What’s the best treatment setting for stable PE patients?

The answer seems to be the outpatient setting. Here’s why.

**PRACTICE CHANGER**

Manage patients with acute pulmonary embolism (PE) who are hemodynamically stable in the outpatient setting to decrease adverse events—regardless of their initial risk category.¹

**STRENGTH OF RECOMMENDATION**

B: Based upon a good-quality retrospective cohort propensity score analysis.


**ILLUSTRATIVE CASE**

A 63-year-old woman with a history of hypertension presents to the emergency department (ED) with acute onset shortness of breath and pleuritic chest pain after traveling across the country for a work conference. She has no history of cancer, liver disease, or renal disease. Her blood pressure is 140/80 mm Hg, and her heart rate is 90 bpm. You diagnose an acute PE in this patient and start anticoagulation. Should you admit her to the hospital to decrease morbidity and mortality?

According to the Centers for Disease Control and Prevention, venous thromboembolism (VTE) affects approximately 900,000 people each year, and approximately 60,000 to 100,000 of these patients die annually.² Pulmonary embolism is the third leading cause of death from cardiovascular disease, following heart attacks and strokes.³ Prompt diagnosis and treatment with systemic anticoagulation improves patient outcomes and decreases the risk of long-term complications.

The 2016 American College of Chest Physicians (CHEST) guideline on antithrombotic therapy for VTE disease recommends home treatment or early discharge over standard discharge (after the first 5 days of treatment) for patients who meet the following clinical criteria: “clinically stable with good cardiopulmonary reserve; no contraindications such as recent bleeding, severe renal or liver disease, or severe thrombocytopenia (ie, <70,000/mm³); expected to be compliant with treatment; and the patient feels well enough to be treated at home.”³

The guideline states that various clinical decision tools, such as the Pulmonary Embolism Severity Index (PESI), can aid in identifying low-risk patients to be considered for treatment at home. The PESI uses age, gender, vital signs, mental status, and a history of cancer, lung, and cardiac disease to stratify patients by risk.⁴

A systematic review of 1 randomized controlled trial (RCT) and 7 observational studies found that in low-risk patients, outpatient treatment was as safe as inpatient treatment.⁵ This more recent study determines the net clinical benefit of hospitalized vs outpatient management in a wider range of patients with acute PE, regardless of initial risk.¹

**STUDY SUMMARY**

Hospitalization confers no benefit to stable patients with acute PE

This retrospective, propensity-matched co-
A higher rate of AEs in those treated as inpatients vs outpatients

This trial supports the CHEST guideline recommendations to manage hemodynamically stable patients with acute PE as outpatients. It adds to the conversation by demonstrating higher rates of adverse events with hospitalization, even in high-risk subgroups (PESI Class III-V).

A good study, but it wasn’t an RCT

While this is a well-designed cohort study, it is not a randomized controlled trial (RCT). This study defined outpatient management as patients discharged from the ED or hospitalized for <48 hours. However, only 59 of the 544 patients in the outpatient group were early hospital discharges, while the rest were never admitted. Finally, a specialized thrombosis clinic followed up with the patients within 24 hours of discharge, and patients had telephone access to specialized health care professionals; such organization of care contributed to the safe outpatient management of these PE patients.

Insurance coverage may present an issue

Medication coverage of direct oral anticoagulants and low molecular weight heparin...
may present a barrier to patients treated in the outpatient setting who have no insurance or are insured by certain insurance carriers.

ACKNOWLEDGEMENT
The PURLs Surveillance System was supported in part by Grant Number UL1RR024999 from the National Center For Research Resources, a Clinical Translational Science Award to the University of Chicago. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Center For Research Resources or the National Institutes of Health.

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References