Updated Cardiovascular Risk Calculator with Halcyon Forms

Practice Change

- The Cardiovascular Disease (CVD) Risk Assessment calculator in the new Halcyon forms for cardiovascular risk and diabetes is changing to use the New Zealand (NZ) Primary Prevention equations.
- The risk categories and thresholds for pharmacological management of cardiovascular risk are updated with moving to use the NZ Primary Prevention equations. New risk categories based on 5 year Cardiovascular Disease Risk Assessment (CVDRA):
    - Low risk <5% - Lifestyle management
    - intermediate risk 5-15% - Pharmacological management should be discussed
    - High risk ≥ 15% - Pharmacological management recommended

Background

In February 2018, the New Zealand Ministry of Health published a consensus statement on cardiovascular disease risk assessment and management **Cardiovascular Disease Risk Assessment and Management for Primary Care**. The consensus statement introduced a new cardiovascular risk calculator using the NZ Primary Prevention equations and changes to the definitions of established CVD. The consensus statement updated the thresholds for pharmacological management of cardiovascular risk based on the NZ Primary Prevention equations.

Health Hawkes Bay is rolling out Halcyon Claiming system on the 1st of November 2020. As part of the implementation, the two Halcyon forms (CVD risk and Diabetes) replace the one previous combined CVD/Diabetes Advanced Form. The new forms use the NZ Primary Prevention equations to calculate 5 year CVD risk. Summarised in tables 1 to 4 are changes which should be considered when assessing and managing cardiovascular risk.

Table 1. When to start risk assessments for men and women in different population subgroups (adapted from Cardiovascular Disease Risk Assessment and Management for Primary Care 2018)

Population subgroup	Men	Women
Māori, Pacific peoples or South-Asian peoples	Age 30 years	Age 40 years
People with severe mental illness See consensus statement for more detail	Age 25 years	Age 25 years
• People with other known cardiovascular risk factors or at high risk of developing diabetes • Family History of early CVD or diabetes • Personal history risk factors: Current smokers, pre-diabetes, gestational diabetes, obesity, chronic kidney disease 3a, atrial fibrillation See consensus statement for more detail	Age 35 years	Age 45 years
People with diabetes (type 1 or 2)	From the time of diagnosis	From the time of diagnosis
Individuals without known risk factors	Age 45 years	Age 55 years

Table 2: Changes in the definition of established CVD include (from BPAC 2018 Cardiovascular Disease Risk Assessment and Management Series)

Risk factor or risk category	Updated 2018 guidance
Heart failure	A history of heart failure is now considered to be established CVD
Coronary or carotid artery disease	Patients with a diagnosis of asymptomatic carotid disease (including plaque identified on carotid ultrasound) OR asymptomatic coronary disease (including coronary artery calcium score > 400) OR plaque identified on CT angiography are considered to have an equivalent CVD risk to that of a person with established CVD
Renal function	Patients with an eGFR < 30 mL/min/m^2 OR patients with diabetes and an eGFR < 45 mL/min/m^2 are now considered to have a CVD risk equivalent to those with established CVD

Table 3. The pharmacological management of cardiovascular risk based on the 2018 CVD consensus statement (adapted from BPAC 2018 Cardiovascular Disease Risk Assessment and Management Series)

Risk category	New thresholds (based on NZ Primary Prevention equations)	Recommended management
Low risk	< 5%	Cardiovascular medicines are not generally recommended as this is believed to be the point below at which the harms of treatment are likely to exceed the benefits of treatment.
Intermediate risk	5–15%	The benefits and risks of blood-pressure and lipid-lowering medicines should be discussed and initiation of treatment considered, particularly for those with a risk at the higher end of this spectrum.
High risk	≥ 15%	Blood pressure and lipid-lowering medicines are recommended. Aspirin for primary prevention of CVD should be considered for patients who are aged under 70 years. In general, patients with a high CVD risk should be managed in the same way as patients with established CVD.

Table 4 Recommend interval for repeat CVD risk assessment (adapted from BPAC 2018 Cardiovascular Disease Risk Assessment and Management Series)

5 year CVD Risk (based on NZ Primary Prevention equations)	Interval
Risk < 3%	10 year
Risk 3–9%	5 years
Risk 10–14%	2 years
Risk ≥ 15%	1 year
Risk 5–15% and prescribed pharmacological interventions	1 year
Severe mental illness	2 years (or 1 year if risk ≥ 15%