

## Quality Improvement Project

# Improving Emergency Department Patient Experience Through an Organizational Values-Aligned Standardized Behavioral Model

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## ABSTRACT

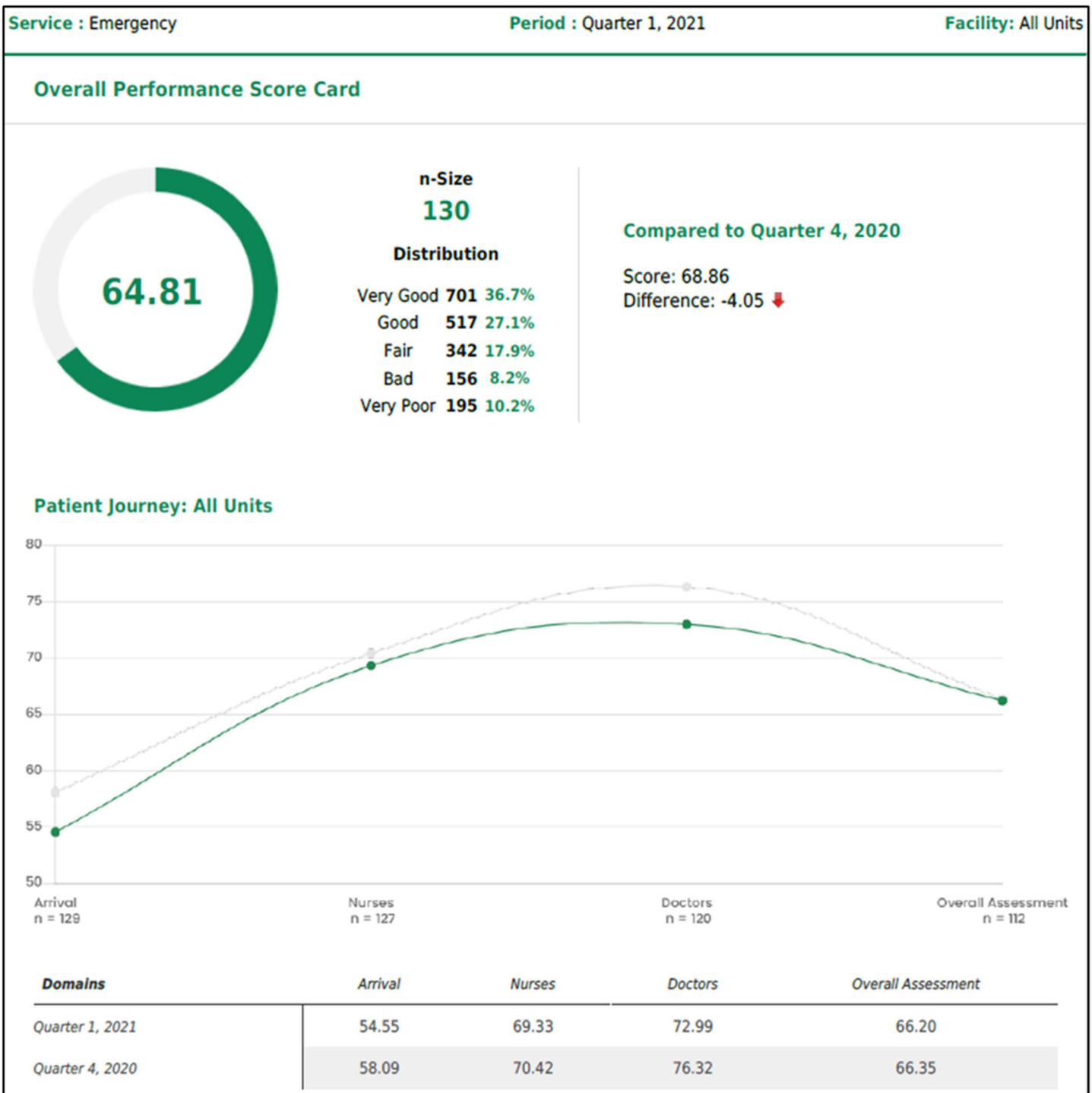
**Introduction:** Patient experience in the setting of the emergency department (ED) is an area of strategic priority for all healthcare facilities. Patient experience can be affected by several factors that encompass the cultural, behavioral, and psychological domains of the healthcare organization. Al Hada Armed Forces Hospital, in its efforts to achieve the strategic objectives of continuously improving the patient experience at scale, implemented an ED-based behavioral model of service behaviors that was adapted to match the local community needs and practiced by the frontline healthcare staff at the ED during Q2-2021. **Methods:** A pre-experimental and postexperimental design was used for our patient experience quality improvement project. The Institute for Healthcare Improvement model for improvement plan-do-study-act was used to implement the quality improvement initiative. Our work is reported in accordance with the SQUIRE (Standards for Quality Improvement Reporting Excellence for Education) 2.0 guidelines from the EQUATOR network. **Results:** The ED patient experience mean score improved during the postimplementation phase by 5.23 points (8% increase) in Q1-2022 and reached a sustainability level during Q3-2022. **Conclusion:** This quality improvement project in patient experience at our ED provides strong evidence for adopting organizational values-aligned standardized service behaviors to improve the patient experience at scale across ED settings.

