Best Practice Message

May 2024

Statins for secondary prevention of cardiovascular events

Practice changing moments

- Māori are disproportionately affected by cardiovascular disease (CVD). Significantly more Māori die from cardiovascular disease and at a younger age.
- Lack of statin therapy is the primary driver for patients not receiving triple therapy for secondary prevention.
- Most of the perceived statin intolerance of muscle pain is unrelated to the statin therapy.
- Consider reviewing the intensity of statin therapy to ensure patients are receiving maximal benefit.

Introduction

Triple therapy (statin, antihypertensive and antiplatelet/anticoagulant) can reduce the risk of recurrent cardiovascular events by at least 50% over five years and is recommended by current New Zealand guidelines.[1,2] While there will be a small group of patients for whom triple therapy is not appropriate, there is still a considerable rate of patients with previous cardiovascular events who are not receiving triple therapy. The main driver for this is low rates of prescribing of statins.

Rates of triple therapy in Māori and Non-Māori are similar, however Māori are disproportionately affected by cardiovascular events with a higher burden of disease and younger ages at presentation than Non-Māori.[3]

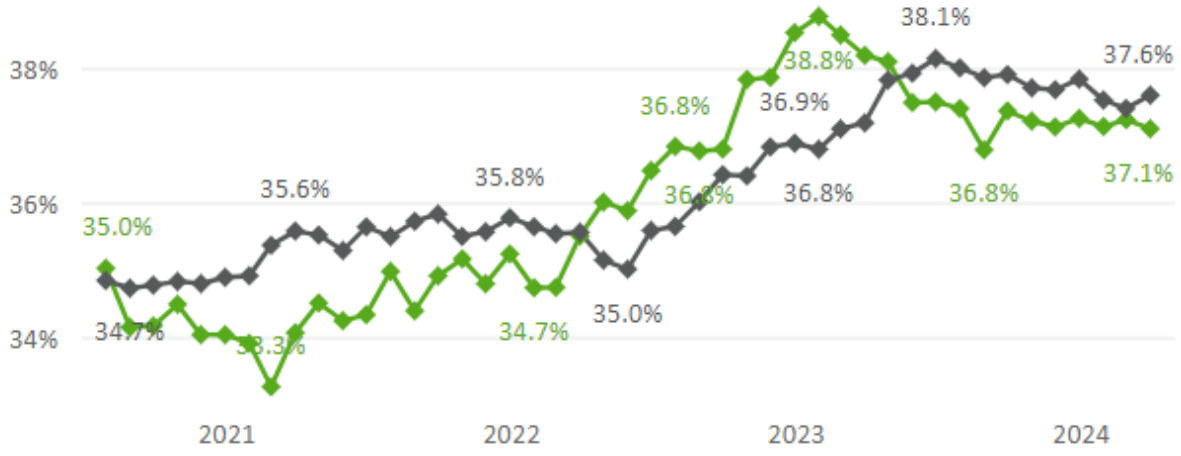


Figure 1: Proportion of patients with established CVD, enrolled in a Health Hawke's Bay practice, who have been prescribed a combination of Statin, Antihypertensive, and Antiplatelet/Anticoagulant in the last 5 months for Māori (green) and non-Māori (grey) as reported in Thalamus as of 31st March 2024.

Statin Aversion

About half of patients initiated on statins discontinuing therapy within a year[4]. Reasons for poor medication adherence is multifactorial.

A primary driver for patients to avoid statin therapy is the widespread belief around statin associated muscle pain[4]. However, the risk of true rate of statin related muscle pain or weakness is low at 11 per 1000 person-years in the first year of treatment, with this falling to effectively zero in subsequent years. It has also been shown that only 1 in 15 reports of muscle symptoms during the first year of treatment are directly attributable to statin therapy. [5] Furthermore, serious side effects are rare. For every 10,000 patients treated for 5 years there are 5 cases of myopathy[1]. Where statin associated muscle pain has occurred consider whether statin-attributed muscle symptoms (SAMS) favour statin continuation or re-initiation by following the Management of SAMS flow chart (see appendix 1).

Since the FDA published a safety announcement in 2012 about a link between statin therapy and memory loss, there has been public concern around potentially developing dementia from statin use, with this being the second most commonly reported adverse effect with statin therapy.[6] However, large scale studies investigating a link between statin therapy and dementia or reduced cognitive test scores have not found any association. [7] More recently there has been evidence that in some patient groups with a high risk of Alzheimer's disease that statin therapy is protective.[8]

Patients may also disregard the importance of statins particularly due to perceptions of their risk of a future cardiovascular event as well as the asymptomatic nature of dyslipidaemia in most patients. [9,10] He Ako Hiringa have great resources for communicating CVD risk and for strategies to address the complexities of non-adherence in CVD.

