

The Nurse's Role in Preventing Clinical Deterioration

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Disclosure / Acknowledgement



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

Background of The Study



- Early detection of patient deterioration can prevent Failure to Rescue (FTR) and save patients' lives¹.
- 46% of ICU admission could be avoided when patients were monitored closely².
- Electronic early warning system requires timely and accurate physical assessment documentation³.
- There are barriers, such as lack of knowledge of changes in vital signs, for nurses to perform physical assessments⁴.

- 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?

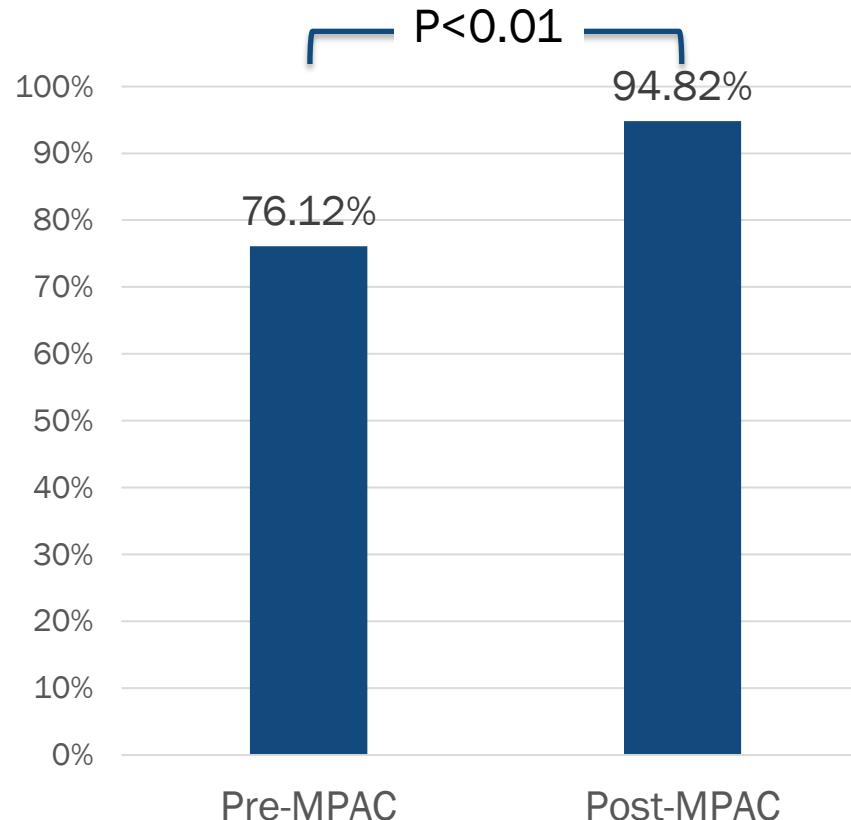
- Completion Rate
- Timeliness and Accuracy of Documentation

