SAEM 2026 · RISK STRATIFICATION

Comparing Patient Evaluation of Their Clinical Risk of Pulmonary Embolism to Physicians' Using the Wells Score: A Prospective Observational Study

Sigal Tavel, MD · Joshua Schwarz, MPH
University of Virginia, Charlottesville, Virginia

ON DISPLAY · PRESENTER ON GLOBAL-HEALTH ROTATION

+0.73

PHYSICIAN WELLS SCORE INCREASE PER +1 IN PATIENT-RATED LIKELIHOOD

Patient likelihood scored 1–5 · $p < 0.01$

89
ADULT CHEST-PAIN ED SUBJECTS
After excluding subjects without physician scores

1.84 / 1.38
MEDIAN PATIENT / PHYSICIAN WELLS
Patient IQR 0–3 · Physician IQR 0–1.5

p = 0.005
OVERALL RISK-CATEGORY CONCORDANCE
Chi-squared across low / moderate / high

BACKGROUND

Can patients triage themselves?

Emergency departments (ED) are facing greater patient volumes, causing challenges in triage. ED physicians employ validated clinical decision rules to risk stratify patients, including the Wells score for pulmonary embolism (PE).

The current investigation explores if patients can generate a Wells score comparable to the score determined by their physician.

METHODS

Prospective observational, paired patient/physician Wells.

Population. Adults presenting to the UVA ED with chest pain.

Exclusion. No associated physician Wells score.

Patient instrument. Pre-physician questionnaire containing the components of the Wells score; also ranked likelihood of PE on a 1–5 scale.

Physician. Assigned Wells score after seeing the patient.

Primary outcome. Concordance of physician- and patient-generated Wells scores when analyzed by group as high, intermediate, or low risk.

Risk categories. Low < 1.5 | Moderate 1.5–6 | High > 6

RESULTS

Meaningful agreement, especially among low-risk.

- **89** Subjects included after exclusion
- **+0.73** Physician Wells per +1 patient likelihood (1–5) *($p < 0.01$)*
- **60 (67%)** Patients self-rated low risk
- **54 / 89** Of all subjects, both patient and physician rated low (60%)
- **6 / 89** Patient low → physician moderate (7%)
- **24 (27%)** Patients self-rated moderate risk
- **5 / 89** Patient moderate → physician high (6%)
- **5 (5%)** Patients self-rated high risk · 0 physicians assigned high
- **29%** Discordance on the question "is patient HR > 100 bpm?" — most discordant item
- **p = 0.005** Overall chi-squared across three risk categories

CONCLUSION

Patient self-stratification may be feasible as an early triage tool.

Patient-generated Wells scores demonstrate meaningful agreement with physician assessment, particularly among low-risk patients. Patient-generated risk stratification may represent a feasible early triage tool with applications in ED workflows and telemedicine evaluation of chest pain.

ASK ME ABOUT

- Questionnaire design
- HR > 100 bpm discordance
- Telemedicine triage applications
- Next-step validation