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Title	**Oral anticoagulant-associated adverse event rates are high in the post-hospital discharge period**
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Reviewer 1	Edward Etchells
Institution	Medicine, Sunnybrook and Women's, Toronto, Ont.
Reviewer comments/author response in bold	Thank you for the opportunity to review your manuscript. This is a retrospective cohort study of patients age 66 or older discharged from Ontario hospitals between 2010-2015 who filled a prescription for an oral anticoagulant. Patients discharged after major bleeding were excluded. The outcomes of interest are major bleeding and thromboembolic events requiring hospital admission or an ED visit. The main results are 25.8 major bleeds per 100 person years of follow up and 19.3 thromboembolic events per 100 person years of follow up in the first month after index discharge. STRENGTHS The strengths of the paper are the large sample size and the clear succinct manuscript. SUGGESTED IMPROVEMENTS The exclusion of patients with an index admission for major bleeding is an important methodologic feature which could be highlighted in the abstract. Please indicate whether the strata (incident/prevalent switcher and prevalent non switcher) were established a priori. It would be helpful to put the results into context for the nonexpert reader. What would be the expected rate of bleeding and thromboembolism in 1 month after a new start of an OAC for atrial fibrillation, acute VTE, or after major orthopedic surgery? Perhaps citing results from clinical trials of carefully selected patients getting optimal treatment and monitoring, or from the original risk prediction studies, would help put the results into context. Based on table 2, I entered the CHADS-2VASC (median risk score 4) and HASB(L)ED (median risk score 2) for the typical patient in this study. The risk scores indicate that with POAC therapy there would be an expected thromboembolism rate of 1.6-2.4% (i.e. about 80% lower than the current study) and a major bleeding rate of 2.8-4.1% per year (i.e. about 80% lower than observed in the current study). **Author response: Dr. Etchells also makes this excellent point about providing more context for our results. We have added this to the Interpretation – Key Results section on page 7.** Another limitation is that little light is shed on the potential causes of the observed higher than expected rates of bleeding and thromboembolism. The study was not designed uncover causes, but the authors could speculate in the discussion. Are the patients bleeding because their clinical bleeding risk has changed, they are on

	the wrong dose of OAC, they are on new drugs that increase the risk of bleeding, or they did not get their INR checked within a week of discharge? If there is literature on this topic it should be cited. If not, then future studies should be suggested. It would be premature to undertake trials of interventions without a deeper understanding of the contributing causes. Table 2 suggests that NSAID use (15.7%) (!!) is one potential contributor to bleeding.
Reviewer 2	Peter Zed
Institution	Faculty of Pharmaceutical Sciences, University of British Columbia, Vancouver BC
Reviewer comments	Thank you for the opportunity to review this paper. This is a very well performed analysis using quality methods by a very experienced author group. I found the paper easy to follow and the authors described the methods and thier results clearly. I have no major concerns for this paper and feel it would add to the literature and bring similar past work in this area to the current state of the issue on a commonly encountered issues of ADEs in patients receiving OAC treatment.