

# Improving EMS Handoffs: Using the “IMIST-AMBO” Mnemonic to provide Standardized Structure & Organization



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## BACKGROUND

- The transfer of patient information and care between healthcare providers is commonly conducted in an organized “handoff,” “sign-out,” or “report” process
- Although many nursing and medical professionals receive formal training and resources to guide their handoffs (e.g. SBAR, IPASS), there is no such formal training for prehospital providers within the Pitt County EMS system
- While this has not been extensively studied in domestic EMS systems, an agency in Australia reported success in using the mnemonic IMIST-AMBO to improve handoffs
- Our project is intended to evaluate the current handoff process between Pitt County EMS and the ECU Health Emergency Department, then standardize handoff training and practices using the IMIST-AMBO mnemonic

## PROJECT AIM

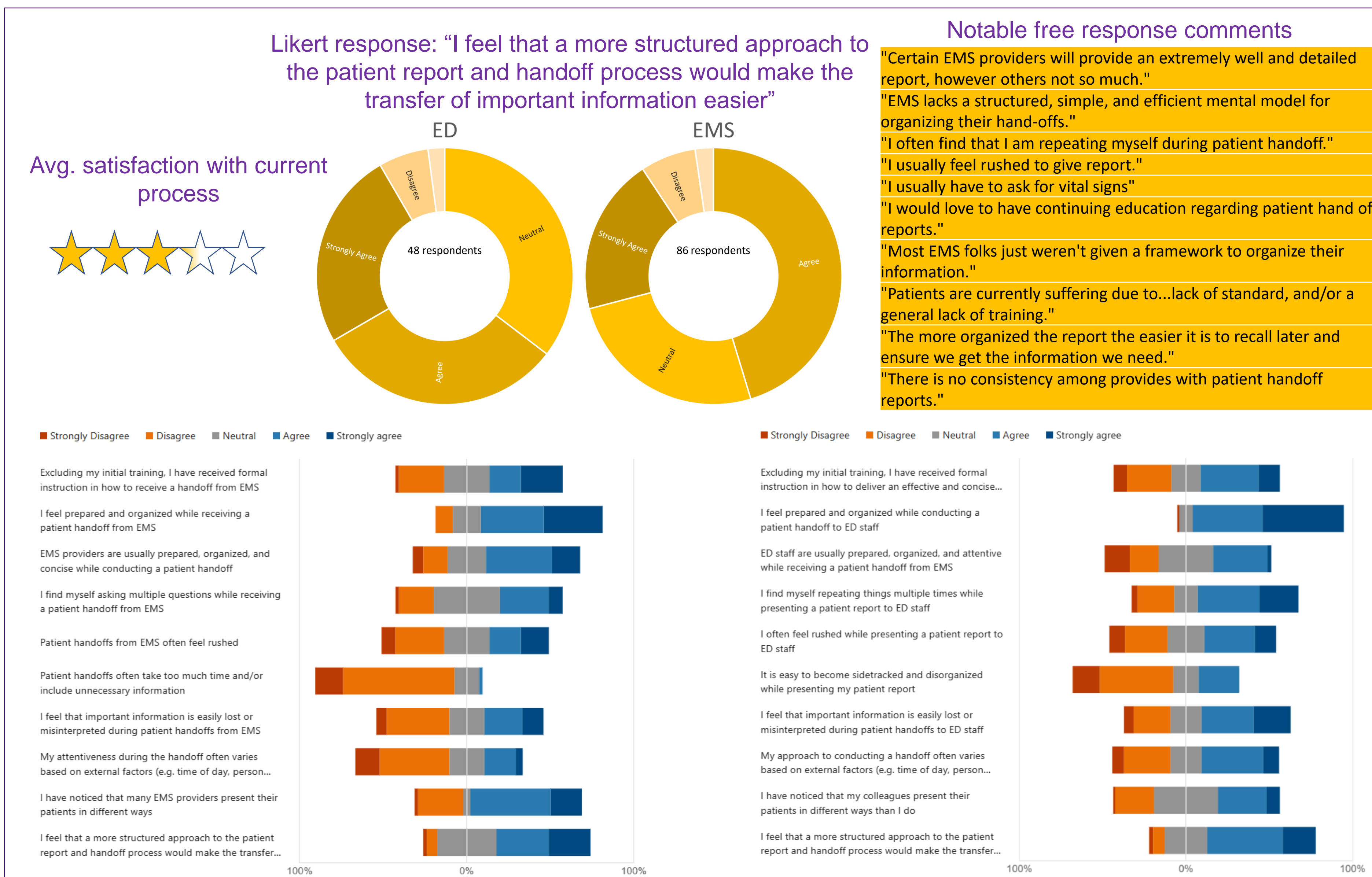
By 2024, all Pitt County EMS providers will receive standardized training in patient handoffs using the “IMIST-AMBO” mnemonic, resulting in an improvement of at least 20% in handoff satisfaction, and more consistent verbalization of important patient information