**Keywords:** patient experience, quality improvement, emergency department, patient-centered care

## INTRODUCTION

Patient experience (PX) is defined by The Beryl Institute as “the sum of all interactions, shaped by an organization’s culture, that influence patient perceptions across the continuum of care.”<sup>[1]</sup> PX is an integral component and measure of patient-centered care, a key domain of healthcare quality as outlined by the 2001 Institute of Medicine (now National Academies of Sciences, Engineering, and Medicine) seminal report *Crossing the Quality Chasm* as well as numerous other studies.<sup>[2–4]</sup> In an emergency department (ED)

setting, the most commonly identified drivers of PX include factors related to communication, wait times, and staff empathy and compassion.<sup>[3–5]</sup> Variations in the PX outcomes across the global healthcare systems have been reported in the recent tri-institutional global healthcare quality reports from the National Academies of Sciences, Engineering, and Medicine; World Bank Group; and Lancet Global Health Commission.<sup>[4]</sup> Al Hada Armed Forces Hospital (AHAFH) is a 371-bed tertiary care academic medical center located in Taif, Saudi Arabia. It serves local patients from Taif City and



**Figure 1.** Al Hada Armed Forces Hospital Emergency Department Patient Experience Report for Q1-2021 compared with Q4-2020 as measured by Health Links Press Ganey Hospital Consumer Assessment of Healthcare Providers Survey.

adjacent suburbs and is a regional referral center for complex or critically ill patients.

**Problem**

ED PX mean score, as measured by the Press Ganey PX Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey, at the AHAFH was in

continuous decline during Q1-2021 (ED PX mean score = 64.81, *n* = 130), down by 4.05 points (5.9% decrease) as compared with Q4-2020 (ED PX mean score = 68.86, *n* = 125) (Fig. 1). Furthermore, based on patient complaints and comments analysis, behavioral concerns around various domains of ED PX including arrivals, doctors, nurses, and overall assessment were not infrequent issues.

## Rationale

Providing a distinguishing PX is one of the Ministry of Defense Health Services' (MODHS') corporate and AHAFH's strategic objectives. Based on the PX journeys, the ED was a priority area for PX improvement owing to the increased volume of patients using the ED services at AHAFH. Furthermore, an excellent PX is a priority area of Saudi Arabia Vision 2030: Health Sector Transformation Program and an indicator of operational excellence linked with a better effect on a healthcare organization's reputation.<sup>[6]</sup> Existing literature demonstrates that staff-patient communication and staff empathy and compassion are among the most frequently cited factors that shape the PX in an ED setting.<sup>[5]</sup> These reflections were the immediate stimulus for the AHAFH leadership and ED to use a comprehensive and collaborative approach that will focus on the staff behavioral model to implement an improvement project to improve the PX at the AHAFH ED. During Q2-2021, the ED team and PX team in collaboration with the hospital leadership planned to achieve the ED PX mean score of 70.00 (8% increase) by the end of Q1-2022.

## Specific Aim

We aimed to increase the ED PX mean score from 64.81 to 70.00 (8% increase) by the end of Q1-2022 (12-month period).

## METHODS

### Ethical Considerations

This quality improvement project did not require organizational ethics committee approval.

### Context

The AHAFH ED has 11 zones, consisting of 54 monitored beds and 16 assessment chairs with 109,266 annual (about 9105 per month) ED patient visits. AHAFH in its efforts to continuously improve the quality of healthcare delivered to the patients, recently redesigned the ED to improve the waiting experience of the patients, using the lean methodology by adapting the Canadian Triage and Acuity Scale.<sup>[7]</sup> The next phase of the improvement was prioritized to focus on improving the PX at the AHAFH ED in conjunction with the hospital's strategic and operational priorities.

