Integrating Digital and In-person Counselling to Improve Patient's Knowledge About Warfarin – A Cross Sectional Study

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Background

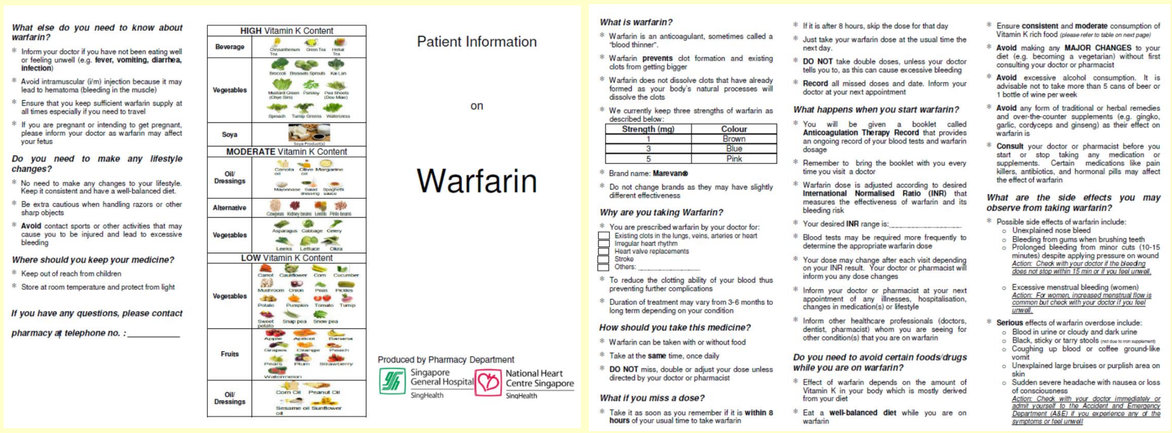
Warfarin is an anticoagulation, which is commonly used for venous thrombosis, stroke prophylaxis and prevention of mechanical heart valve thrombosis. It has a narrow therapeutic index which can be affected by lifestyle changes, diet, medications and others.[1] Literature has shown that good education to patients are important to improve anticoagulation control and reduce risk of adverse drug reaction associated with warfarin[2,3].

In Singapore General Hospital (SGH), Warfarin is considered as a High Alert Medication. Physicians will order Warfarin Counselling to be performed by pharmacists for patients who are newly initiated on warfarin. Pharmacist will then conduct verbal counselling at patient's bedside with a Patient Information Leaflet as an aid (Picture 1).

Aim

To improve patients' knowledge on warfarin, as a surrogate marker for patients' outcome

- Secondary outcome: Man hours saving for pharmacists



Picture 1: Warfarin Patient Information Leaflet given to patients as point of counselling

Methodology

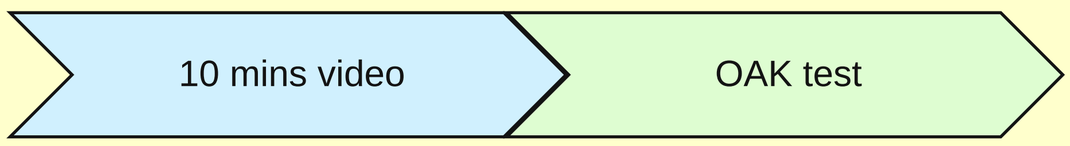
To assess patients' understanding, Oral Anticoagulation Knowledge (OAK) test is administered after the counselling was done. OAK test is a validated and reliable knowledge assessment instrument which is associated with positive treatment outcome.[4] Duration of counselling was also captured.

ICHOM measures (for Atrial Fibrillation, Stroke, VTE) were not applicable in this study.

