



**Introduction**

Under treating with oral anticoagulation (OAC) in patients with atrial fibrillation (AF) was found in various health care settings nationwide despite stroke risk.

**Literature Background**

1. Lack of awareness of stroke risk in AF
2. Time constraint for patient education in PCP clinic (high patient volume and multiple problems to address within allotted time)
3. Concern with potential bleeding (physician's and patients' fear)
4. Knowledge gap on availability, efficacy and safety of direct oral anticoagulants (DOACs) {compared to Warfarin}
5. Uncertainty of availability, usage, efficacy and safety of reversal agents
6. Lack of compliance with OAC therapy
7. Difficulty in maintaining INR or lack of compliance with INR monitoring
8. Lack of knowledge on which extent of AF burden is required to be treated with OAC to prevent stroke
9. Concomitant use of dual antiplatelet therapy (DAPT)

**Problem Statement**

16% of patients with CHA<sub>2</sub>DS<sub>2</sub>-VASC score ≥2 were not on appropriate OAC therapy in resident clinic in Orlando VA Medical Center.

**Definitions**

Appropriate: OAC use for non-valvular AF in patients with CHA<sub>2</sub>DS<sub>2</sub>-VASC score of ≥2

Inappropriate: No OAC use for non-valvular AF in patients with CHA<sub>2</sub>DS<sub>2</sub>-VASC score of ≥2 in the absence of documented absolute or relative contraindication to OAC or absence of OAC due to refusal by patients without adequate education by provider.

**Goal Statement**

Reduction in rate of inappropriate OAC therapy by 50% by the end of academic year (by 30<sup>th</sup> June, 2019).

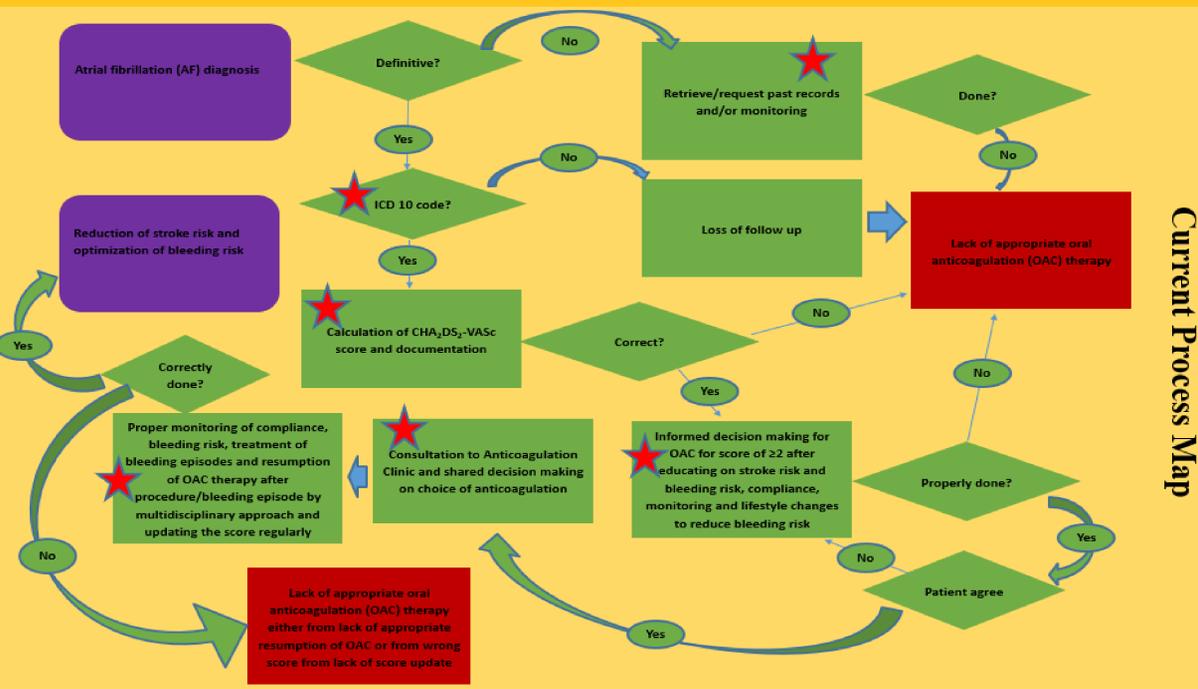
**Method**

Extensive chart review was performed in 240 AF patients belonging to resident clinics throughout 2017 to identify barriers to OAC therapy.