### Behavior Model

The behavior model design from Netcare Hospital/ Holdings was used and modified to adapt to the needs of the local hospital ED context in terms of community and culture at AHAFH.<sup>[8]</sup> The design of the behavioral model particularly focuses on ED staff to adopt the seven key behaviors as described below:

1. Respect: "I will always greet everyone to show my respect."

2. Identity: "I will always introduce myself to show my identity."
3. Dignity: "I am always well groomed to show my dignity."
4. Care: "I always practice proper hand hygiene to show my care."
5. Compassion: "I always seek consent to show my compassion."
6. Appreciation: "I always say thank you to show my appreciation."
7. Diversity: "I always embrace diversity to show I am not a racist."

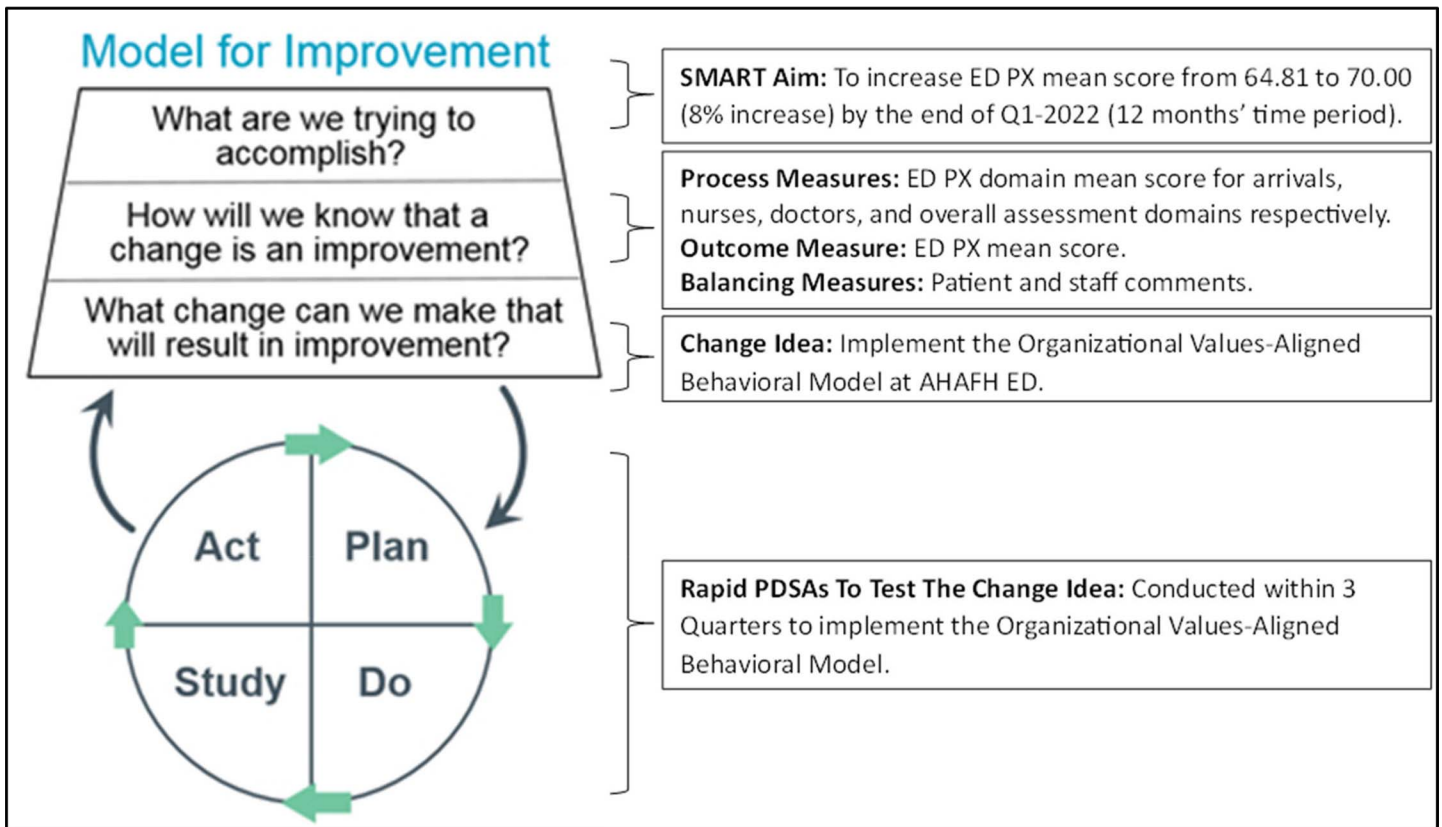
The behaviors that are demonstrated through the behavioral model closely align with the MODHS and AHAFH organizational values of "Patients First," "Human Centric," "Innovations," "Professionalism," and "Continuous Learning."

