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HOT OFF THE PRESS

SGEM#323: Mama I'm comin' home—For outpatient treatment of a pulmonary embolism

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BACKGROUND

Pulmonary embolism (PE) is a common diagnosis in emergency departments (EDs) in the United States, with over 180,000 patients receiving this diagnosis in 2016.[1,2] Recent literature suggests that there is a subset of patients, up to 50%, who are low risk, are candidates for oral anticoagulation, and have primary care follow-up, who can be managed as outpatients.[3,4] While trials have suggested that outpatient management is safe, outcomes from clinical practice are not clear.

ARTICLE SUMMARY

This study is a retrospective cohort study utilizing a database of 740 U.S. hospitals, consisting of approximately 20% of U.S. hospitalizations in a given year. Patients who were ≥18 years of age and received a diagnosis of PE between July 2016 and June 2018 were included. In addition, patients had to have imaging to evaluate for PE as well as treatment of PE. Patients who had been evaluated in the ED for a PE-related visit in the previous 90 days were excluded, as were patients who expired in the ED. The primary outcome of interest was initial disposition from the ED, with secondary outcomes including return visits or hospitalizations with 30 days and costs.

Discussing: Westafer LM, Shieh MS, Pekow PS, Stefan MS, Lindenauer PK. Outpatient management of patients following diagnosis of acute pulmonary embolism. Acad Emerg Med. 2021;28(3):336–345.

Associated podcast: https://www.thesgem.com/2021/03/sgem323-momma-im-comin-home-for-outpatient-treatment-of-a-pulmonary-embolism/

QUALITY ASSESSMENT

This study includes a large number of U.S. hospitals and patients, from diverse practice settings including urban and rural academic and community centers, and as such is likely reflective of U.S. practice patterns. The outcomes are clearly delineated and measurable to minimize bias. The major limitations of the study come from the limitations of the database, which contains coding data only. Individual patient-level details such as vital signs, laboratory results, and other findings were not available, so no information about risk stratification could be performed. In addition, size and location of the PEs could not be obtained from the database. As such, the data allowed conclusions regarding the specific outcomes of interest (disposition, return visits, costs) but could not provide information to analyze discharge or admission criteria, appropriateness, or other factors.

KEY RESULTS

A total of 61,070 patients were identified from the database, with a mean age of 62 years. Slightly over half (53%) were female. For the primary outcome of disposition from the ED, 4% of patients were discharged, and 96% were admitted. Charges among the total cohort were $9,225 while outpatients were charged $1,214. Return visits occurred for 28% of patients, and 11% of those initially discharged were subsequently admitted. Respiratory failure, shock, hypotension, heart failure, and malignancy were associated with admission at the index visit. A total of 1.3% of discharged patients returned within 30 days for a bleeding-related complaint, and 1.9% of admitted patients died.

AUTHORS' COMMENTS

U.S. patients with an ED diagnosis of PE are overwhelmingly discharged from the ED. Charges for admitted patients are much higher than for those discharged. There is approximately a one in 10 chance of admission once discharged and a one in three chance of returning to the ED. U.S. emergency physicians should consider risk stratification and appropriate criteria for safe discharge of PE patients.

TOP SOCIAL MEDIA COMMENTARY

Comments from thesgem.com

***Jeffery Hill*:** Most patients with PE end up admitted in our system but those with a sPESI<1 are candidates for outpatient treatment pending the ability to arrange meds and follow up.

