Table B.47: Anticoagulants, Transitions Between Hospital or Emergency Department and Home —Single Studies

Note: Full references are located in the [Section 7.3 reference list](#Section7point3refs).

| Author, Year | Description  of Patient Safety Practice | Study Design; Sample Size; Patient Population | Setting | Outcomes: Benefits | Risk of Bias (High, Moderate, Low) |
| --- | --- | --- | --- | --- | --- |
| Barbic et al., 201817 | Atrial fibrillation and flutter (AFF) pathway developed at the study site by emergency physicians, cardiologists, and pharmacists. The pathway consists of a care map, decision aids, medication orders, management suggestions, and electronic consultation or referral documents, all embedded into the computerized physician order entry and integrated electronic medical record program. | Pre-post;  301 (129 pre-pathway and 172 post-pathway);  patients presenting in the emergency department (ED) with final diagnosis of AFF | Two EDs—one academic inner-city medical center, one community hospital; Vancouver, BC | The rates of new anticoagulation on discharge from the ED for patients who were incorrectly not on anticoagulation at ED arrival were 51/105 (48.6%, 95% confidence interval [CI] 42.1% to 55.1%) in the pre group and 97/138 (70.2%, 95% CI, 62.1% to 78.3%) in the post group, for an absolute difference of 20.6% (95% CI, 15.1% to 26.3%).  The 30-day ED revisit rate for congestive heart failure decreased from 13.2% (pre) to 2.3% (post) (absolute difference of 10.9%; p<0.01 [95% CI,  -8.1% to -13.7%]).  Median ED length of stay decreased from 262 to 218 minutes (44 minutes [p<0.03; 36.2–51.8]).  There were no significant differences between pre and post groups on the following outcomes: 30-day ED revisit for stroke, major bleeding, or AFF; death within 30 days; outpatient clinic referral. | Moderate-to-high: small sample size, no comparison group |
| Castelli et al., 201714 | Rivaroxaban Patient Assistance Kit (R-PAK) | Randomized controlled trial—patients randomized to receive either education by a pharmacist plus the R-PAK or education by pharmacist alone;  25 patients;  patients newly diagnosed with acute venous thromboembolism(s) (VTE) and treated with rivaroxaban | Hospital discharge from one community teaching hospital | No difference in the baseline assessment of health literacy status was noted (p=1.00). Proper transition to daily administration on Day 22 was no different between the groups (p=0.891). Adherence was reported in 99.8% of R-PAK patients and 97.65% of control patients (p=0.074). There was no significant difference between the two groups on any of the following outcomes: percentage of patients who stopped rivaroxaban for any reason, patient understanding of correct timing and dose of medication, overall patient satisfaction, self-reported side effects, recurrent VTE, death. | High: very small sample; single site |
| Chu and Limberg, 201715 | Commercially available medication dose pack with counseling by ED pharmacist | Retrospective cohort;  75 patients (41 received intervention, 34 received usual care);  patients discharged from ED on rivaroxaban with a discharge diagnosis of VTE | Discharge from ED in one urban community hospital | No statistically significant differences were found between the two groups on the following outcomes: medication adherence beyond the first month after discharge, 90-day readmission for recurrent VTE due to nonadherence or treatment failure, 90-day readmission due to bleeding or adverse event. | High: very small sample; single site |
| DiRenzo et al., 201816 | Pharmacist management of rivaroxaban, as compared with management by primary care provider | Prospective cohort;  pharmacist-managed patients (n=17) were seen for low-risk VTE in the ED over a 5-month period in 2015;  Comparison group (n=17) was selected from the outpatient pharmacy records and matched to patients in intervention group on month and year of rivaroxban initiation, age, and sex | One academic, safety-net medical center in a metropolitan city | There were no significant differences between groups 6 months after diagnosis in major bleeding, recurrent thromboembolism, fatal event due to either bleeding or thromboembolism, number of hospitalizations after diagnosis, adverse events, or Morisky medication adherence score.  Only one complication (recurrent thromboembolism) occurred in each group. Only eight patients in the pharmacist group were assessed for medication adherence, compared with no patients in the comparison group. | Moderate-to-high: small sample size; no random assignment; one health system—not generalizable |
| Stafford et al., 201118 | Home-based post-discharge warfarin management service adapted from the Australian Home Medicines Review program—includes home visits for patients with INR monitoring and a summary of the patient’s inpatient warfarin therapy sent to the patient’s general practitioner, from which the general practitioner may make adjustments | Prospective cohort;  268 patients (129 intervention, 139 controls);  adults being discharged from the hospital with an indication for ongoing warfarin therapy for at least 3 months | Eight hospitals across five metropolitan, rural, and remote regions of Australia | The intervention was associated with significantly decreased major and minor hemorrhagic events at 90-day followup post discharge (5.3% vs. 14.7%; p=0.03) and at 8-day followup (0.9% vs. 7.2%; p=0.01) as compared with usual care. The rate of combined hemorrhagic and thrombotic events at Day 90 also decreased (6.4% vs. 19.0%; p=0.008) and persistence with warfarin therapy improved (95.4% vs. 83.6%; p=0.004).  No significant differences in readmission and death rates or time to therapeutic range or international normalized ratio control were demonstrated. | Low-to-moderate: moderately small sample size |