### Plan-Do-Study-Act Cycles

A multistakeholder core team was gathered; it consisted of ED nursing director as team leader along with ED medical director, ED nursing coordinator from the unit-based council (UBC), the PX head, and continuous quality improvement and patient safety consultant. The hospital's executive leadership fully supported and sponsored this PX improvement project at the AHAFH ED. The Institute for Healthcare Improvement (IHI) model for improvement Plan-Do-Study-Act (PDSA) was used to implement the behavioral model intervention to improve the ED PX mean score.<sup>[9,10]</sup> Multiple focus groups, engaging the employees representing the entire ED and the patients, were conducted to better adapt the behavioral model to our local context in the AHAFH ED. All the ED staff received initial training on the behavioral model. ED UBC structure was leveraged to continuously reinforce the use of the behavioral model approach by the nursing staff whenever they are dealing with patients at the ED. Regular meetings with the UBC champions were conducted to sustain the collaborative multidisciplinary teamwork between nursing, doctors, and other members of the service team. This allowed advanced planning for the sustainability of any positive gains from the project by creating a local coalition and a common platform for communication among the ED team.<sup>[5]</sup> A quarterly review of the IHI model for improvement PDSA was performed for any iterations based on the ED PX mean score of the previous quarter. The IHI model for improvement PDSA cycle was used during the intervention phase spanning Q2-2021 to Q4-2021 (Fig. 2).

### Plan

- The team studied the results of the Press Ganey PX HCAHPS survey at the ED for Q4-2020 and Q1-2021.
- Results revealed concerns related to the staff attitudes and behaviors.
- The plan was to leverage the ED UBC members for implementing the behavioral model at the AHAFH ED (Fig. 2).



**Figure 2.** IHI model for improvement PDSA cycles for implementing the emergency department behavioral model to improve patient experience. AHAFH: Al Hada Armed Forces Hospital; ED: emergency department; IHI: Institute for Healthcare Improvement; PDSA: Plan-Do-Study-Act; PX: patient experience; SMART: Specific, specific, measurable, achievable, realistic, and time-bound aim.

- The UBC members consisted of 15 ED staff that were part of the daily workforce.
- UBC members were deployed to gain the buy-in from the rest of the ED team.

#### Do

- A UBC monthly meeting was held with all the members including a member from the quality team.
- One part of the agenda was the PX, which includes the quarterly results for Press Ganey PX HACHPS survey at the ED.
- All the ED staff were trained on the behavioral model.
- Patient-staff focus groups were conducted to gather the comments as well as use codesign principles for optimal adaptation of the behavioral model into the context of AHAFH ED.
- The team took individual behaviors and came up with an action plan for each required behavior:
  1. Patient Friendly identification cards were made so that patients and their families were able to identify the staff easily.
  2. The ED staff was encouraged to greet all patients in the Arabic language to create the right first impression with the patients and families.