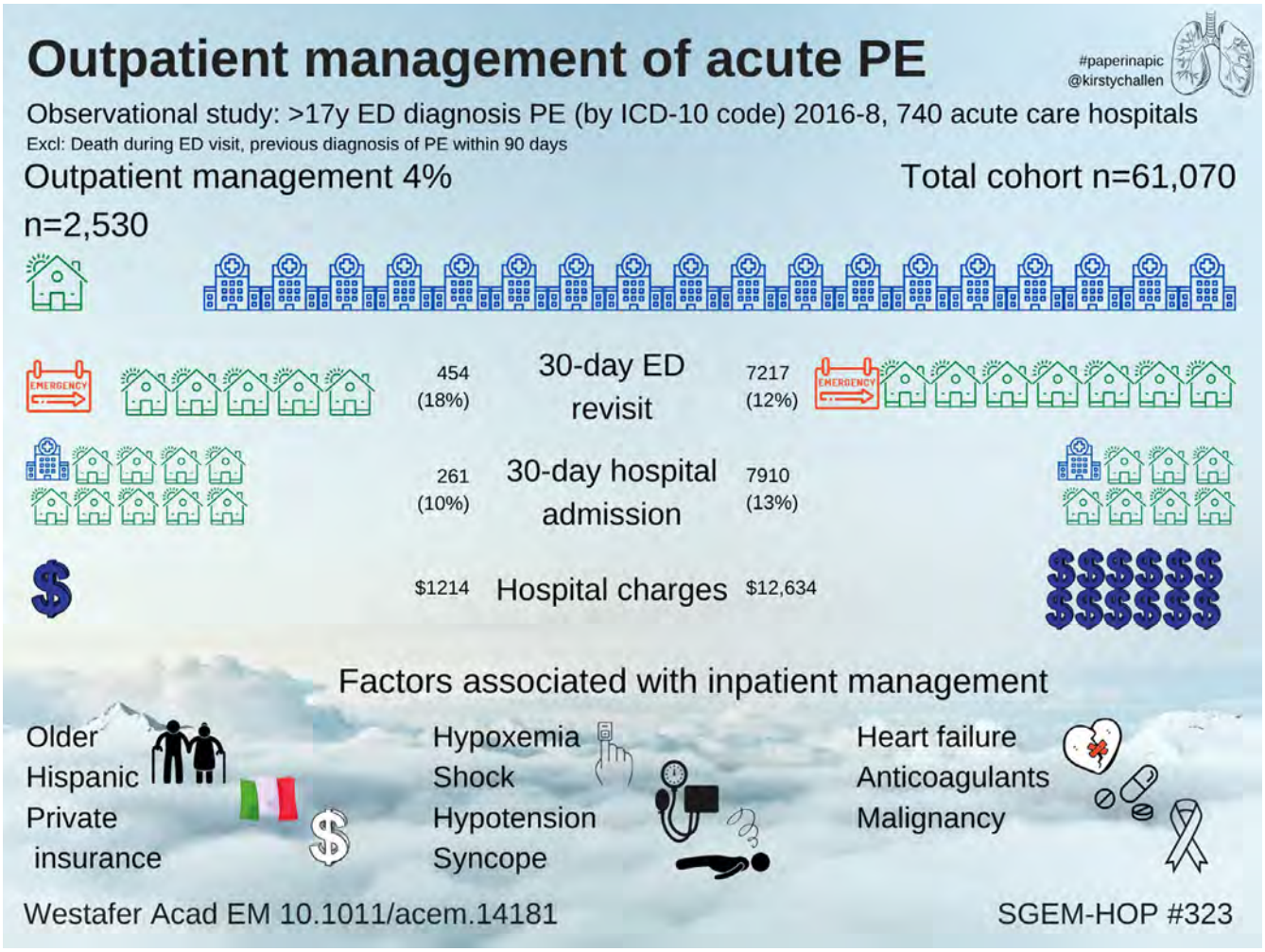
Comments from Twitter

@RozhenaIMD : In my experience the limiting factor is often the fact that some insurance plans cover rivaroxaban and others cover apixaban, apparently none cover both. So it's practically impossible to figure this out and send them home on a doac unless it's 2 pm on a Tuesday. Hence, obs.

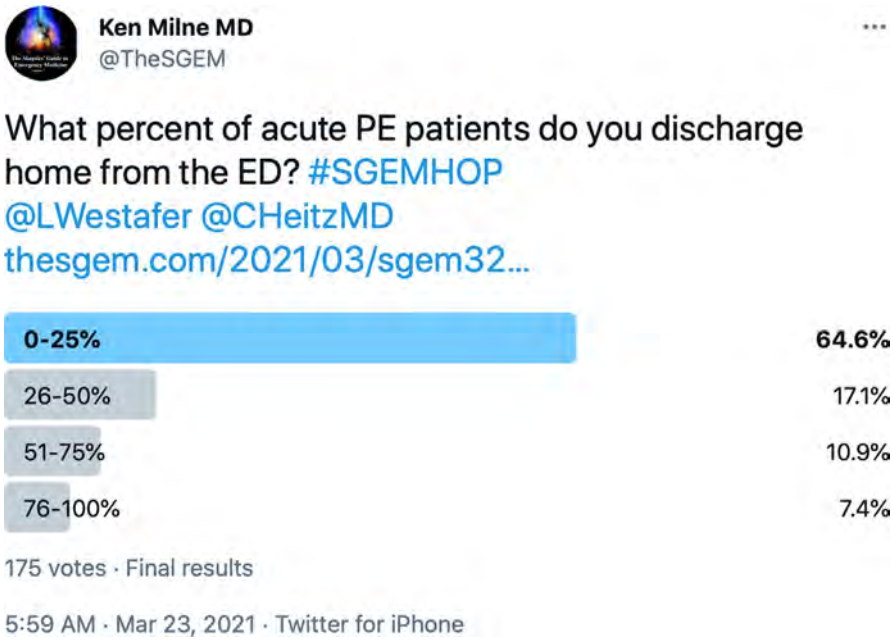
> ***Reply by author @LWestafer:*** We get around this with initial coupons. https://eliquis.com/eliquis/hcp/resources#panel-element-2... either 30d free or 10$ copay regardless of insurance- I tell patients they may get switched but this will get them started

***@TheCaseyGlass*:** I don't have numbers but we discharge most without an O2 requirement or other signs of massive PE. Our pharmacists help initiate tx with NOAC or before that we would send out on enox & warfarin. We have an Obs protocol to help get the dominoes lined up if it will take a minute.

Paper in a pic by Dr. Kirsty Challen



Twitter poll by Ken Milne



TAKE-TO-WORK POINTS

Society guidelines provide direction for risk stratification of PE patients who can safely be discharged home. U.S. emergency physicians should consider utilizing these tools to select patients who do not need to be admitted, with the understanding and subsequent communication to the patient that about one in three will return to the ED, and 10% will be admitted on a future visit.

CONFLICT OF INTEREST

The authors have no potential conflicts to disclose.

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