Prescribing practices of secondary stroke prevention medications at discharge from a large tertiary hospital

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Background

Stroke is the second leading cause of death and major cause of disability worldwide, yet greater than 80% of strokes are preventable[1].

The occurrence of a previous stoke or transient ischaemic attack (TIA) is a substantial risk factor for a subsequent stroke[2].

Secondary stroke prevention includes the commencement and/or continued use of **three** key evidence-based preventative drug therapies[3]:

- Antihypertensive
- Statin
- Antithrombotic

These agents should be used in **all** patients who have experienced an acute stroke or TIA unless contraindications exist.

Despite their effectiveness, **1 in 3** patients with an ischaemic stroke and **1 in 4** patients with a haemorrhagic stroke are discharged without the recommended preventative medication[4].

Aim

1. Determine the current prescribing practices of secondary stroke prevention medications, in patients post stroke or TIA
2. Identify factors associated with the observed prescribing trends

Method

A retrospective observational audit was conducted in a large tertiary hospital.

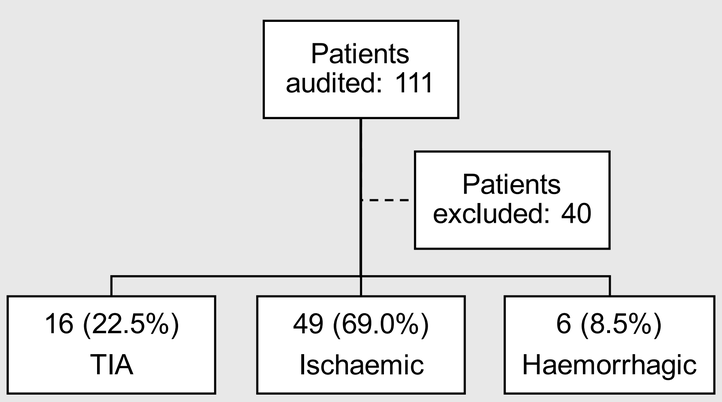
Case notes were retrieved for patients treated under the stroke unit, from August to September 2016.

- **Inclusion:** diagnosed with likely TIA or stroke (Ischaemic or haemorrhagic) on discharge
- **Exclusion:** placed on comfort care measures, died prior to discharge or patient was transferred under another clinical team

Uni-varient analysis assessed for an association between prescribing trends and various independent variables including but not limited to:

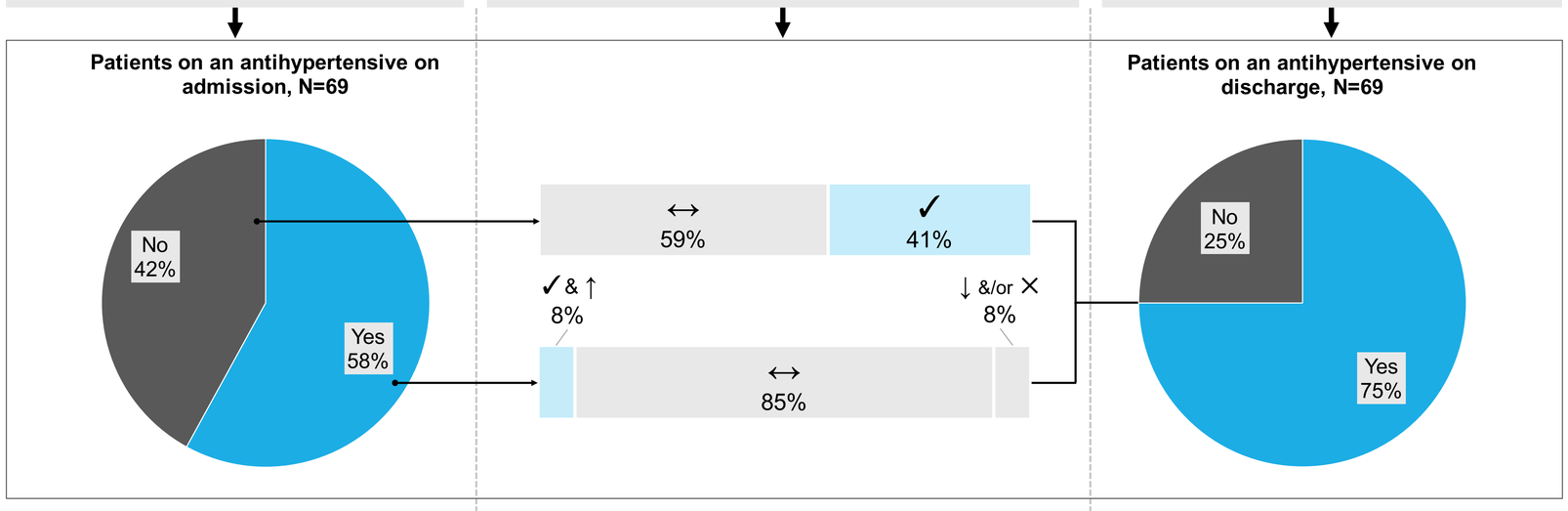
- Age, gender, length of stay, blood pressure, type of stroke and past medical history

