Safe Outpatient Management of Low Risk Pulmonary Embolism

St. Luke’s Health System – Idaho
In Collaboration with
Physician Leadership Institute – A Part of Salem Health

Background/Situation

Pulmonary embolism (PE) is a common problem diagnosed in our Emergency Department. Historically, all patients who presented with a diagnosis of PE required hospital admission for intravenous anticoagulation to reduce the incidence of morbidity and mortality. With the development of newer, safer, and more rapidly acting anticoagulant medications, many patients with otherwise low risk for complications can now safely be managed as outpatient, without requiring hospitalization. A well validated tool is available to predict and determine which patients presenting with PE can be treated safely as outpatient.

Current practice, however, has not caught up with the latest evidence. Many patients, perhaps as high as 50%, who present with PE but with low risk for complications, as determined by use of the Simplified Pulmonary Embolism Severity Index (sPESI) calculator tool, are admitted to the hospital, and are frequently discharged within 24 hours.

Goal Statement

By April 15th, 2017, we will have zero hospital admissions for patients who present to the St. Luke’s Boise Emergency Department with a primary diagnosis of PE and an sPESI score of zero.

Measure

Balance Measures:

• Patients returning to the Emergency Department with complications related to PE within 30 days of initiating outpatient therapy for low risk PE.

Process Measures:

• Physicians in the Boise Emergency Department will utilize the sPESI Calculator tool on all patients diagnosed with a new onset of PE to determine risk for outpatient management.

• The Boise Emergency Department Unit Clerk and Registrar will coordinate patient follow-up with a Primary Care Provider within 72 hours of discharge.

Intervention

• The team created a ‘safety net’ for patients by developing a direct scheduling process, recruiting APCs to educate patients about PE and anticoagulation in clinic, and by reassuring ED physicians that there is close and safe follow-up.

• Educated and taught providers and staff about sPESI scores and their application, created awareness about the calculator built into our EMR, and taught staff about the direct scheduling process.

• Implemented outpatient management of PE by re-educating staff on the pilot’s scope and application of sPESI score, and by trouble shooting scheduling issues.

Outcomes

- Two patients avoided hospitalizations for low risk PE, and no patients suffered harm or adverse outcomes.
- More physicians learned it is safe to follow low risk PE as outpatient.
- Direct scheduling of outpatient follow up facilitated patient safety.
- Success was achieved by breaking down role-specific advocacy through patient-centered plan. Consistent message, flexible problem solving, persistent follow through, communicating information, support, inspiration at the right time to the right people, team diversity in backgrounds, communication styles, and expertise were also factors that helped achieve success.

Unnecessary PE Admission from ED

October 2016 – April 2017

Participants

- Frank Johnson, MD, Internal Medicine
- Danielle Orchard, MD, Internal Medicine, Hospitalist
- Cathy Archibald-Seiffer, MHSc-PLI Coach, Improvement Coordinator
- Brandee Tenley, RN, MPH
- Doug Croft, Director, Operations Improvement
- Cliff Tenley, MD, Internal Medicine, Chief of Staff
- Dave McFadyen, Administrator, SL Boise Medical Center

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