

EP News: Quality Improvement and Outcomes

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Clinical decision support and shared decision making

In this issue of **HeartRhythm**, we present recent publications relevant to quality of care and outcomes, particularly in relation to clinical decision support and shared decision making.

Alert-based computerized decision support for high-risk hospitalized patients with atrial fibrillation not prescribed anticoagulation: a randomized, controlled trial (AF-ALERT)

Piazza et al (Eur Heart J Jun 29, 2019; doi: 10.1093/eurheartj/ehz385, PMID 31228189) conducted a single-center randomized study to evaluate the efficacy of an electronic medical record–based alert system in anticoagulation prescription practices for hospitalized patients with atrial fibrillation. A total of 458 patients with a CHA₂DS₂-VASc score of ≥ 1 not receiving anticoagulation at the time of admission were randomized to either the intervention or the control group. The admitting providers received a best practice alert for the 248 patients in the intervention group, notifying them of the patient's elevated risk of stroke with an option to either select the anticoagulation order set or decline anticoagulation while providing rationale for that decision. The anticoagulation order set was selected in 35.4% of alerts; the most common reason for not anticoagulating was bleeding risk (50%). The median CHA₂DS₂-VASc score was 4 in both groups, with only 9 patients (4 in the intervention group and 5 in the control group) having a CHA₂DS₂-VASc score of 1 for female sex alone. The primary outcome of new anticoagulation prescription orders was higher in the intervention group than in the control group during hospitalization (25.8% vs 9.5%; $P < .0001$), at the time of discharge (23.8% vs 12.9%; $P = .003$), and at 90 days (27.8% vs 17.1%; $P = .007$). The secondary outcome of composite major adverse cardiovascular events

(cerebrovascular accident, systemic embolism, myocardial infarction [MI], and all-cause mortality) at 90 days was 55% lower in the intervention group than in the control group (11.3% vs 21.9%; $P = .002$), with an 87% decrease in the frequency of MI (1.2% vs 8.6%; $P < .001$) and an 88% lower incidence of cerebrovascular accident or systemic embolic event (0% vs 2.4%; $P = .02$) in the intervention group. *The authors concluded that the alert-based computerized decision support intervention improved anticoagulation prescription rates and decreased major adverse cardiovascular events in hospitalized patients with atrial fibrillation who are at an elevated stroke risk.*

Decision aids that facilitate elements of shared decision making in chronic illnesses: a systematic review

Wieringa et al (Syst Rev 2019;8:121, PMID 31109357) presented the findings of a systematic review of shared decision making (SDM) tools. Specifically, they evaluated whether 20 decision aids in cardiovascular disease, respiratory disease, or diabetes used the formal 6 criteria of high-quality decision aids identified by the International Patient Decision Aid Standards (IPDAS) and whether concordance with these criteria was associated with SDM outcomes. These 6 criteria include situation diagnosis, choice awareness, option clarification, discussion of harms and benefits, deliberation of patient preferences, and making the decision. The authors found that all (20 of 20 [100%]) the tools clarified options and most (18 of 20 [90%]) discussed harms and benefits. Only 4 (20%) met all 6 criteria, and the investigators found no association between concordance with IPDAS criteria and SDM outcomes. *The authors conclude that SDM tools are primarily designed to present options and their harms and benefits and that they were not able to identify an association between concordance with IPDAS criteria and SDM outcomes.*

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