LDL Targets

While New Zealand guidelines written in 2018 suggest a target of 1.6 - 1.8mmol/L LDL-C is suitable for patients with established CVD [1], more up to date International guidelines have recently moved to an aggressive target of <1.4mmol/L when treating patients.[11] It is expected that updates to New Zealand guidelines will follow this, with the NZSSD guidelines for managing patients with diabetes already using a target of <1.4mmol/L.[12]

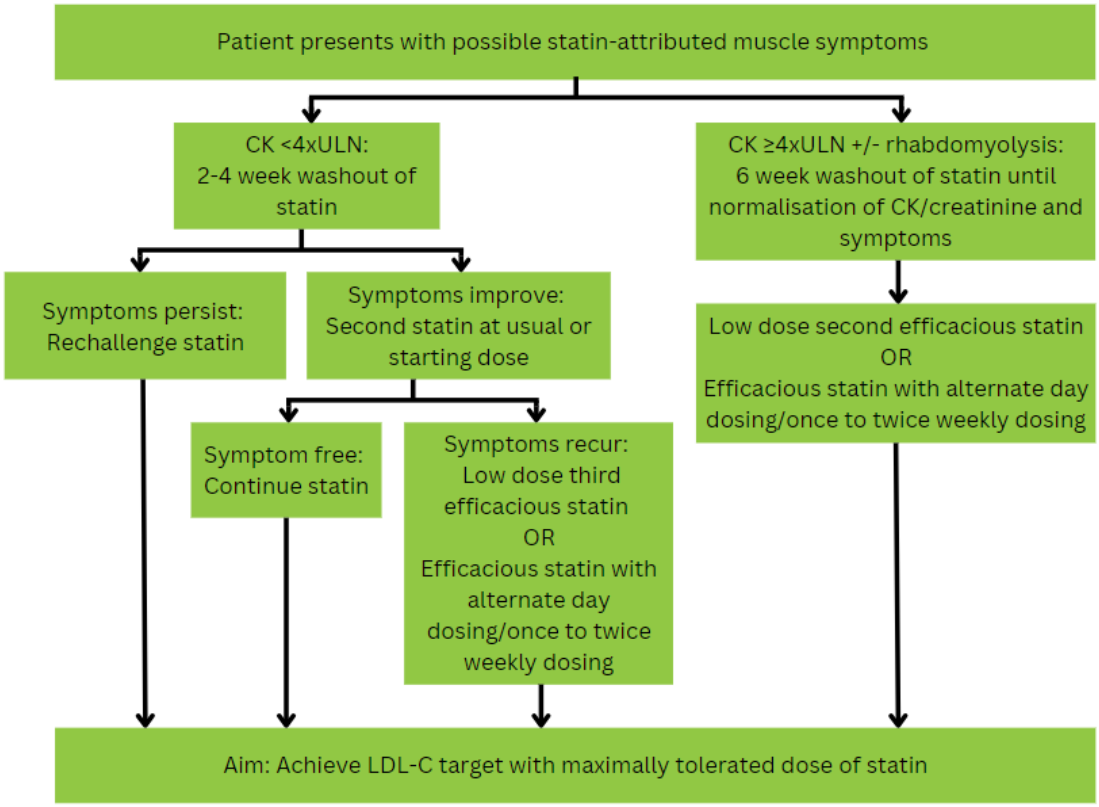
It is also important to remind patients that any LDL-C reduction is beneficial, with each 1mmol/L reduction in LDL-C reducing the relative risk of major adverse cardiovascular event (MACE) by 22%. Consider switching patients to a higher intensity statin at the highest tolerated dose to gain maximum benefit. Table 1 highlights the expected drop of LDL-C from current available statin therapy.

Ezetimibe has a modest effect on lowering LDL-C, adding an approximate 13-15% reduction in LDL-C levels when combined with simvastatin, atorvastatin or rosuvastatin.[13] Consider addition of ezetimibe therapy if LDL-C goal is not met with maximum tolerated intensity and dose of statin therapy.

Treatment Intensity	Pravastatin	Rosuvastatin	Atorvastatin	Simvastatin	Expected % drop in LDL-C
Low	20 mg			10 mg	30%
Medium	40 mg		10 mg	20 mg	38%
	80 mg	5 mg	20 mg	40mg	41%
High		10 mg	40mg	80 mg	47%
		20 mg	80 mg		55%
Very High		40 mg			63%

Table 1. Approximate equivalence of statins[1]

Appendix 1: Management of patients with statin attributed muscle symptoms.



Adapted from [Wiley Statin-Associated Muscle Symptoms May 2022]

Resources:

Thalamus PPP Outcome measures dashboards
He Ako Hiringa EPiC Cardiovascular disease dashboard
He Ako Hiringa Understanding and communicating CVD risk and management recommendations
He Ako Hiringa Pondering the complexities of preventing cardiovascular disease
Heart foundation patient information: Statins
Healthify patient information: Statins
New Zealand formulary: Statins
New Zealand formulary: Interaction checker
CARM suspected adverse event reporting
Health Pathways: Cardiovascular Risk Assessment
Heat Beat: Cardiac rehabilitation sessions for patients

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Authored by: Ben Firestone **Reviewed by:** Riani Albertyn

Acknowledgements: Thanks to Brendan Duck and the Hawke's Bay Clinical Pharmacist Facilitator team for content contribution and guidance.