MICHIGAN COLLEGE OF EMERGENCY PHYSICIANS

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MCEP Statement on ED Quality of Care
VTE Management in the Emergency Department

MCEP recommends that all Michigan emergency departments and emergency physician groups consider and review the evidence informing best practices in the evaluation of suspected pulmonary embolism and management of this condition in the emergency department. There is high-quality evidence supporting standardization of these practices. This may include, but is not limited to:

- Use of guidelines and clinical decision rules
    - Pulmonary Embolism Rule-out Criteria (PERC)
    - Wells criteria
- Incorporation of appropriate use of d-dimer with consideration of threshold adjustment
    - Age-adjusted d-dimer
    - YEARS algorithm in the pregnant population
- Appropriate use of CT angiogram thorax imaging

Next, after establishing the diagnosis of acute pulmonary embolism, emergency clinicians should consider risk-stratifying patients using established clinical decision rules:

- Pulmonary Embolism Severity Index (PESI)
- simplified Pulmonary Embolism Severity Index (sPESI)
- HESTIA criteria

to determine the safety of outpatient management of this diagnosis or utilization of observation units or inpatient admissions based on risk stratification.

Finally, Emergency physicians are well suited to help their healthcare systems implement usage of these tools or assist in formation of Pulmonary Embolism Response teams (PERT). Hospitals or independent groups can reach out to MCEP for more information or quality service organizations for assistance.

Supporting Documents:

Michigan Emergency Department Improvement Collaborative
https://medicqi.org/QI-Initiatives/CT-for-Suspected-Pulmonary-Embolism

Triaging acute pulmonary embolism for home treatment by Hestia or simplified PESI criteria: the HOME-PE randomized trial. *European Heart Journal*, Volume 42, Issue 33, 1 September 2021, Pages 3146–3157

Schouten H, Geersing G, Koek H, et al. Diagnostic accuracy of conventional or age adjusted D-dimer cut-off values in older patients with suspected venous thromboembolism: systematic review and meta-analysis. *BMJ*. 2013;346(may03 1).

Van de pol LM, et al. Pregnancy-Adapted YEARS Algorithm for Diagnosis of Suspected Pulmonary Embolism. NEJM. 2019; 380;12: 1139-1149.

Rosovsky R, Zhao K, Sista A, Rivera-Lebron B, Kabrhel C. Pulmonary embolism response teams: Purpose, evidence for efficacy, and future research directions. *Res Pract Thromb Haemost*. 2019;3(3):315-330. Published 2019 Jun 9. doi:10.1002/rth2.12216

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