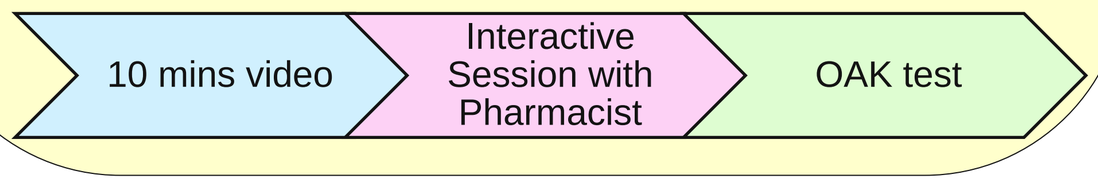
Interventions

A standarised video can reduce error, minimizing variation and increase quality and efficiency. Hence a 10 minute education video was developed.

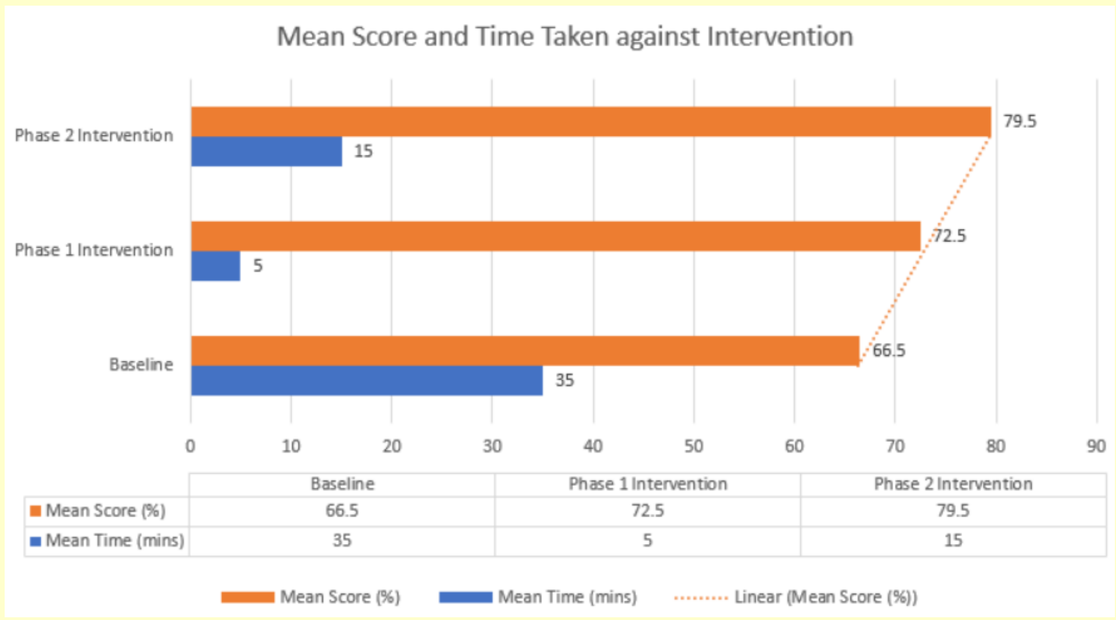
Phase 1: 10 mins video was showed to patient, followed by OAK test.



Phase 2: 10 minute video was viewed by patient, followed by an interactive session with a pharmacist to clarify any doubts or ask questions. OAK was then administered



Results



Phase 1 intervention showed a 85% reduction in man-hours savings with a 9% improvement of OAK score from baseline.

Phase 2 intervention only reduced 57% in man-hours savings from baseline but increased OAK score by 19.5% This translates to 243 man hours saved per annum (~US$7,476) while improving OAK score.

Conclusion

While it is crucial to consider efficacy, hospital should be mindful of its impact on PROM. We strive to ensure our warfarin counselling video is non-inferior to our current standard of care. We also endeavor to improve PROM through integrating digital and in-person counselling. The limitation of this study is a single-centred with a small sample size.

References

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3) N. Kagansky, H. Knobler *et. al.* (2004) Safety of anticoagulation therapy in well-informed older patients. *Arch Intern Med* 164(18): p2044-50.
4) M.M. Zeolla *et. al.* (2006) Development and validation of an instrument to determine patient knowledge: the Oral Anticoagulation Knowledge test. *The Annals of Pharmacotherapy*; 40: p633-8.