non-mandatory field):
  - Numeric answer – units of bpm
- Resting heart rhythm (mandatory field):
  - Regular
  - Irregular
  - Not examined

Pulse checks that are recorded as “irregular” should be followed up with appropriate investigations and subsequent management.

Refer to Atrial Fibrillation in the Auckland Region Health Pathways for further information.

Equity

The Auckland PHO CVD Risk Assessment and Management funded Programme ensures that:

- There is a system/funding that aims to mobilise screening efforts and is targeted at patients who have never been screened or not had a screen in 5 years, particularly for Māori males;

- Practices are encouraged to opportunistically test for lipids, HbA1c, eGFR, BP etc. prior to an eligible screening age to have all the requirements for a valid CVD risk assessment;
- In the event there is doubt that the patient will access the laboratory, consider undertaking phlebotomy on-site and claim via the Auckland PHO Discretionary Funding Pool
  Auckland PHO Discretionary Funding Pool Programme Description Document
- There is a system and funding to support primary prevention in patients who have a CVD risk score of greater than or equal to 15%, or support secondary prevention in patients with known CVD and/or diabetes**;**
- There is funding for primary and secondary prevention for people with a CVD risk of 15% or more.

Frequency of CVD Risk Assessments

Five Year Risk Level	Repeat CVD Risk Assessment every:
<3 %	10 years (Mōhio recall is 5 years)
3 – 9%	5 years
10- 14%	2 years
15+%	1 year as part of annual management review

For people with **severe mental illness** (schizophrenia, major depressive disorder, bipolar disorder, schizoaffective disorder, CVD risk assessment is recommended from age 25 years. Repeat assessments should follow every two years, unless the risk is 15 percent or more, when it should be repeated every year.

Refer to resource links at the end of this document.

Upper Age Limits

It is expected that the number of older people 75+ to double by 2035. While many suffer from chronic conditions, expectancy has increased by over 10 years in the last 50 years and will rise further.

Benefits of CVD treatment is directly proportional to absolute 5-year CVD risk. Age is a major predictor of risk. Although there is not YET direct evidence (because this has not been studied), logic suggests that older people will have greater benefit from treatment than their younger counterparts. However, the risk of adverse drug events increases with age and number of medications and is a need to balance two competing domains; the potential greater harms from under treating than over treating particularly for the 'healthy' elderly and the need to consider de-prescribing for those who are frail or have side effects or complications/co-morbidities to deal with.

Therefore, according to the 2018 CVD risk assessment and management guidance, healthy people over 75 years, with few co-morbidities and an estimated life expectancy of more than 5 years, are recommended to have their 5-year CVD risk assessed, using the New Zealand Primary Prevention equations and treatment based on discussing the same management options as for people under 75 years.

The Auckland PHO funding to support CVD Risk Assessment is aligned with current best practice and is funded for people up to the age of 74 years for patients who do not have diabetes.

For patients outside this age range (>75 years) who do not have diabetes, completing a CVD risk assessment is a clinical decision.

Funding & Business Rules CVD Risk Assessments

Note: all funding is GST exclusive

Funding

$10.00 for a 5-yearly CVD Risk Assessment for eligible populations
$20.00 for Māori men 30 – 45 years

Business Rules

The patient must be:

- Enrolled and;
- Never been screened and no screen in 5 years; **or**
- Māori/Pacific/Indo-Asian men ≥ 30 years and women ≥ 40 years & < 75 years, **or**
- People with other known cardiovascular risk factors or at high risk of developing diabetes men ≥ 35 years and women ≥ 40 years & < 75 years, **or**
- People with severe mental illness – all ethnicities ≥25 years & < 75 years, **or**
- Other ethnicities Men ≥ 45 years and women ≥ 55 years & < 75 years
- Diabetes – all types and all ages (See Diabetes Annual Review/Year of Care Information.

