Improving direct-oral anticoagulant (DOAC) monitoring in a GP surgery during the COVID-19 pandemic

Emily Paige Reeves (Supervisor: Caroline Hooper)

County Durham and Darlington NHS Foundation Trust

Background

Although DOACs don't require regular INR checks as with warfarin, monitoring still needs to be carried out to ensure dosing is appropriate and asses for bleeding events and side effects.

DOAC monitoring should be carried out within time frames determined by certain patient factors, as shown in the table below. These guidelines are taken from the NECS monitoring recommendations used within the GP surgery, adapted from the drugs' SPCs.

Baseline	U+Es, LFTs, FBC, coagulation screen and weight
Routine	**Annual weight, LFTs and FBC for all patients** **<75y/o and CrCl > 60mL/min:** 12 monthly U+Es **≥ 75/yo and/or CrCl 30-60mL/min:** 6 monthly U+Es **CrCl 15-30mL:** 3 monthly U+Es

Due to COVID-19, DOAC monitoring was put on hold where possible to prevent unnecessary attendance to the GP surgery. Monitoring was carried out in an opportunistic manner rather than systematically.

Objective

Implement a strategy to ensure regular DOAC monitoring. This was defined as being no longer than two weeks overdue

Methods

The method undertaken followed the flow chart below. The initial search was required to identify the magnitude of the problem and determine how to proceed.

Immediate solutions were then made for overdue patients before making interventions to improve the process in the future.

Initial Search

- Three clinical searches were produced within SystmOne to identify patients who were due 3, 6 and 12-monthly monitoring
- These identified patients who received a DOAC within the last year without documentation of creatinine clearance within the time-frames.

Solution

- Up-to-date blood tests and weight were requested
- Results were examined in regards to clinical appropriateness of the DOAC and dose

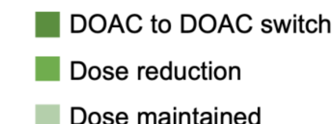
Interventions

- Recalls were set to ensure ongoing monitoring
- An automatic report of search results was set to alert the practice pharmacist via a two-weekly task
- A 30-minute slot was created within the appointment ledger for said pharmacist to arrange and examine bloods on a two-weekly basis

Results

Of 155 patients identified by the clinical searches as being prescribed a DOAC within the surgery, 62 (40%) were overdue monitoring. The chart to the right shows how overdue these patients were as a proportion of all overdue patients.

The chart below shows the outcome of monitoring for all patients. All dose adjustments were due to a decline in renal function. For the patient who required DOAC switching, the recommendation was made by their renal consultant. This recommendation was due to a wider pool of safety data being available for the use of apixaban in severe renal impairment as opposed to rivaroxaban.



Since putting in place the automatic search and time block for monitoring there have been no patients more than 2 weeks overdue, therefore meeting the objective.

Conclusion

- Scheduled time within the workload appears to be the most effective intervention in improving the monitoring service
- Further re-auditing will be needed to ensure the system remains efficient and meets the objective.
- Further improvements could look into developing a similar process for other drugs

Limitations:

The audit was carried out in a time when GP surgeries are under more pressure and it may be that this strategy will no longer be needed in the future

References

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