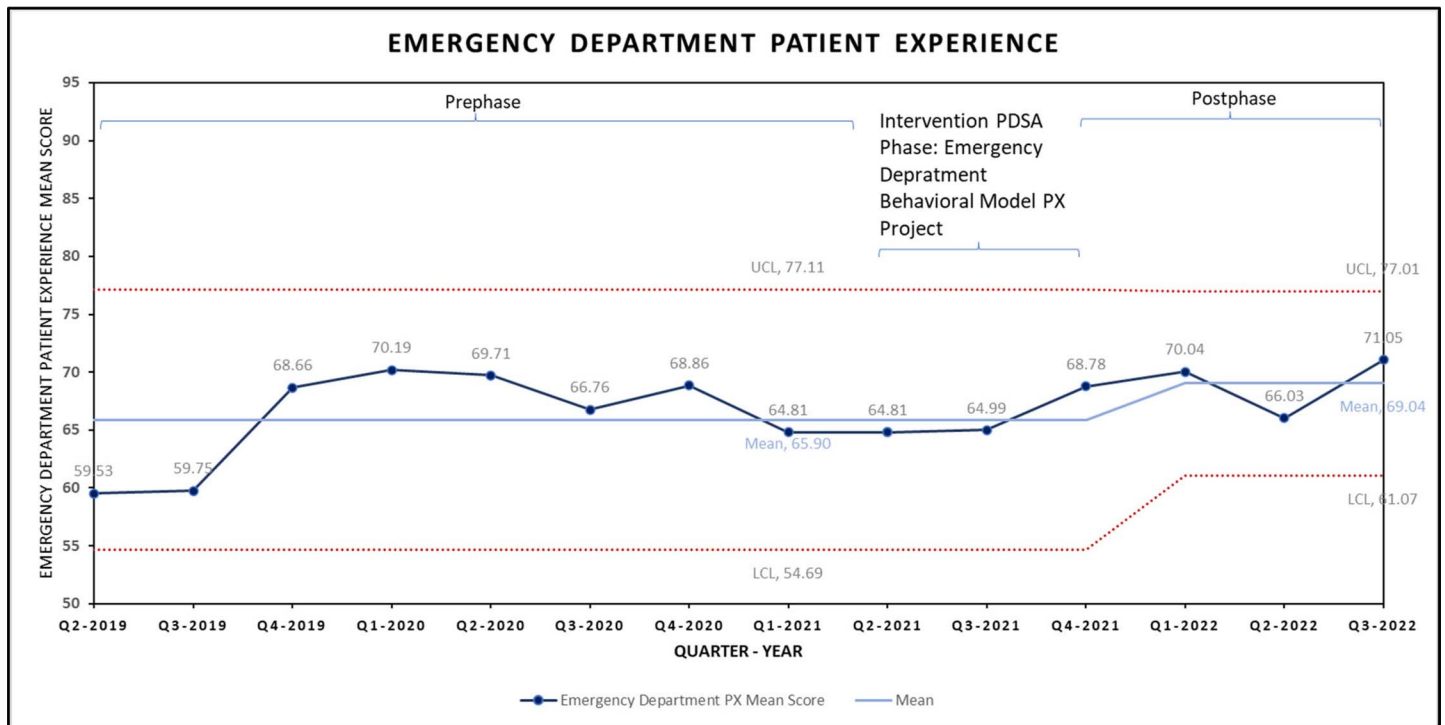
3. The staff was encouraged to wear the appropriate and official uniform, and this was escalated as a challenge with the director of nursing to request that laundry increase the supply of uniforms to staff to meet this behavior criterion.
4. The practice, assessment, and suit tool was developed to do random audits to encourage the proper practice of hand hygiene, consent, and appreciation (Supplemental Figure S1, available online).
5. The staff behavior was observed with daily contact during huddles and observations with the patients.

- Daily huddles and PX communication board were used as an opportunity to reinforce the seven behaviors of the behavioral model as a practice norm among the ED staff and encourage ED staff engagement.
- Regular UBC meetings, UBC champions, and videos across ED screens demonstrating the seven key behaviors were leveraged for reinforcement and optimal uptake of the behavioral model skills practiced at the frontlines of ED.

#### Study

- There was an overall improvement in the ED PX mean score reaching 70.04 by the end of Q1-2022.





**Figure 3.** Control chart for emergency department patient experience mean score variation and improvement during preintervention, intervention, and postintervention phase. PDSA: Plan-Do-Study-Act; PX: patient experience.

- Multiple positive staff and patient comments were received for the AHAFH ED.

#### Act

- Leverage the behavioral model to improve and sustain the positive PX at scale across all the settings of AHAFH, using the standardized MODHS Service Excellence and Service Recovery program.

#### Measurement

We collected the data by using a validated and reliable instrument, the Press Ganey PX HCAHPS survey. The Press Ganey conducted the PX HCAHPS survey on a randomized sample from the total patients visiting the AHAFH ED to generate a report of quarterly ED PX HCAHPS survey results. The AHAFH and MODHS have been working in partnership with Press Ganey to conduct regular PX HCAHPS surveys and receive quarterly reports since Q2-2019. We selected ED PX mean score as the primary outcome measure, and the ED PX domain mean score in the domains of arrivals, nurses, doctors, and overall assessment as the process measures driving the ED PX mean score. Qualitative data (balancing measure) about the staff and patient comments through various focus groups and Press Ganey PX HCAHPS survey were also collected for the project.