CVD Risk Management (Dual/Triple Therapy)

Funding for people who do not have diabetes

- First Consultation: $45.00 (all ethnicities and quintiles)
- Second and ongoing review $30 (Quintiles 4 or 5 Māori, Pacific/South Asian/CSC holder
- Second and ongoing review: $20.00 (all other ethnicities and quintiles 1 - 3)

Business Rules (first consultation)

- Enrolled up to 75 years
- CVD risk ≥15% or previous CVD event
- All quintiles and ethnicities
- Not diabetic

Business Rules (second and ongoing annual review)

- Enrolled
- Aged up to 75 years
- CVD risk ≥15% or previous CVD event
- Not diabetic
- Quintiles 1 – 3

Business Rules for people with diabetes with a CVD risk ≥ 15%

- $10 in addition to the funded $50 Diabetes Annual Review

- All people with diabetes (type 1 and 2)
- All quintiles and ethnicities

Quality System Indicator Targets

- CVD Risk Assessment – **90% of enrolled eligible patients have had a CVD risk assessment**
- CVD Management
  - CVD Secondary Prevention:**70% of enrolled eligible patients (25 – 74 years) with known CVD who are on triple therapy (statin+ BP lowering agent+ antiplatelet/anticoagulant). Exclusion: history of haemorrhagic stroke)**
  - CVD Primary Prevention: **70% of enrolled patients (25 – 74 years) whose most recently recorded CVD risk score is ≥15% are on dual therapy (statin + BP lowering agent.)**

Exclusions: History of prior CVD and other conditions identified as "clinically high".

These Quality System Indicator Targets were agreed to by the Northern Region Clinical Governance Forum.
Quality System Indicator Targets

Note that reporting ages and associated age funding across some indicators are different.

Timing of measurements to complete a CVDRA

The interval for when measurements (such as bloods, BP, ACR etc) should be taken or repeated for an individual should be in accordance with the clinical guidance.

CVD Assessment and Management in Primary Care

Recording Exemptions from Treatment for Primary and Secondary Prevention of CVD

(See Mōhio Form Screenshots 4 and 5 below)

Recording exemptions allows identification of patients who have been assessed for treatment with primary and secondary therapy that yet cannot or will not have it.

Providers can use the Mōhio CVD Management Form to record exemptions from treatments for primary and secondary prevention of CVD. The options being Contraindicated, Intolerant or Declined. Recording whether a patient is on treatment (Given) is also available for completeness.

By setting the flexible recall on the Mōhio form, this can be used as a reminder for reassessment or discussion.

NOTE: Eligible patients will always be included in the NRCGF CVD/DM Clinical Indicator 70% target, regardless of whether they have been marked exempt.

Recording an outcome – Medtech and MyPractice

The Mōhio form will write back exemptions into a screening template in Medtech (CVDX for Primary Prevention Exemptions and CVDX2 for secondary prevention Exemptions) and as a measurement in MyPractice (M_TRICVDX1_OC and M_TRICVDX2_OC).

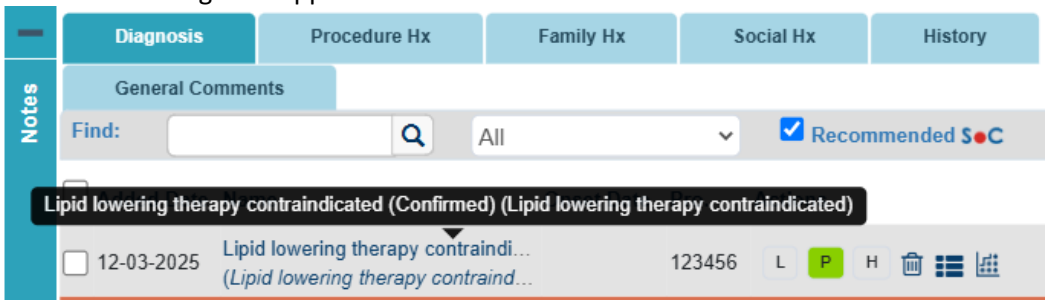
The outcome code used in the screening and measurement templates is “Exempt - X”, and recall dates are set based on the selection made by the clinician in the Mōhio form.

