

Statins in Stroke: Is there Rhyme and Reason to Prescribing Patterns?

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INTRODUCTION

- Australian and international stroke prevention guidelines advocate the use of statins following an acute stroke.¹⁻⁴
- The use of statins to lower low density lipoproteins (LDL) to achieve a target level of <1.8 mmol/L reduces the likelihood of subsequent ischaemic stroke¹.
- Variability exists in statin selection and dosage.⁵

AIM

To understand statin prescribing patterns at University Hospital Geelong (UHG), Barwon Health (BH), considering patient factors such as: renal function, age, gender, National Institutes of Health Stroke Scale (NIHSS), Modified Rankin Scale (mRS) and Low-density lipoprotein (LDL) levels

METHODS

Retrospective audit of data over a 12-month period in 2021.

- 1 Patients were identified through UHG coding system under "specific intracerebral infarction" and BH's stroke data set.
- 2 Data was collected using BossNET records (UHG's digital medical record) and MERLIN dispensing software.
- 3 Data was analysed using SPSS (V23.0, Amonk, NY) and subgroup analysis performed using chi-square (X2) test.

Inclusion Criteria

- Patients admitted under the stroke team with ischaemic stroke
- Pre-admission statin therapy was acceptable

Exclusion Criteria

- Haemorrhagic stroke
- Patients admitted for less than 24 hours
- Unavailable medication discharge information

Table 1: Low dose and high dose statin clarification²

	Statin	Dose
High dose statin (reduction of LDL levels of 50% or higher)	Atorvastatin	80mg
	Rosuvastatin	40mg
Low dose statin (reduction of LDL levels less than 50%)	Atorvastatin	5mg, 10mg, 20mg, 40mg
	Fluvastatin	20mg, 40mg, 80mg
	Pravastatin	20mg, 40mg, 80mg
	Rosuvastatin	5mg, 10mg, 20mg
	Simvastatin	5mg, 10mg, 20mg, 40mg, 80mg

RESULTS

- 250 patients were included in the study (Table 2).