**Barriers Identified**



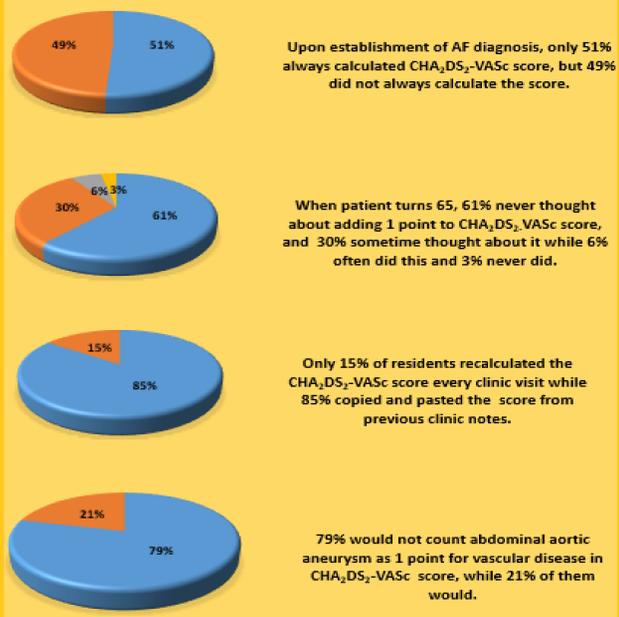
**Current Process Map**



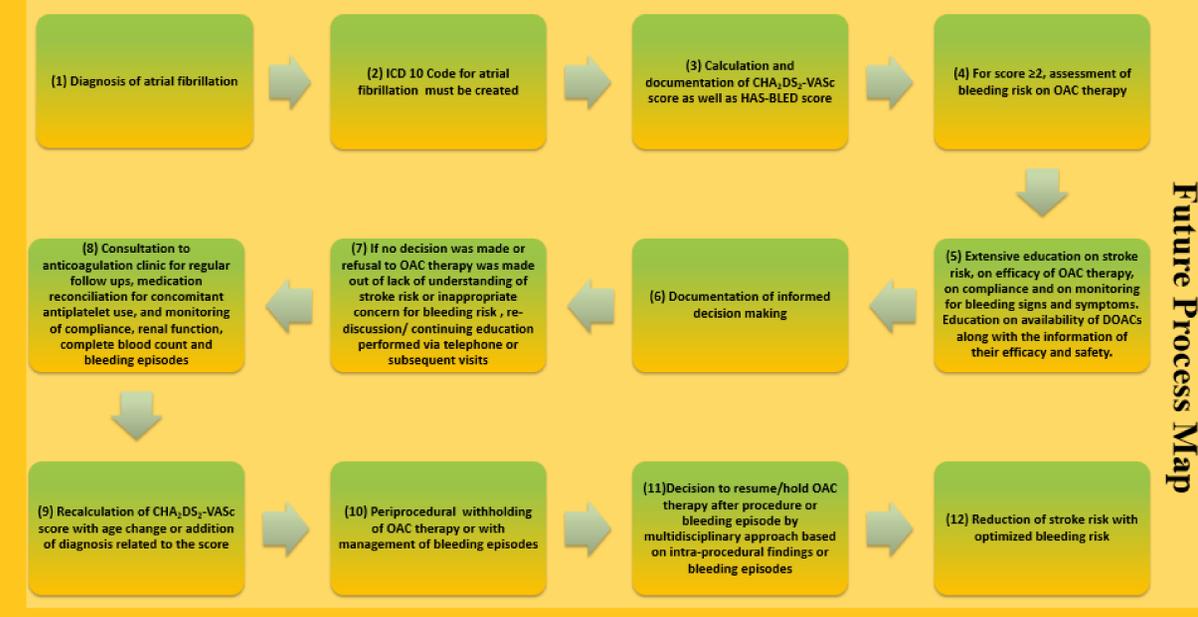
- 18% refused OAC without further discussion or stroke risk education from primary care physicians (PCP)
- 14% lacked explanation for not being on OAC therapy
- 13% verbally reported history of AF diagnosed outside of VA but lacked record and further monitoring
- 13% verbally reported OAC discontinuation by outside cardiologist without documented reason
- 13% of patients had missed diagnosis of AF
- 10% refused OAC due to minor bleeds without receiving risk-stratification reevaluation or stroke-awareness talk by PCP
- 7% had post operative AF but lacked justification or further screening
- 4% has not yet started on OAC without documented reason for delay
- 2% was not on OAC due to wrong CHA<sub>2</sub>DS<sub>2</sub>-VASC score calculation
- 2% lacked resumption of OAC after an elective procedure.
- 2% was stopped on OAC due to unspecified gastrointestinal bleed
- In 2%, PCP decided not to start on OAC without further effort neither on evaluation to weigh risk and benefit nor on discussion with patients