Recording an outcome – Indici

The Mōhio form will write back a CVDX Measurement Outcome and will record the medication exemptions as a diagnosis code. Below is a table of the exemption codes which will be written back for any of the three drug classes:

Therapy Type	Exemption reason	Snomed CT Code	Snomed Description
Lipid lowering	Contraindicated	135822005	Lipid lowering therapy contraindicated
	Declined	135826008	Lipid lowering therapy declined
	Intolerant	293417004	Lipid lowering drug adverse reaction
Anti-platelet / Anti-coagulant	Contraindicated	413558003	Anticoagulation contraindicated
	Declined	413559006	Anticoagulation declined
	Intolerant	413561002	Anticoagulation not tolerated
BP lowering	Contraindicated	303081000210103	Antihypertensive therapy contraindicated
	Declined	21681000175107	Antihypertensive therapy declined
	Intolerant	293495006	Antihypertensive adverse reaction

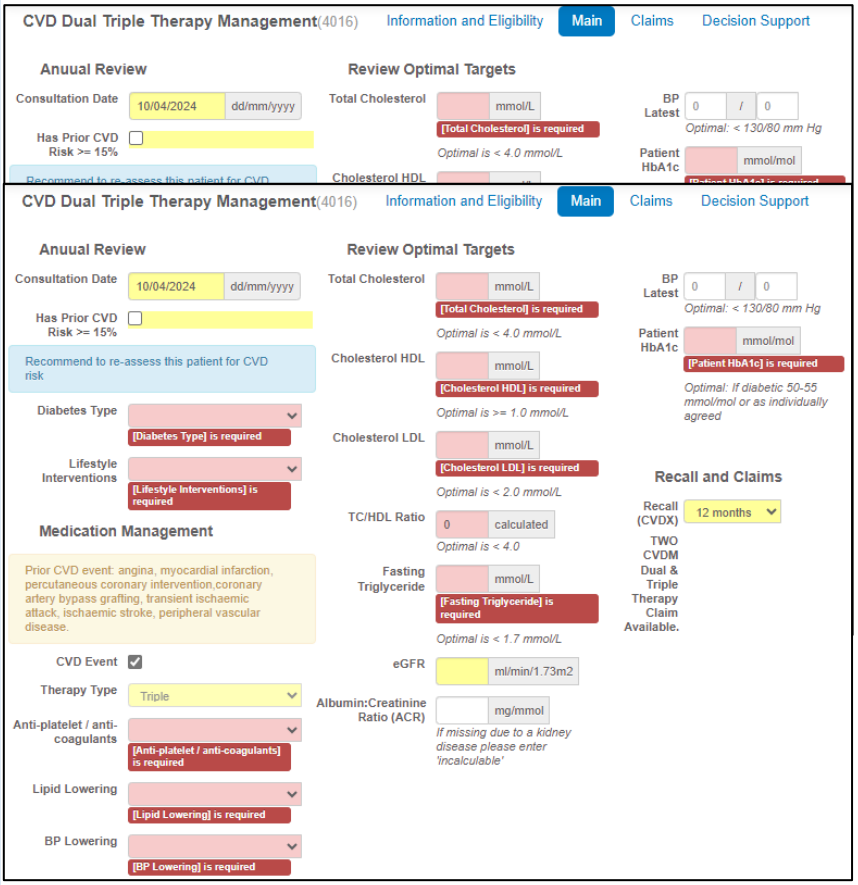
And how the diagnosis appears in Indici:



Mōhio Form

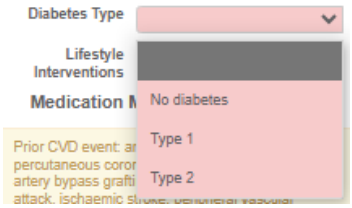
The CVD Dual/Triple Therapy Management Mōhio form has been updated and simplified.

1. <u>CVD Dual therapy Management</u>



3. <u>CVD Triple Therapy Management</u>

<u>2. Diabetes dropdown list</u>

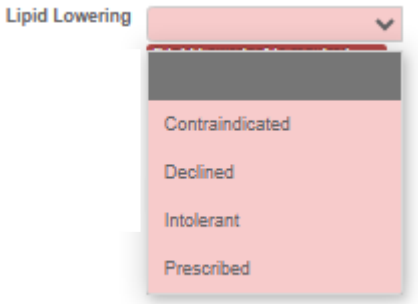


4. <u>Recall and exemption (CVDX) options:</u>

- Options range from 1 week - 12 months
- There is also an option for providers to not set a recall for the patient

5. <u>CVD Exemptions</u>

Exemptions (List is the same for all three drug classes)



Resources

Auckland Regional HealthPathways

CVDRA and CVDM

Hyperlipidaemia

Hypertension in Adults

Diabetes

CVD Assessment and Management in Primary Care

Manatū Hauora - MoH

Visit: Cardiovascular Disease Risk Assessment and Management

National Heart Foundation of NZ

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