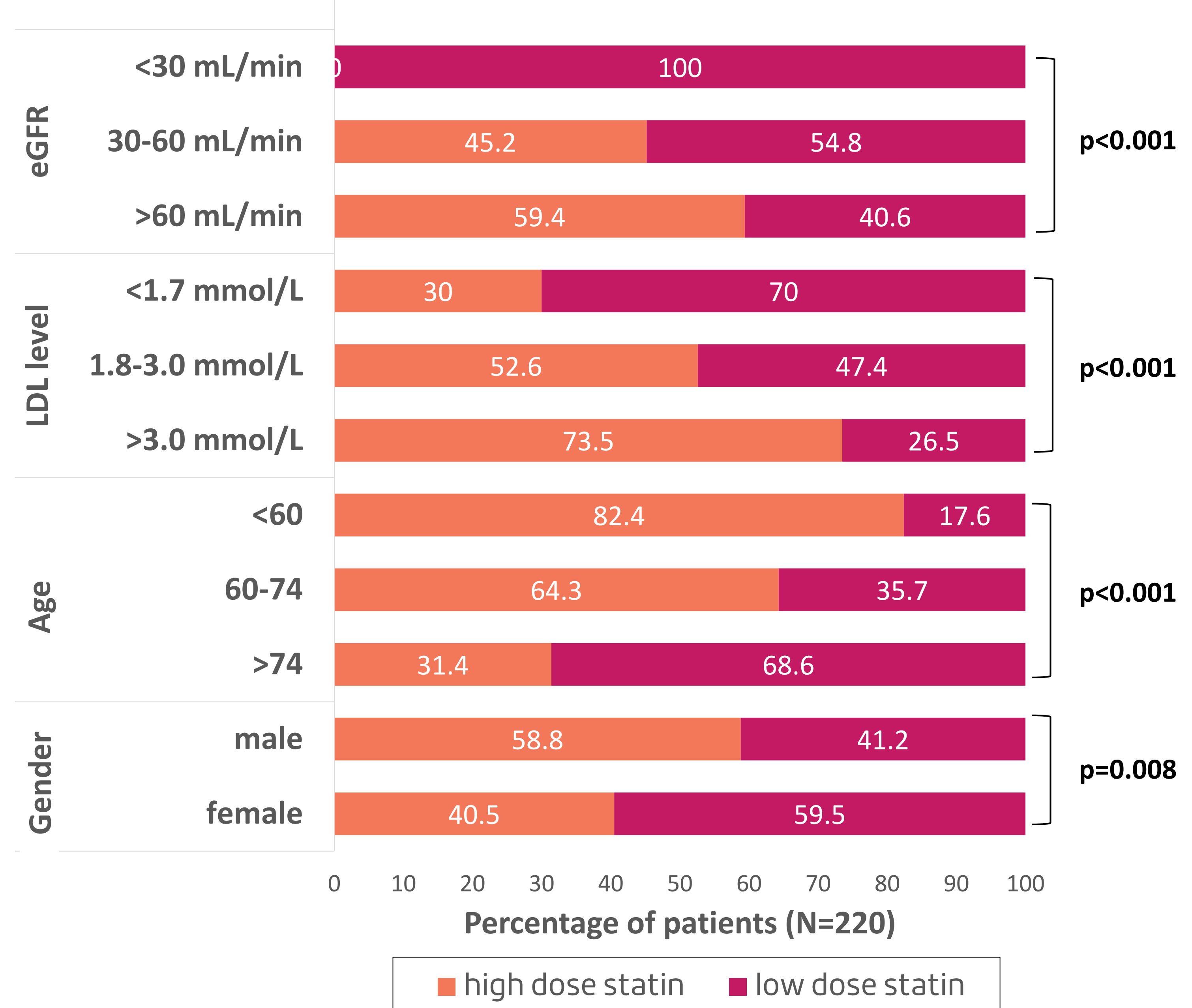
Table 2: Demographic Information

Demographic	Patients (N=250)
Gender (male), % (n)	58.8% (147)
Age (years), median [IQR]	75 [65;84]

RESULTS

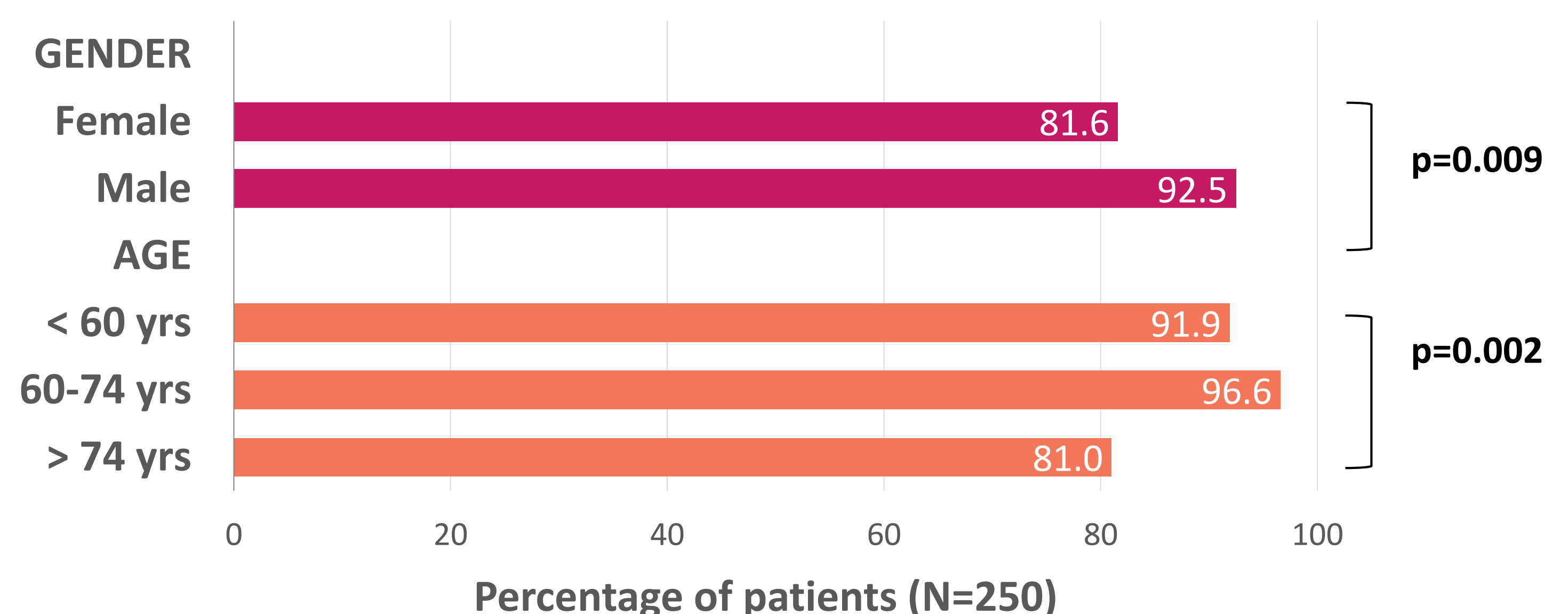
- 88% (220/250) of patients were prescribed a statin on discharge.
- 52.3% (105/220) were prescribed high dose statin and 47.7% (105/220) a low dose statin.
- Statistically significant differences in prescribing patterns were found related to gender, age, LDL levels and renal function (Fig 1).

Figure 1. Patient factors affecting prescribed statin dose



Females and those 75 years and above were less likely to be prescribed a statin on discharge (Fig 2).

Figure 2. Percentage of Patients Prescribed Statin on Discharge



DISCUSSION / CONCLUSION

This study identified variability and found clear prescribing trends in relation to patient factors in statin prescribing post stroke in an Australian setting.

These findings correspond to international studies^{3,5,6} and suggest that further research is required to identify prescriber reasoning and the clinical effect of prescribing patterns on secondary stroke prevention.

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