## PROJECT DESIGN/STRATEGY

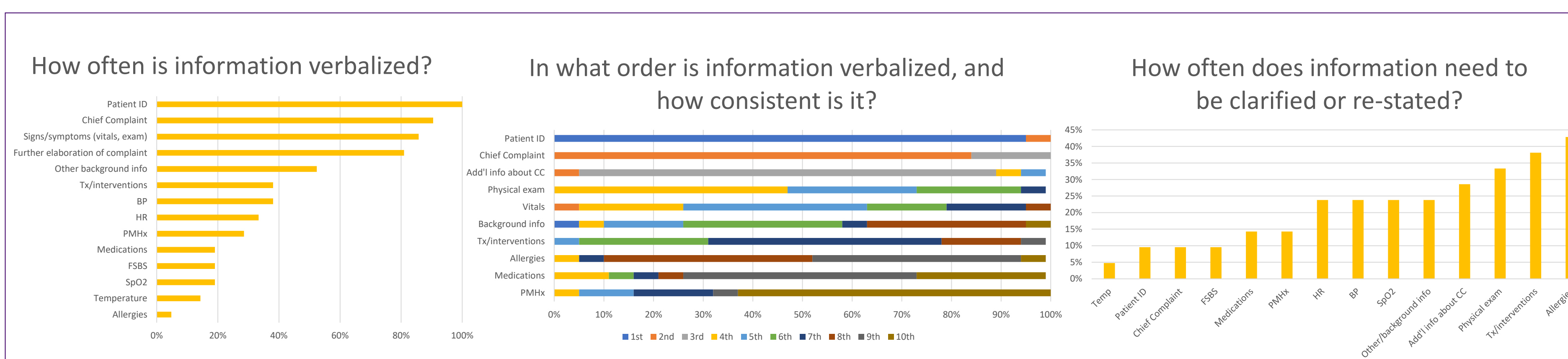
- Measured satisfaction with current handoffs through anonymous online surveys distributed to both Pitt County EMS and ECU Health ED nursing staff
  - Collected information on training & expertise, multiple questions on a Likert scale, a 5-star rating system, and a comment section
- Directly observed 21 EMS handoffs in the ED to record current handoff content, structure, duration, and number of interruptions
- Interviewed 10 EMS and ED supervisors regarding satisfaction, potential benefit, and suggestions with the “IMIST-AMBO” mnemonic
- Will create a formal training module as well as reference materials (posters, badge cards) for EMS and ED providers to use
- Will pilot the module and reference materials with one select EMS station, study our measures, and make any necessary changes before rolling out to the rest of the agency

