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Stroke prophylaxis action after US emergency department of atrial fibrillation patients

Erin Kinney^a; E. Margaret Warton, MPH^b; Candice Kutz, PA^a; Dustin W Ballard, MD, MBE^{b,c}; Mary E Reed, DrPH^b; David R Vinson, MD^{b,c}; Bory Kea, MD, MCR^a

a. Department of Emergency Medicine, Oregon Health and Science University, Portland, OR

b. Kaiser Permanente Division of Research, Oakland, CA

c. The Permanente Medical Group, Oakland, CA

Background

Oral anticoagulation (OAC) reduces stroke risk in patients with atrial fibrillation (AF). The incidence of US emergency department (ED) OAC initiation is poorly understood, as are the appropriate actions following discharge. We examined stroke prophylaxis actions on, and delivery system.

Methods

This retrospective cohort study included ED encounters among adults with a diagnosis of AF, high stroke risk (CHA2DS2-VASc ≥ 2), and no recent (< 90 d) OAC from 21 community EDs between 2010-2017. We compared OAC action rates between groups with t- tests, and chi-square tests, and used ANOVA and Cramer's V to estimate effect size. We used Poisson GEE models to estimate rates of OAC action, with confidence intervals (CIs) adjusted for repeated measures by clinician/facility/patient cluster and an exchangeable correlation structure.

Results

Among 9,603 eligible ED discharges, mean age was 73.1y (SD 11.4), 38% were female, and mean CHA2DS2-VASc was 3.5 (SD 1.5). From 2010 to 2017, OAC action increased significantly from 19.6% to 37.9%. In the adjusted model, encounters with females aged 75-84y were less likely to result in OAC action than encounters with males aged < 64 y (estimate of mean: 23.9%, 95% CI 14.1-33.8%; 18.7%, 95% CI 13.4-23.0%, respectively). OAC action was associated with moderate stroke risk, with encounters with CHA2DS2-VASc 4 to 5 receiving OACs at rates 4.6% above (95% CI 2.4-6.9%) those with CHA2DS2-VASc 2-4.

Conclusion

While OAC action increased over the 7-year study a majority of eligible patients were not receiving appropriate OAC action. Additionally, female gender and those > 84y were less likely to receive appropriate action compared to men and those < 65y. There are opportunities to address prescribing disparities as we seek to improve stroke prophylaxis in AF patients discharged from the ED.