

Why do we use warfarin today? A retrospective study from a large comprehensive anticoagulation centre

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INTRODUCTION

- Direct oral anticoagulants (DOACs) are now preferred over warfarin for patients requiring anticoagulation for non-valvular AF and VTE treatment
- Despite a decline in the use of warfarin it is still recommended for almost a fifth of all new patients starting anticoagulation at the Staffordshire Thrombosis & Anticoagulation Centre (STAC)
- Treatment plan for all new patients referred to STAC are reviewed and approved by a thrombosis consultant
- This retrospective study was conducted to determine the clinical reasons for patients being recommended warfarin therapy in the era of widespread DOAC use

AIM

- To determine the clinical reason for starting new patients on warfarin anticoagulation in preference over DOAC, between Jan 2017-May 2019
- To determine the longitudinal trend of DOAC and warfarin use over the last 3 years.

METHOD

- STAC based at the Royal Stoke University Hospital (RSUH), manages anticoagulation of over 7000 patients. Approximately 1000 new patients are referred to this service annually to start anticoagulation.
- All new patients referred to STAC have their treatment plan approved by a thrombosis consultant. This plan incorporates the indication, duration, comorbidities, renal, liver function, body weight, bleeding risk, interacting medication and all clinical parameters and patient preference. It also includes any logistic and social issues which may impact warfarin monitoring or DOAC use.
- We performed a retrospective review of choice of anticoagulant for all new patients started on oral anticoagulation from Jan 2017 until May 2019. We reviewed treatment plans for 2749 patients who started anticoagulation over this 29 month period.
- Subgroup analysis was carried out on patients initiated on Warfarin

REFERENCES

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RESULTS

Table 1: New patients starting on anticoagulation; Indications and treatment choice

	All new patients	VTE	NVAF	Mechanical Heart Valve	Warfarin	DOACs	Others/Missing data
2017 Jan-Dec	956	426	466	64	541 (57%)	359 (38%)	56 (6%)
2018 Jan-Dec	1380	616	680	84	442 (32%)	869 (63%)	69 (5%)
2019 Jan-May	572	259	285	28	149 (26%)	389 (68%)	34 (6%)

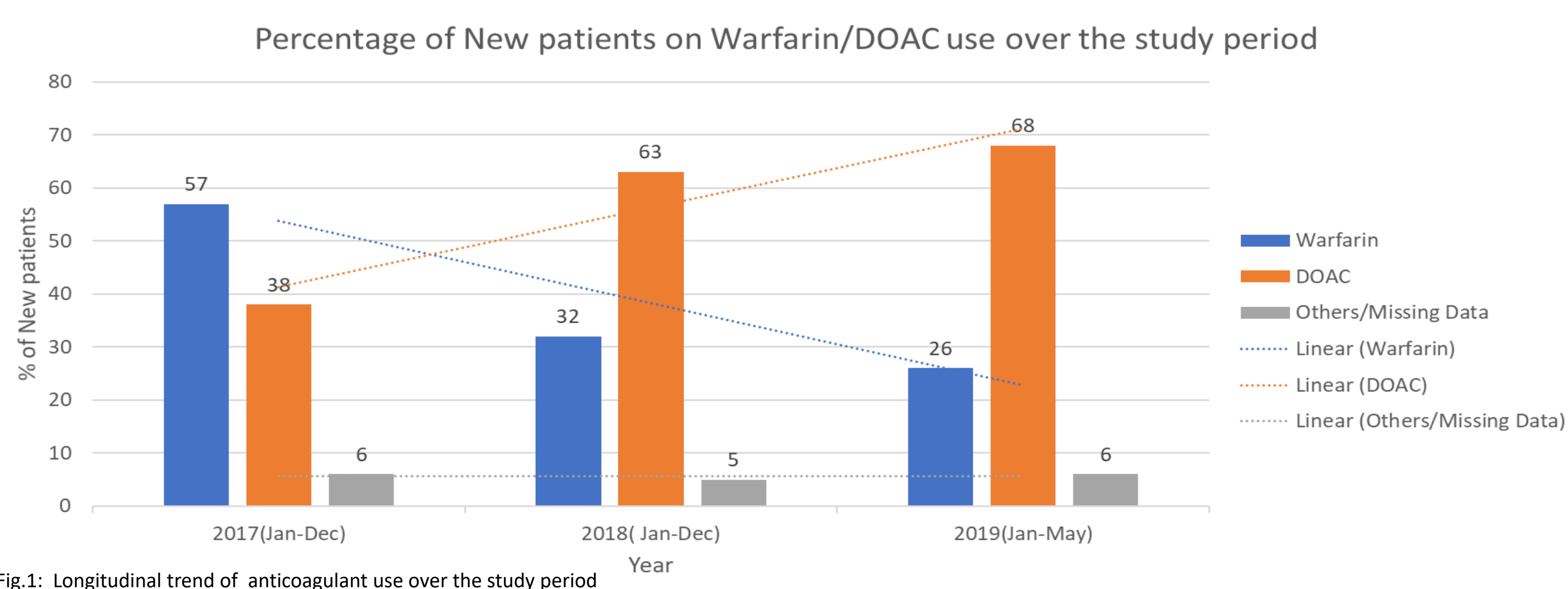


Fig.1: Longitudinal trend of anticoagulant use over the study period

Table 2.: Clinical reasons for starting warfarin for new patients starting anticoagulation

Year n= pt starting warfarin	Severe renal impairment	DOAC intolerance	Drug interaction with DOAC	Obesity	Physician /Patient Preference	Patient Preference	Rec VTE on anticoagulation	Mech Heart Valve	Unusual site thrombosis /APLS
Jan- Dec, 2017 n=541	41 (7.6%)	4 (0.7%)	6 (1.1%)	4 (0.7%)	371 (68.6%)	13 (2.4%)	18 (3.3%)	64 (11.8%)	20 (3.7%)
Jan-Dec, 2018 n=442	55 (12.4%)	15 (3.4%)	16 (3.6%)	0	216 (48.9%)	10 (2.3%)	24 (5.4%)	84 (19%)	22 (5.0%)
Jan-May, 2019 n=149	12 (8.0%)	6 (4.0%)	2	2	78 (52.3%)	2	12 (8.0%)	28 (18.8%)	7 (4.7%)

CONCLUSIONS

- Warfarin use has declined by over half during the study period, 2017-19. The declining trend is seen across all indications where DOAC's are licensed.
- For all new patients starting anticoagulation, use of DOAC increased from 38% to 68% and warfarin decreased from 57% to 26% over the study period.
- In most cases patients were started warfarin due to physician/patient preference.
- There was a strong clinical indication to prefer warfarin for a small selection of patients. These patients will continue to require some service for warfarin monitoring and dosing.

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