

# The Nurse's Role in Preventing Clinical Deterioration

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- No financial disclosure or conflicts of interest with the presented materials.
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- **Learning Objective:**
  - *Learners will learn how standardized physical assessment can improve clinical outcomes.*

- Early detection of patient deterioration can prevent Failure to Rescue (FTR) and save patients' lives<sup>1</sup>.
- 46% of ICU admission could be avoided when patients were monitored closely<sup>2</sup>.
- Electronic early warning system requires timely and accurate physical assessment documentation<sup>3</sup>.
- There are barriers, such as lack of knowledge of changes in vital signs, for nurses to perform physical assessments<sup>4</sup>.

- Methodist Proficient Assessment Competency (MPAC) Certification was created to standardize the process for completing a systemic physical assessment.
- This 4-hour course included didactic training that taught the standardized physical assessment and included a video demonstration, followed by return demonstration of a physical assessment on a standardized patient and a clinical deterioration simulation with a high-fidelity manikin.

- The pilot training started in December 2017.
- After the pilot training, the house-wide nursing education was completed between April and December 2018.
- 1,800 nurses (99.7% of nurses at Houston Methodist Hospital), were trained.
- Added the curriculum to the nursing on-boarding program in January 2019 and continues today.

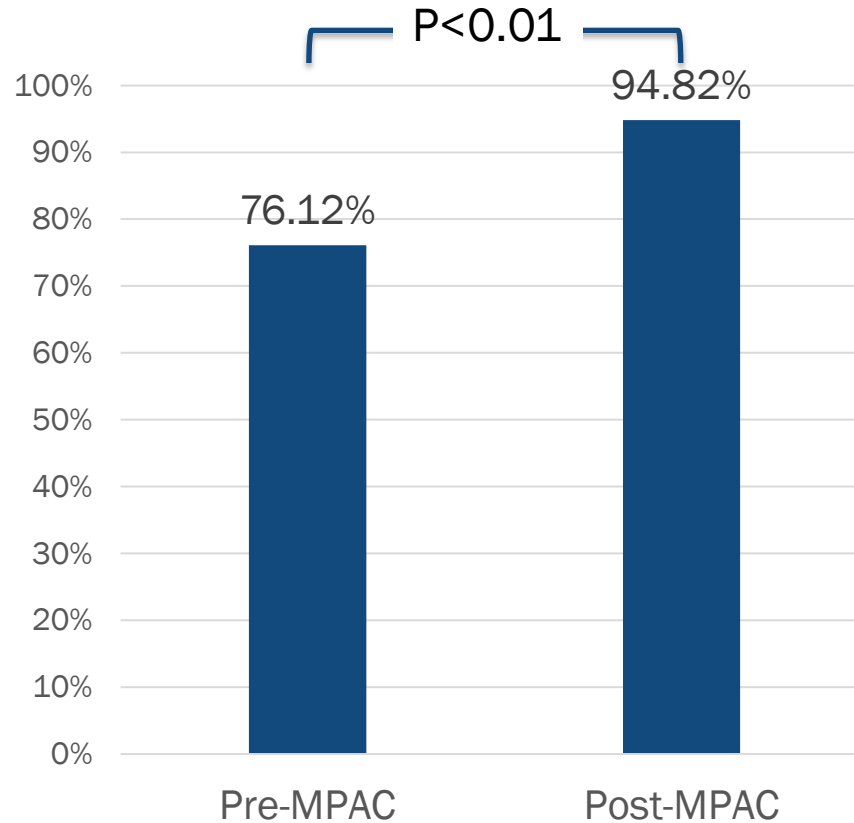
## **Did we change nurses' practice around physical assessment?**