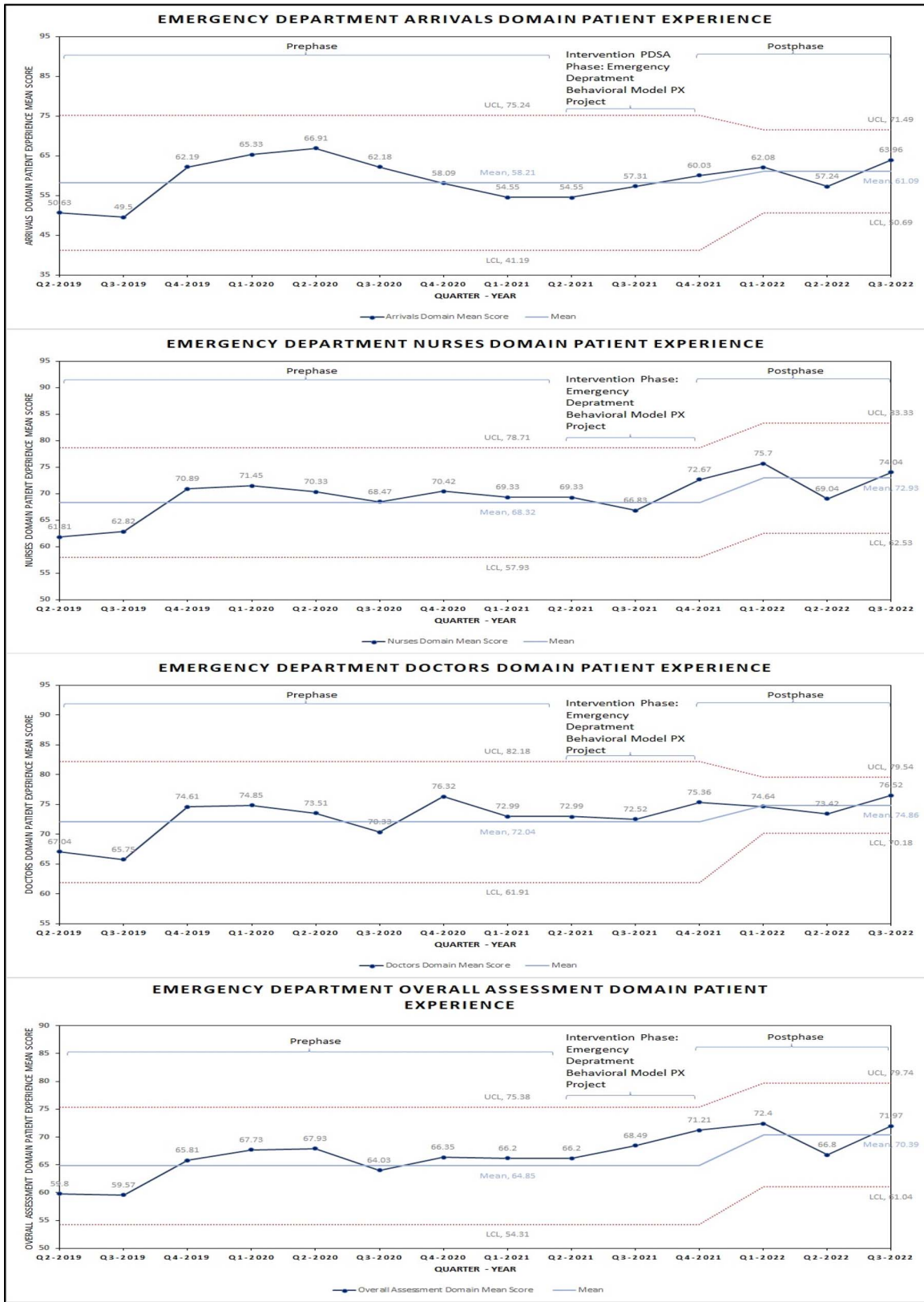
#### Analysis

A descriptive analysis of the quantitative measures (process and outcomes) collected over time were

reported as control charts with phase analysis of preintervention and postintervention phases. Control charts were used to measure the effect of intervention preimplementation and postimplementation of the behavioral model on the AHAFH ED PX mean score. The corresponding mean, upper control limit (UCL), and lower control limit (LCL) were reported to identify improvements in these measures. Qualitative measurement (balancing measure) of the staff and patient comments through various focus groups and Health Links Press Ganey PX HCAHPS survey were used for the project and reported verbatim to the project leadership. SQUIRE (Standards for Quality Improvement Reporting Excellence for Education) 2.0 guidelines were used to write the manuscript.<sup>[11]</sup> The data were analyzed by using Microsoft Excel.

