Venous thromboembolism risk, physical activity, and outcomes in a UK Virtual Ward: Preliminary findings.

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Introduction

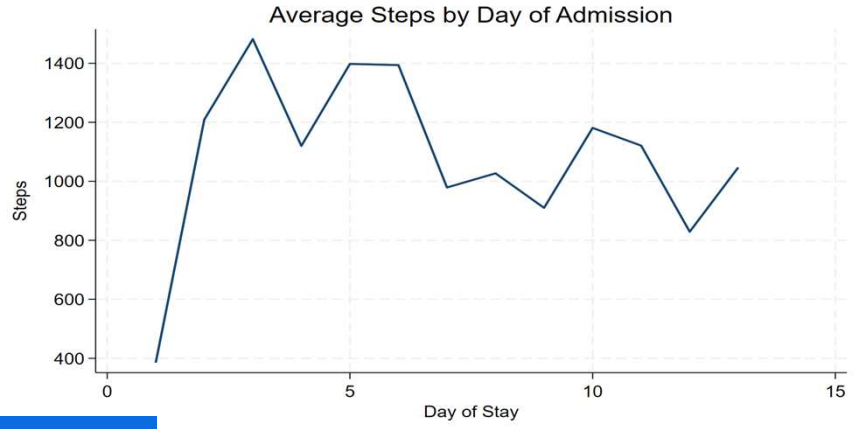
Approximately 70% of venous thromboembolisms (VTEs) are considered preventable in hospitalized patients. A major risk factor for VTE is immobility; inpatients take fewer than 900 steps/day increasing their risk. Increased mobility is often cited as a benefit of virtual ward (VW) programs, however, there is limited evidence on physical activity in this setting. We aimed to quantify movement in these VW patients, alongside VTE-related risk scores and outcomes.

Methods

Kingston and Richmond NHS Foundation Trust's virtual ward (VW) continuously monitored patients' vital signs and movement with the Current Health (CH) platform. Adherence was defined as CH device wear-time over length of stay (LOS). For 66 admissions (64 patients, Jan–Mar 2023), we summarized demographics, VTE scores, LOS, adherence, anticoagulation, daily step count over the first 14 days, and adverse VTE outcomes at 30 and 90 days using descriptive statistics.

Results

Patients in the VW (mean age = 67.9 (16.0 SD) years, 68% female) had VTE risk scores of 1 [IQR 1,2] and 23% (n=15) received anticoagulants. Median LOS was 9 days [IQR 6,12] with high device adherence (median 82.2% [IQR 74, 87]). Mean steps/day was 1083 (285 SD). Of the 632 VW days, 68.4% had step count greater than 0 and 45% of days with steps were greater than 900 steps. Sixty-three percent of patients had at least 1 VW day with 900+ steps. There was one 90-day post-discharge VTE-related adverse outcome.



Conclusion

VW patients had a low risk of VTE on admissions. The single VTE case resulted from surgery and non-adherence to prescribed prophylaxis. Patients took ~100 more steps/day (~10% increase) than reported in the inpatient setting, consistent with increased mobility in VW. As VWs scale, with patients more likely to be active in their homes, review of prophylaxis may be warranted as the risks of VTE, and the benefits of anticoagulation may be reduced.