- Completion Rate
- Timeliness and Accuracy of Documentation

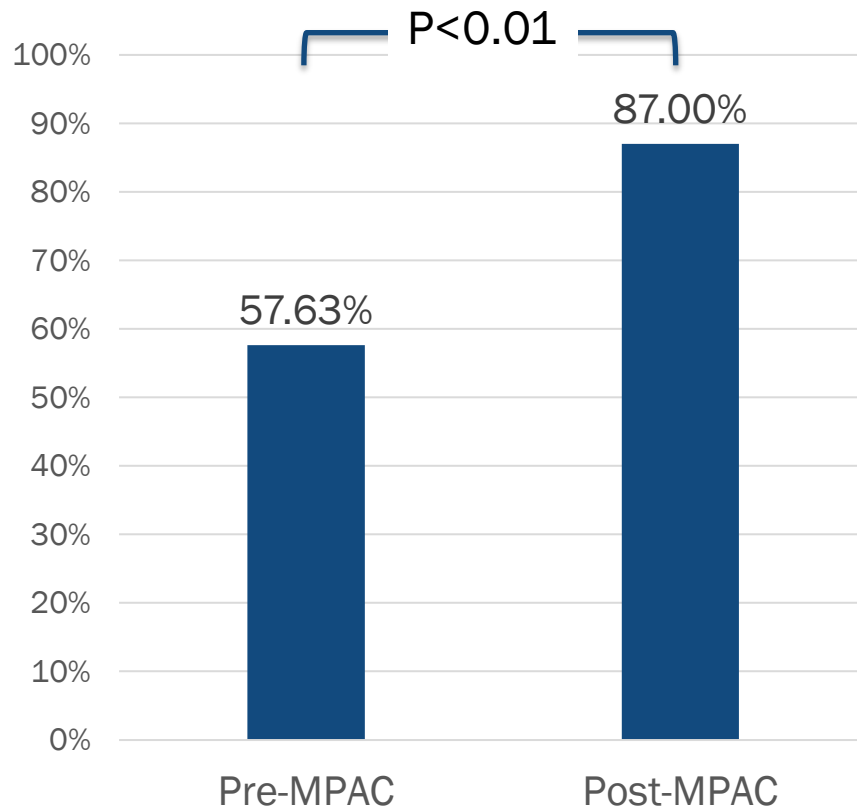
- A Physical Assessment Audit tool was developed.
- Before the MPAC training, we audited 179 nurses when performing physical assessment.
- After the MPAC training, we audited 951 nurses.



# Physical Assessment Completion Rate Increased



# More Documentation Happened within Four Hours



## **Did we see any clinical outcomes after MPAC?**

- Early detection of clinical deterioration
- ICU Admission
- Survival Rate

# Review Medical Records Before and After The MPAC Training

- Houston Methodist Hospital has a Rapid Response Team (RRT), which is composed of nursing practitioners and a respiratory therapist.
- Nurses activate the Rapid Response Team when the patient has vital sign changes such as tachycardia, bradycardia, hypotension, hypertension, tachypnea, bradypnea, hypoxia, or a change in level of consciousness.
- We reviewed medical records of patients with a RRT call for the period of six months before and after MPAC training.

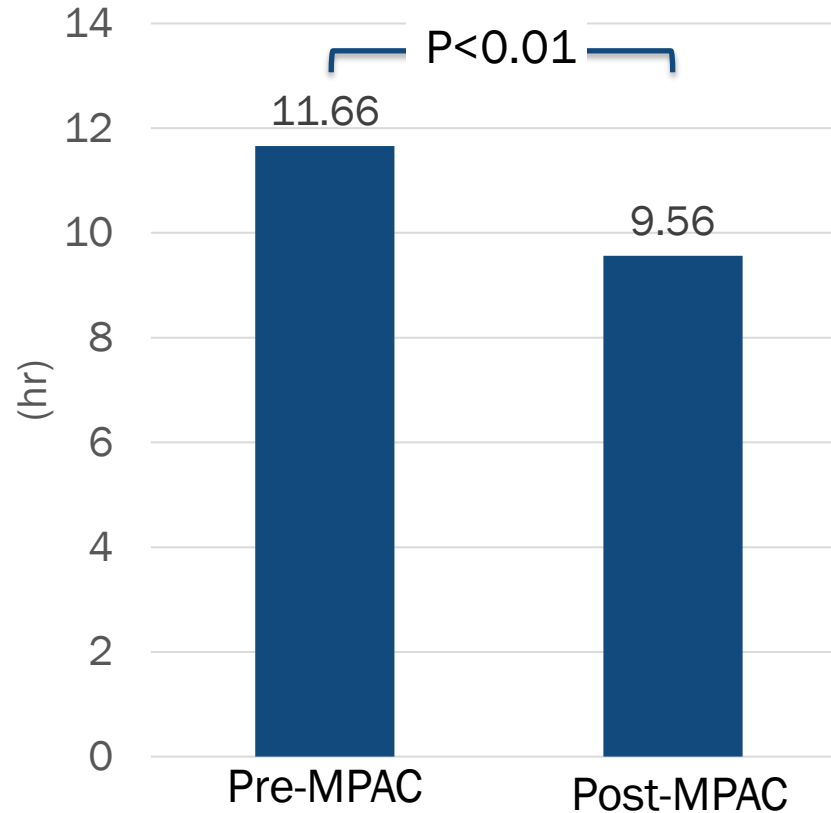
# Statistics Showed The Demographics Were The Same