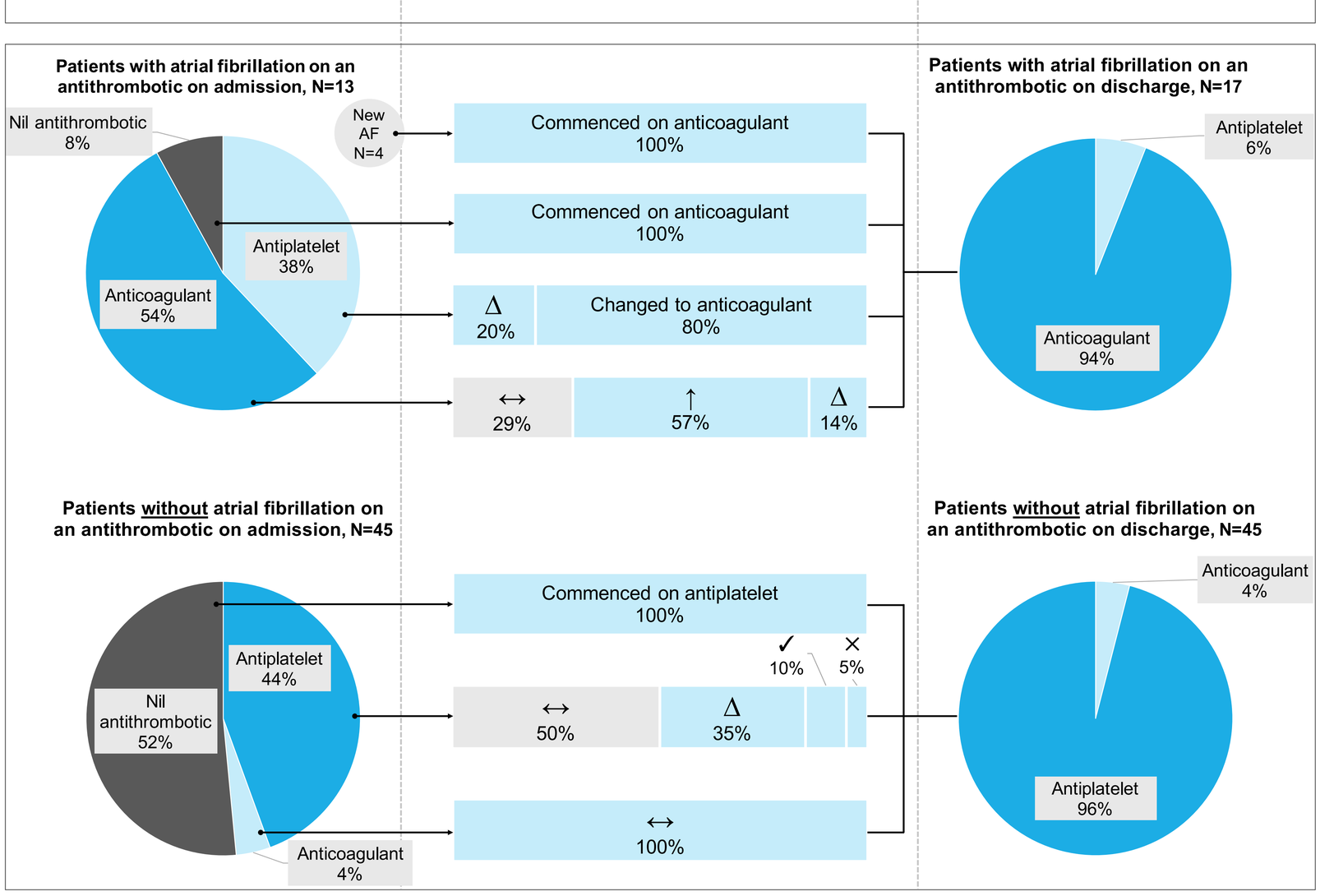
Statistical analysis was performed using the Chi squared test of independence or Fisher's exact test (P-value <0.05 considered statistically significant).



Results

LEGEND					
	↔ Nil change	✓ New medication commenced (either to nil or existing therapy)		✕✕ All agents ceased
	↑ Dose increased	Δ Medication changed to a new agent (ie. aspirin to clopidogrel)		
	↓ Dose decreased	✕ One agent ceased (ie. aspirin plus clopidogrel to clopidogrel alone)		





The following factors were associated with an increased incidence of being prescribed an:

- Antihypertensive on discharge – Age ≥65-80 years (P-value 0.0002); history of hypertension (0.05)
- Statin on discharge – current/past smoker (0.0002); no falls history (0.02); history of hypercholesterolemia (0.002)

Conclusions

1 in 4 eligible patients were **not** discharged on an **antihypertensive** – **1 in 3** eligible patients were **not** discharged on a **statin** – **All** eligible patients **were** discharged on an **antithrombotic** → Only **1 in 2** eligible patients were discharged on all **three** agents

Reference
1. O'Donnell MJ, et al. Global and regional effects of potentially modifiable risk factors associated with acute stroke in 32 countries (INTERSTROKE): a case-control study. The lancet. 2016;388(10046):761-75.
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About the Author
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