#### RESULTS

The ED PX mean score (outcome measure) improved during the three quarters to reach above the desired target at 70.04 ( $n = 516$ ) by Q1-2022 with a shift in the control chart mean, UCL, and LCL during the post-behavioral model implementation phase at the AHAFH ED (Fig. 3). There was a decline in the ED PX mean score to 66.03 ( $n = 488$ ) during Q2-2022 (Fig. 3). The ED PX mean score reached 71.05 ( $n = 309$ ) by the end of Q3-2022, indicating a sustainable improvement (Fig. 3). Similar improvements were also noted in our process measures of ED PX domain mean score for



**Figure 4.** Control chart for process measures of arrivals domain, nurses domain, doctors domain, and overall assessment domain patient experience mean score demonstrating variation and improvement during preintervention, intervention, and postintervention phase. PDSA: Plan-Do-Study-Act; PX: patient experience.

arrivals, nurses, doctors, and overall assessment domains (Fig. 4).

Our patient-staff focus groups and PX survey comments (balancing measure) also presented a deeper qualitative effect of the behavioral model implementation at AHAFH ED in improving the PX comments during the postbehavioral model implementation phase at AHAFH ED.

## DISCUSSION

The project aimed to improve the ED PX through a crosscutting sustainable intervention that used standardized behaviors and attitudes amongst ED staff while communicating with the ED patients at AHAFH. For this to be achieved a collaborative, multidisciplinary approach was used under the strong commitment of the executive leadership, which leveraged and optimized already existing resources to improve the ED PX cost-effectively.

A key lesson learned during the implementation of the behavioral model through the IHI model for improvement PDSA was to adapt the behavioral model to fit the local context and setting, making such models more effective in generating sustainable improvements. As shown, by Q3-2022, the ED PX mean score was 71.05, well above the target aim of 70.00 (Fig. 3). During Q2-2022, there was a decline in the ED PX mean score to 66.03. This decline was expected owing to an increased expatriate ED staff turnover resulting from the local authorities' decision to lift pandemic-related travel restrictions, as well as increased burnout among frontline healthcare workers. The ED leadership and the project team acted proactively by partnering with the recruitment department to increase staff hiring and reduce the vacancy rate. Moreover, they used monthly UBC meetings, daily ED huddles, and project team meetings to make staff feel appreciated with positive comments from patients, reduce staff burnout, and transparently share the steps taken by leadership to reduce the nursing vacancy rate and nurse-to-patient ratio in the ED. These strategies led to improvement and sustainment of the ED PX mean score well above our target aim by the end of Q3-2022. The report shows the collaborative multidisciplinary approach of ED nurses, physicians, nursing leadership, and the PX team, demonstrating that organizational value-aligned core behaviors are significant factors in improving PX and ultimately sustaining a quality healthcare service.

Previous studies have identified numerous factors including staff behaviors that affect the PX.<sup>[5]</sup> To mitigate staff behavioral challenges, it is essential to implement a nonpunitive, blameless, and fearless learning culture at the unit and hospital level.<sup>[3,4]</sup> An effective and efficient PX culture is driven by a supportive management and leadership team.<sup>[5,4]</sup> Nurses are at the forefront of the PX and are the helping hand to patients

in need.<sup>[5]</sup> Leveraging UBC and recognizing staff with positive PX comments are additional lessons we learned during our project, which may significantly help improve the ED PX through active staff engagement and co-design.

Our project is the work of a single healthcare institution department at the local ED, which could limit generalizability. However, we believe that the basic principles described in using an organizational values-aligned behavioral model and evaluating its effectiveness, using the IHI model for improvement PDSA, could be easily extrapolated to other types of institutions.

## CONCLUSION

Staff behavior is a major priority for improvement in the ED PX journey of a patient. By adopting an organizational values-aligned standardized behavioral model, sustainable PX improvement can be achieved in busy ED settings. Leadership support is a significant part of improving the PX. By adopting standardized service behaviors, PX can be improved on a larger scale.

## Acknowledgments

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## Supplemental Material

Supplemental materials are available online with the article.

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