**Resident Survey**

**Why are of CHA<sub>2</sub>DS<sub>2</sub>-VASC score calculated wrong?**



**Future Process Map**



**Progress After Education**

Pre Education Survey	Post Education Survey
72% of residents would not hold off from initiating OAC therapy when the HAS-BLED score is high (>3) but 28% said they would.	10% would still hold off on OAC therapy for patients with high HAS-BLED score, but 90% would not.
52% of residents were mostly comfortable initiating OAC therapy, while 24% were mostly uncomfortable. 25% were always comfortable, 3% were never comfortable.	95% of residents became more comfortable than they were before in managing OAC therapy.
76% of residents were very familiar with relative and absolute contraindications to OAC therapy, while 21% were only somewhat familiar and 3% were not familiar at all.	48% of residents became strongly familiar with absolute and relative contraindications of OAC therapy, whereas 52% said they are somewhat familiar.

**Changes Aimed and Action Plans**

1. Increase in primary care physician (PCP) engagement in informing and educating patients on stroke risk, bleeding risk and rationale of OAC therapy along with careful monitoring for bleeding as well as interventions to reduce bleeding risk by education of residents in Orlando VA Medical Center.
2. Promote accurate calculation of CHA<sub>2</sub>DS<sub>2</sub>-VASC score by educating the residents with case based exercises and problem solving through clinical scenarios.
3. Increase in interval recalculation of CHA<sub>2</sub>DS<sub>2</sub>-VASC score by educating residents as well as by planning to implement clinical reminder to recalculate the score each visit or at least once a year.
4. Improve rate of utilization of anticoagulation clinic for monitoring of patients on OAC by pharmacy in addition to primary care visits.
5. Increase in appropriate resumption of OAC after procedure through clinical reminder or recurring pop-up screen notification starting at 5 days of OAC discontinuation.
6. Promoting comprehensive care through resident "Active Panel Management" approach. Residents will be given a dedicated half day session during which they will be provided with their list of patients with AF. Residents can evaluate appropriateness of OAC therapy in their AF patients and will utilize the PACT team to improve the rate of appropriate OAC therapy.

**References**

1. Buckingham, T.A. and R. Hatala, Anticoagulants for atrial fibrillation: why is the treatment rate so low? Clin Cardiol, 2002, 25(10): p. 447-54.
2. Sen, S. and K.W. Dahlberg, Physician's fear of anticoagulant therapy in nonvalvular atrial fibrillation. Am J Med Sci, 2014, 348(6): p. 513-21.
3. Rao, M.P., et al., A clustered randomized trial to IMProve treatment with AntiCoagulanTs in patients with Atrial Fibrillation (IMPACT-AF): design and rationale. Am Heart J, 2016, 176: p. 107-13.
4. Jones, N.R., E.D.R. Hobbs, and C.J. Taylor, Underuse of anticoagulation therapy for atrial fibrillation: Are we falling our patients? Can Fam Physician, 2017, 63(12): p. 943-944.
5. Mas Dalmau, G., et al., Patients' and physicians' perceptions and attitudes about oral anticoagulation and atrial fibrillation: a qualitative systematic review. BMC Fam Pract, 2017, 18(1): p. 3.