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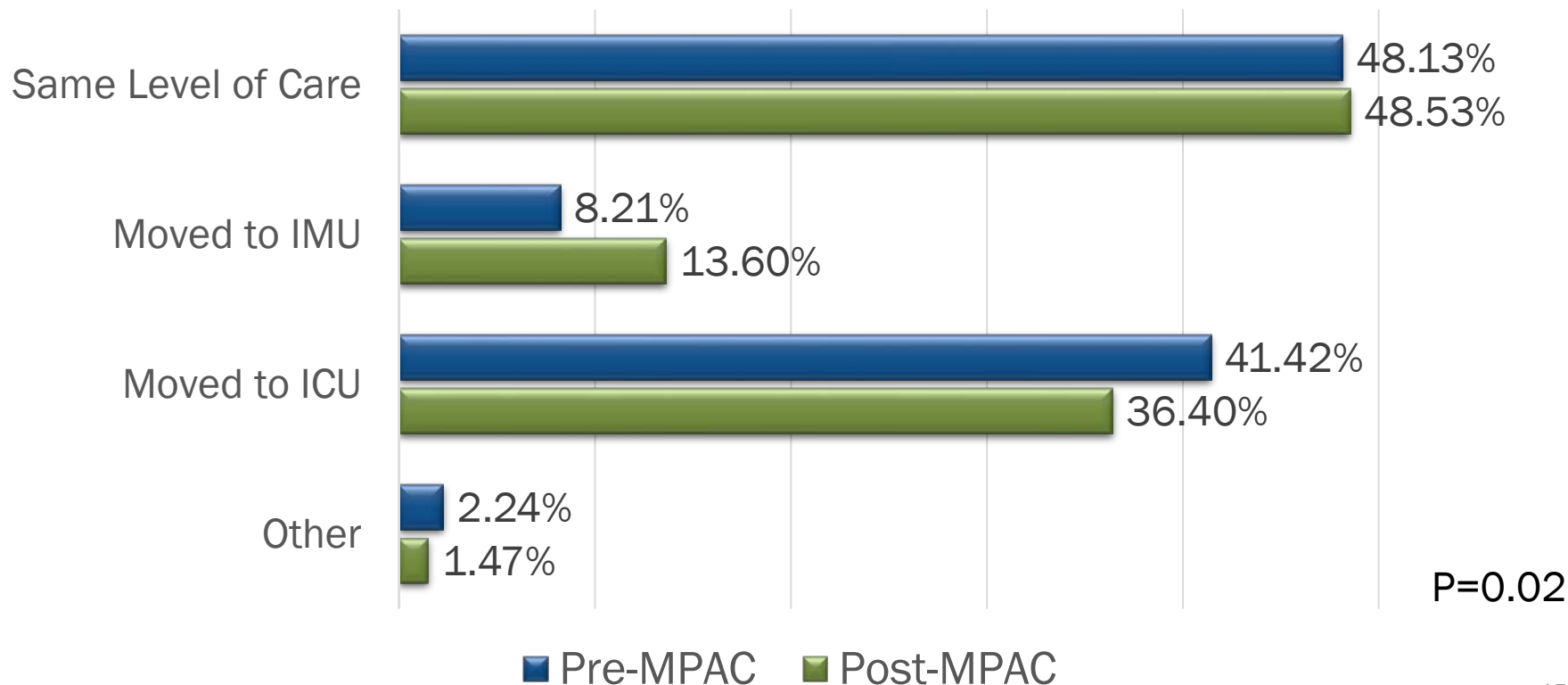
	<b>Pre-MPAC</b>	<b>Post-MPAC</b>	<b>p-value</b>
	<b>N=536</b>	<b>N=544</b>	
Age at time of Admission (Years)	64.66	64.56	0.92
Gender			0.72
Male	265 (49.44%)	263 (48.35%)	
Female	271 (50.56%)	281 (51.65%)	

