

## PURPOSE

- Explore how site-specific factors influence implementation of a point-of care nudge designed to safely increase outpatient management of low-risk pulmonary embolism (PE) across 12 diverse Michigan Emergency Departments (EDs)

## BACKGROUND

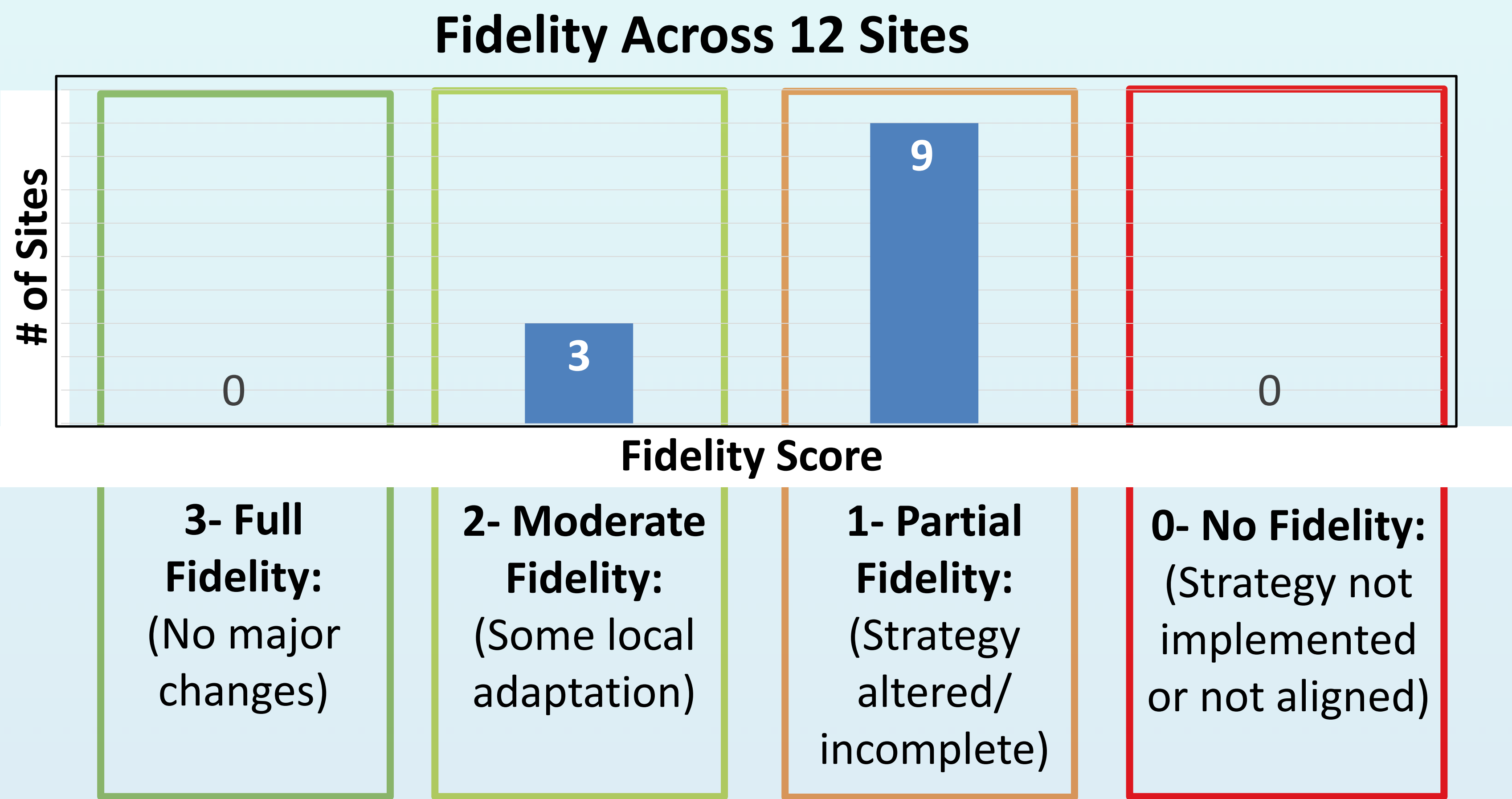
- Outpatient PE care is safe, but <5% discharged
- 100K avoidable admissions and \$500M+ costs each year
- In a previous *single-center pilot study*, an EHR-integrated nudge increased safe outpatient management.

## METHODS

- **Setting:** 12 hospital EDs in the MEDIC network.
- **Participants:** ED clinicians managing acute PE patients.
- **Primary Outcome:** Fidelity of nudge implementation
- **Secondary Outcomes:** Feasibility, acceptability, appropriateness
- **Fidelity Assessment:**
  - Bi-weekly meeting notes and Semi-structured site stakeholder interviews quantified fidelity using a 4-point scale (0 = no fidelity, 3 = full fidelity)
  - Tracked site-level adaptations and modifications throughout implementation

## RESULTS

### Implementation of BPA varied across 12 sites



**Full fidelity was unattainable. Local culture, policy constraints, and technical barriers created adaptations that reduced fidelity**

|                       |                                                                                                                                                                     |                                                                                                                                                                                                                                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Moderate<br>(Score 2) | <b>Barriers:</b> <ul style="list-style-type: none"><li>• Workflow delays</li><li>• Culture preferences</li><li>• Limited IT support</li></ul>                       | <b>Modifications:</b> <ul style="list-style-type: none"><li>• Switched to sPESI; added workstation cards</li><li>• Delayed BPA; used info cards early</li><li>• Used external BPA; added QR posters</li><li>• Used bulletin board; emphasized cultural strategy</li></ul> |
|                       | <b>Barriers:</b> <ul style="list-style-type: none"><li>• Policy blocks</li><li>• EMR constraints</li><li>• Alert fatigue policy</li><li>• Staffing burden</li></ul> | <b>Modifications:</b> <ul style="list-style-type: none"><li>• BPA triggered late; PESI entered manually</li><li>• Opted out of BPA; used info cards</li><li>• No education; lacked provider engagement</li><li>• Bulletin board only</li></ul>                            |

## CONCLUSION/ SIGNIFICANCE

- Key Takeaways:**
- **Flexibility vs. impact:** Local tailoring supported uptake, but whether adaptations preserved the full effect of the nudge remains uncertain.
  - **Fidelity matters:** Conceptual fidelity (core functions intact) may be more important than exact replication across sites.
- Limitations:**
- Findings reflect 12 hospitals within a single state and do not include patient outcome data.
- Implementation Challenge:**
- EMR-based strategies may be the most daunting/ challenging for clinician QI Leads to advocate for.
- Implications:**
- Future multi-component interventions that include an EHR-based nudge, may need to increase the amount of implementation support for the champions to increase fidelity.
  - Rollouts should plan for adaptation needs, budget for support, and evaluate whether local tailoring maintains effectiveness.

- Next steps:**
- Develop a shared adaptation toolkit and examine patient-level outcomes.

## ACKNOWLEDGEMENTS

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