Rosuvastatin: Funded for management of CVD and familial hypercholesterolaemia

Rosuvastatin is funded from 1 December 2021, subject to Special Authority criteria. New Zealanders at increased risk of cardiovascular complications due to high cholesterol now have access to a fourth funded HMG-CoA reductase inhibitor, or statin.[1]

Any relevant practitioner, including nurse practitioners and pharmacist prescribers, can apply for a Special Authority.

This is an abridged version of a full article available at tinyurl.com/HAHrosuvastatin

Introduction and overview of Special Authority criteria

Rosuvastatin Viatris is funded in 5mg, 10mg, 20mg and 40mg once-daily tablet doses. The full funding criteria for patient eligibility have been detailed by Pharmac and are summarised below.[1]

Criteria have been applied to allow funded access for patients with:

- raised cardiovascular disease (CVD) risk
- familial hypercholesterolaemia
- established CVD
- recurrent major cardiovascular events.

Patients with the above specified risks or conditions, as defined in the full criteria, must also have reached a maximum tolerated dose of atorvastatin and/or simvastatin treatment and have a low-density lipoprotein cholesterol (LDL-C) level still above target for that condition. Note that the targets specified in the criteria are in line with international guidelines and may differ from those used locally.

In addition to these clinical criteria, two further specific criteria apply:

- a pro-equity eligibility component for people of Māori or Pacific ethnicity with a higher risk of CVD, to access rosuvastatin as a first-line treatment option
- a waiver process for patients already self-funding rosuvastatin.

Māori and Pacific peoples are at a higher overall risk of CVD compared with most other ethnicities in New Zealand. Data show Māori to have total CVD mortality rates more than two-fold those of non-Māori and a 1.5 times likelihood, compared with non-Māori, of being hospitalised for CVD.[2] Similarly, CVD is the principal cause of death for Pacific peoples, and cardiovascular mortality rates are consistently and significantly higher than for the general population.[3]

For Māori and Pacific populations, CVD risk assessment is recommended to begin in men at age 30 and in women at age 40 (15 years earlier than other population groups).[4] Rosuvastatin is funded for first-line use in eligible Māori and Pacific peoples with raised CVD risk.[1]

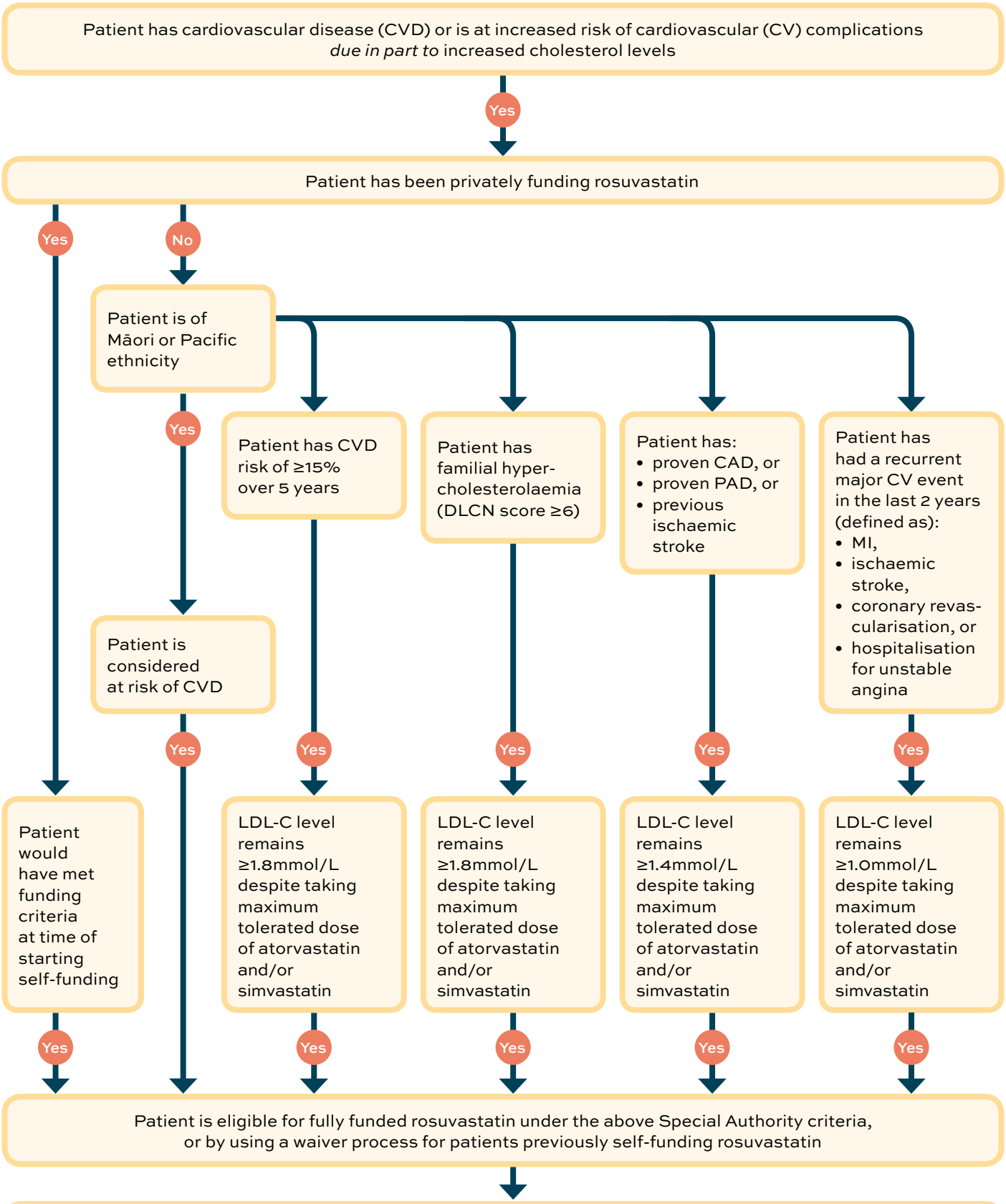
Is my patient eligible for funded rosuvastatin?

