# Primary care monitoring of apixaban for atrial fibrillation

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## Introduction

Apixaban is an oral anticoagulant, effective at preventing AF-related stroke but also posing bleeding risks. Dose is selected to minimise bleed risk while maximising therapeutic effect. Changes to renal function, hepatic function, blood count, and body weight affect dose selection and the balance of risk and benefit. The National Institute for Health and Care Excellence (NICE) and the European Society of Cardiology (ESC) make recommendations on monitoring frequency, including more frequent monitoring (at least 6 monthly) for patients over 80 years. This audit was prompted by anecdotal observation that monitoring and dosing guidance was not consistently applied in practice, and that doctors were not familiar with recommendations on apixaban monitoring and dosing.

## Methods

- Retrospective review of patient records at The Grove.
- Cohort: patients aged 80+ on 01/01/2020 prescribed apixaban for AF throughout 2020.
- Patients identified through SystmOne searches.
- Final sample size was 39 patients.
- Audit standards were set against monitoring recommendations from NICE and ESC.
- Patient records assessed by a pharmacist for compliance to monitoring standard between 01/01/2020 and 31/12/2020.
- Data was collected and analysed in Excel.

## Audit Standards

- FBC, LFT, U&E and body weight to be recorded 6 monthly.
- More frequent monitoring if CrCl < 60ml/min, according to NICE/ECS recommendation e.g. 3 monthly if CrCl ~ 30ml/min, 4 monthly if CrCl ~ 40ml/min.

## Key Results

| Body Weight Monitoring Frequency | | | U&E Monitoring Frequency | | |
|---|---|---|---|---|---|
| NICE / ESC | 6 monthly | Annually | NICE / ESC | 6 monthly | Annually |
| 7/39 (18%) | 9/39 (23%) | 28/39 (72%) | 6/39 (15%) | 9/39 (23%) | 35/39 (90%) |
| **FBC Monitoring Frequency** | | | **FBC Monitoring Frequency** | | |
| NICE / ESC | 6 monthly | Annually | NICE / ESC | 6 monthly | Annually |
| 6/39 (15%) | 8/39 (21%) | 30/39 (77%) | 5/39 (13%) | 7/39 (18%) | 32/39 (82%) |

## Discussion and Outcomes

Audit results demonstrated an overall low level of compliance with monitoring recommendations during 2020. In part this may be explained by the COVID-19 pandemic, which has created a substantial backlog of work across health and social care.

Results were presented to practice partners and a plan agreed to implement a new recall system for all patients prescribed direct-acting oral anticoagulants. Patients overdue monitoring (identified via SystmOne search) were prioritised. All patients prescribed a direct-acting oral anticoagulant now have a recall for annual monitoring. Monitoring will be carried out more frequently where clinically appropriate. Patients aged 75+, weighing under 65kg, or with creatinine clearance below 60ml/min have an additional recall for weight and U&E monitoring every 6 months.

Following monitoring, a SystmOne search generates a list of patients for pharmacist review. Pharmacist oversight of the recall system and review of monitoring results is improving compliance to standards and showing a positive impact on patient care. It has already led to patient identification for dose optimisation.

Re-audit is planned for late 2021, to quantify the impact of the recall and review system.

## References

1. European Society of Cardiology, 2018. The 2018 European Heart Rhythm Association Practical Guide on the use of non-vitamin K antagonist oral anticoagulants in patients with atrial fibrillation. [Online] Available at: https://academic.oup.com/eurheartj/article/39/16/1330/4942493
2. National Institute for Health and Care Excellence, 2021. Management of Apixaban. [Online] Available at: https://cks.nice.org.uk/topics/anticoagulation-oral/management/apixaban/#monitoring