study?	in different patient settings using different PE risk assessment tools and varying means of following up patients.
APPLICABILITY	
9. How can I best interpret the results to apply them to the care of my patients?	The data collected for this study is not well powered. It is very poor evidence and should not be used to change practice. However, what I think that this analysis does highlight is that the information we do have seems to indicate that outpatient management of PE in very select individuals who have engaged in patient-centered decision making with good out-patient support may be appropriate for consideration for out patient management.
10. Were all patient important outcomes considered?	Mostly. (mortality, recurrence of VTE, major bleeding event) Only 2 addressed patient satisfaction. I would like to have seen if there were any difficulties in getting meds paid for, this is a problem that affects my patients greatly.
11. Are the benefits worth the costs and potential risks?	Possibly. Identifying low-risk patients with good follow-up may help reduce admission rate. That stated it remains difficult to assess from such a poorly powered review. However, the benefits of treating PE patients at home would be great in terms of cost and probably patient satisfaction. This study inadequately assesses the potential risks, but seems to indicate that they are low.

Limitations:
- Limited studies available. 4 ED's very heterogeneous studies
- Poorly powered/designed studies
- Paucity of randomized control trials and comparison with an inpatient arm.

Clinical Bottom Line:
- There is no way this study would change my practice, however I think that it does make the case that studying outpatient only management of low risk symptomatic PE is worth studying further and probably pretty safe.
- I am concerned in my population about making sure people get their medications and are able to pay for them and have follow up.

EVMS JC: Critical Appraisal Worksheet: Systematic Review/Meta-analysis

Date: 01/18/2019

Reviewer: Phoebe Glazer

Citation: Vinson et al, Can selected patients with newly diagnosed pulmonary embolism be safely treated without hospitalization? A systematic review.Ann Emerg Med. 2012 Nov; 60(5):651-662.

Guide	
1. Did the review explicitly address a sensible question?	Yes: Can selected outpatients with newly diagnosed pulmonary embolism be treated safely and effectively without hospitalization?
2. Was the search for relevant studies details and exhaustive?	Yes: computer-assisted search of the following biomedical databases from their inception through March 22, 2012: MEDLINE, EMBASE, SciVerse Scopus, Cumulative Index to Nursing and Allied Health Literature, Web of Knowledge, Cochrane Library, and the clinical trial registration Web site (http://www.clinicaltrials.gov) - Plus abstract searches and asked experts in the field for any additional references. Authors followed PRISMA guidelines
3. Were the primary studies of high methodological quality?	No. Using the GRADE criteria, 7/8 studies were deemed to be "very low" quality, the final study was of "moderate" quality (pg 656)
4. Did the authors adequately assess the quality of the included studies?	Yes. They used the GRADE criteria, an objective measurement for pitfalls of the various types of study. Identified small Ns, poor follow up, imprecise results.
CLINICAL IMPORTANCE	
6. What were the overall results of the review? *(Are the results of all included studies clearly displayed? Are the results similar from study to study? Is there a clinical bottom line? If the study results combined, was it appropriate to do so?)*	Original search identified 2286 titles of which 24 studies were identified and 17 were excluded leaving 8 studies (1 RCT, 7 observational) • Kappa for study selection =1 (95%CI 0.85-1.0) • 8 studies included 777 patients, 4 were ED studies, One was US study. Patient ages ranged from 47-69 • Three studies used risk stratification scores (Geneva, PESI & NT-pro BNP • 3 studies included social issues, medical conditions, PE characteristics, VS abnormalities patient preference to preclude D/C • Treatment consisted of LMWH for 5 days and warfarin with arranged clinic follow-up within 7-10 days, • Four studies used an adjudication committee to define outcomes. • **Seven studies with 90 day follow-up on 741 patients found zero cases of thromboembolic or hemorrhage-related death (95% CI 0 - 0.62%).** • Patient satisfaction did not differ between groups (92% outpatient vs. 95% inpatients, p=0.39). • There was one study, which appeared to have higher incidence of adverse events, however this was a study which specifically enrolled cancer patients, one could argue that a patient with active cancer is not a low risk patient to begin with. Only one of the included studies was able to compare inpatient to outpatient outcomes, this study found non-inferiority. (discussion on page 659)
7. How precise are the results? *(What were the confidence intervals? p-values?)*	Not clearly stated for most studies. Those listed seem to have large confidence intervals, many confidence intervals not given because incidence was zero and N was low. No p- values listed.
8. Were the results similar from study to	No There was significant heterogeneity between the study populations which precluded outcome-level assessments. (p. 654). The studies were conducted