## CHANGES MADE (PDSA CYCLES) & RESULTS

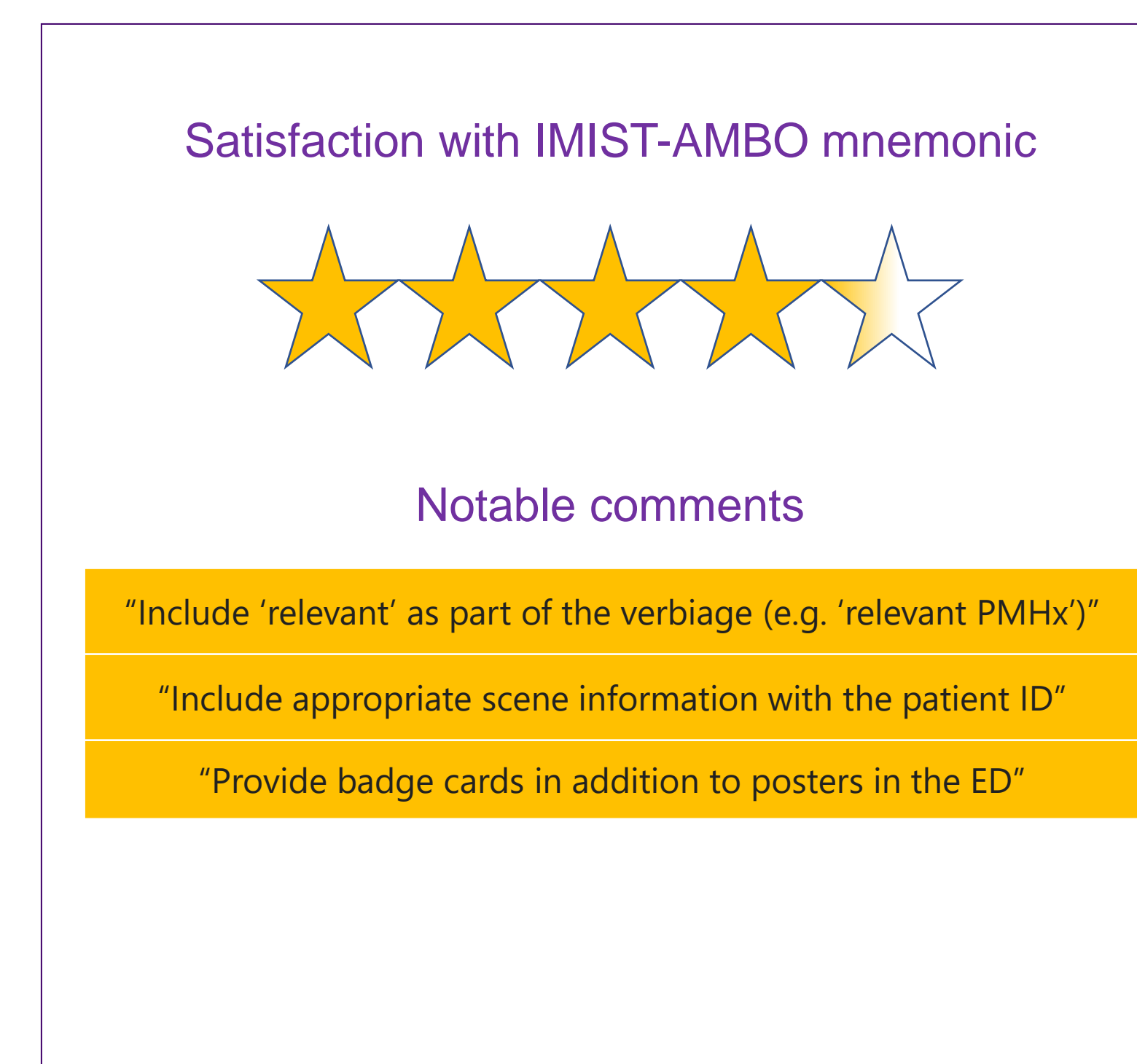
**PDSA 1: Survey of EMS & ED providers to gauge satisfaction/suggestions with current handoff process**



**PDSA 2: Direct observation/evaluation of handoffs to understand existing structure & challenges**



**PDSA 3: Gathering support and suggestions for IMIST-AMBO**



<b>I</b> dentification	Patient ID, relevant scene info
<b>M</b> edical Complaint	Chief complaint/mechanism of injury
<b>I</b> nformation	Elaboration of chief complaint, injuries
<b>S</b> igns & Symptoms	Vitals, POC glucose, EKG/rhythm strip, GCS
<b>T</b> reatment & Trends	Interventions, relevant trends (vitals, GCS)
<b>A</b> llergies	Drug allergies
<b>M</b> edications	Relevant medications
<b>B</b> ackground history	Relevant past medical history
<b>O</b> ther information	Scene, social, valuables, family, etc

## LESSONS LEARNED

- Our project identified a need for improved structure and standardization of EMS handoffs
- While patient ID, chief complaint, and pertinent vitals/exam findings are usually reported, many handoffs fail to consistently include other background information such as PMHx, allergies, and medications
- When this ancillary information is delivered, it is often done so in an inconsistent order
- This leads to redundancies during handoffs, such as interruptions or clarifying questions
- While many other barriers to effective handoffs exist within our EMS and ED system, providers agree that using the “IMIST-AMBO” mnemonic would benefit the current process
- Considering the success of “IMIST-AMBO” in foreign EMS agency, successful implementation within Pitt County EMS may set a framework for other agencies in the US

## NEXT STEPS

- Piloting a handoff training module and editing the mnemonic as necessary
- Integrating the module into Pitt County EMS training
- Distributing reference materials to be used while delivering handoffs
- Re-assessing measures including satisfaction, handoff content, structure, duration, and redundancy

## REFERENCES/ACKNOWLEDGEMENTS

- Pitt County EMS medics, EMTs, and supervisors
- ECU Health Medical Center Emergency Department nursing staff and supervisors
- Iedema R, Ball C, Daly B, et al. Design and trial of a new ambulance-to-emergency department handover protocol: ‘IMIST-AMBO’. *BMJ quality & safety*. 2012;21:627-633.

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