Rosuvastatin is now a fully funded option for lipid-lowering therapy in New Zealand for patients with CVD or at risk of CVD, subject to Special Authority criteria. The following flowchart can be used to guide your decision as to whether or not your patient is eligible for funded treatment with rosuvastatin.

Place in therapy

Rosuvastatin is the most potent of the four funded statins and achieves an equivalent therapeutic effect at a lower dose than the other available statins.[4] Rosuvastatin reduces the LDL-C level across its dose range and, milligram-for-milligram, it is three to four times as potent as atorvastatin (see table).

Any statin may be initiated to reduce LDL-C levels and, if the target is met and the statin is tolerated, there is no need to change treatment. Rosuvastatin can be considered when another statin has been ineffective in achieving the target LDL-C level. Higher doses of rosuvastatin (20–40mg) achieve reductions in LDL-C that are not possible with most of the recommended doses of other statins.[5]



KEY: CAD = coronary artery disease, MI = myocardial infarction, PAD = peripheral artery disease; DLCNS = Dutch Lipid Clinical Network Score www.athero.org.au/fh/calculator; LDL-C level targets are in line with international guidelines; Special Authority waiver process https://pharmac.govt.nz/medicine-funding-and-supply/make-an-application/special-authority-waiver; Product data sheet www.medsafe.govt.nz/profs/Datasheet/r/rosuvastatinviatristab.pdf

Effects on HDL-C, triglycerides and lipid ratios

In addition to the increased potency of rosuvastatin in lowering LDL-C levels, it has been shown to elevate high-density lipoprotein cholesterol (HDL-C) levels by 8–10 per cent over six weeks, compared with approximately 2–6 per cent for atorvastatin, 5–7 per cent for simvastatin and 3–6 per cent for pravastatin; and these effects are across its recommended dose range, unlike atorvastatin.[6,7] Reductions in triglyceride levels with rosuvastatin are similar to those with atorvastatin across the dose ranges and greater than those produced with simvastatin and pravastatin.[6,7]

With regard to the important lipid ratios, rosuvastatin 10mg has been shown to improve total cholesterol/HDL-C, LDL-C/HDL-C and non-HDL-C/HDL-C ratios compared with atorvastatin 10mg, simvastatin 10–40mg and pravastatin 10–40mg.[7,8]

Statin potency – approximate equivalence

Treatment intensity	Atorvastatin	Pravastatin	Rosuvastatin	Simvastatin	LDL-C reduction
Low		20mg		10mg	30%
Medium	10mg	40mg		20mg	38%
Medium	20mg	60mg	5mg	40mg	41%
High	40mg		10mg	80mg	47%
High	80mg		20mg		55%
Very high			40mg		63%

Practice points

- A 5mg starting dose is advised for some Asian populations (Filipino, Chinese, Japanese, Korean, Vietnamese or Asian-Indian origin) who tolerate rosuvastatin less well due to a two-fold higher systemic exposure compared with Caucasian populations.[9,10] Prescribers should be cautious when titrating rosuvastatin and should not use the 40mg dose in this group.[5,9]
- While muscle toxicity has been reported with all statins, lipophilic statins (simvastatin, atorvastatin) penetrate muscle more easily than hydrophilic statins (pravastatin) and are associated with a higher incidence of adverse effects, particularly myopathy. Rosuvastatin is a "relatively hydrophilic" statin.[11,12] While hydrophilic statins have a lower association with adverse effects, they generally require higher dosing to be efficacious, with the exception of rosuvastin.[11,12] Higher doses, in turn, may be associated with adverse effects.

References available at tinyurl.com/HAHrosuvastatin
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