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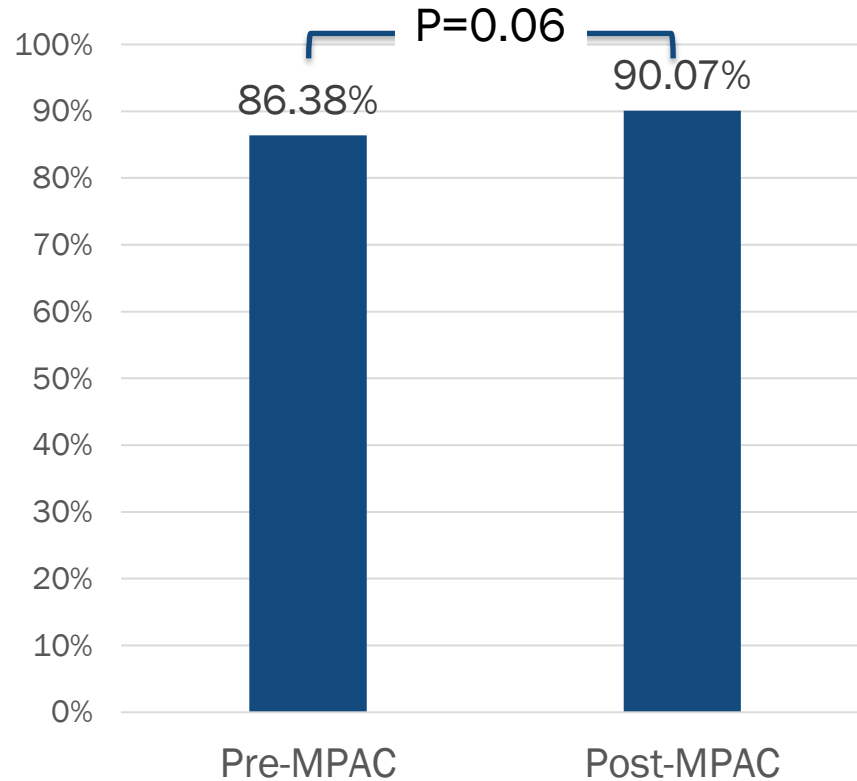
# RRT Activation Time Was Reduced Significantly



# Dispositions After The RRT Calls



# Survival Rate Trended to Increase





# Odds of Death Increased When Transferring to ICU

	OR	95% CI	p-value
Group			
Post-Intervention Group	0.74	(0.50, 1.08)	0.121
Disposition after the RRT			
Ref: Same level of care			
Moved to IMU	1.11	(0.48, 2.61)	0.805
Moved to ICU	4.67	(3.00, 7.26)	<b>&lt;0.001</b>
Other	-		

- MPAC education emphasized the importance of physical assessment.
  - It increased physical assessment completion rate.
  - Nurses documented physical assessment timelier.
- Accurate and timely physical assessment improved clinical outcomes.
  - Activated RRT calls sooner.
  - Reduced ICU admission
  - Improved survival rate

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