Audit Physical Assessment Process

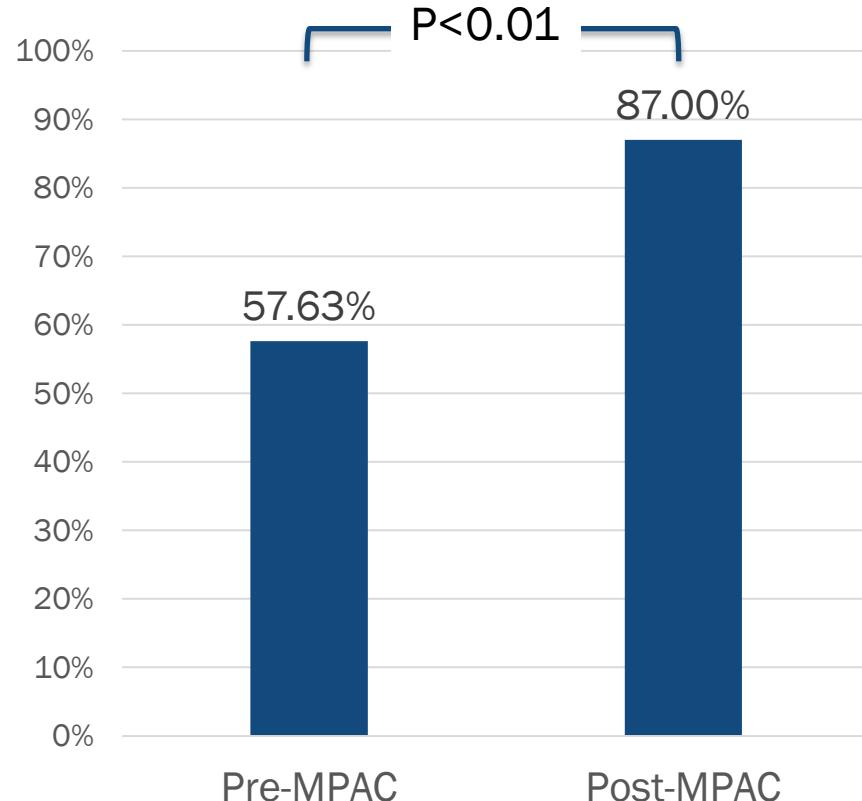


- A Physical Assessment Audit tool was developed.
- Before the MPAC training, we audited 179 nurses when performing physical assessment.
- After the MPAC training, we audited 951 nurses.

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



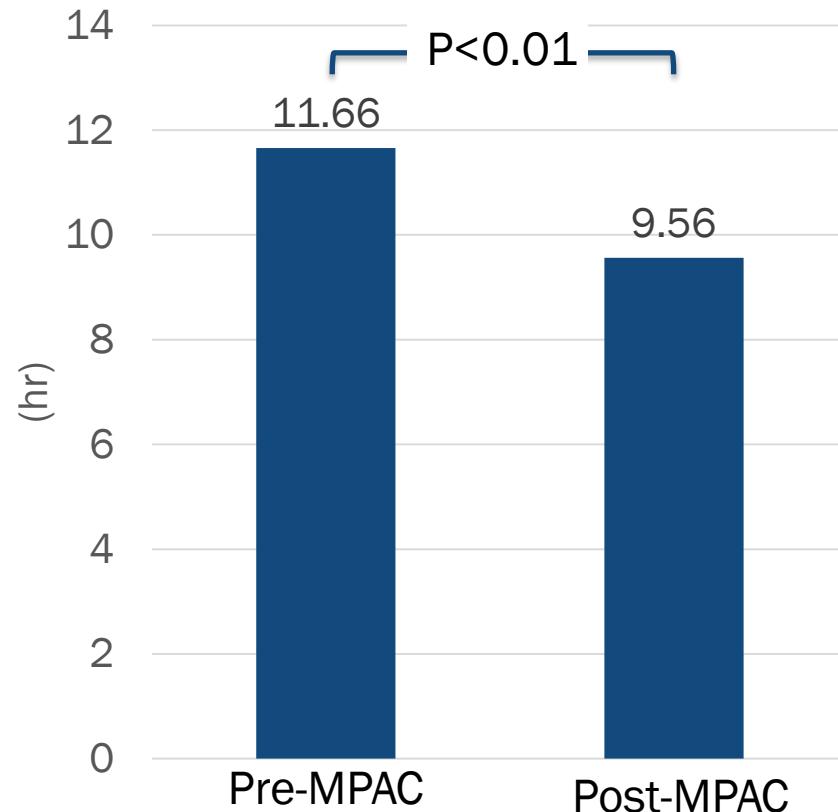
- Houston Methodist Hospital has a Rapid Response Team (RRT), which is composed of nursing practitioners and a respiratory therapist.
- Nurses activate the Rapid Response Team when the patient has vital sign changes such as tachycardia, bradycardia, hypotension, hypertension, tachypnea, bradypnea, hypoxia, 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

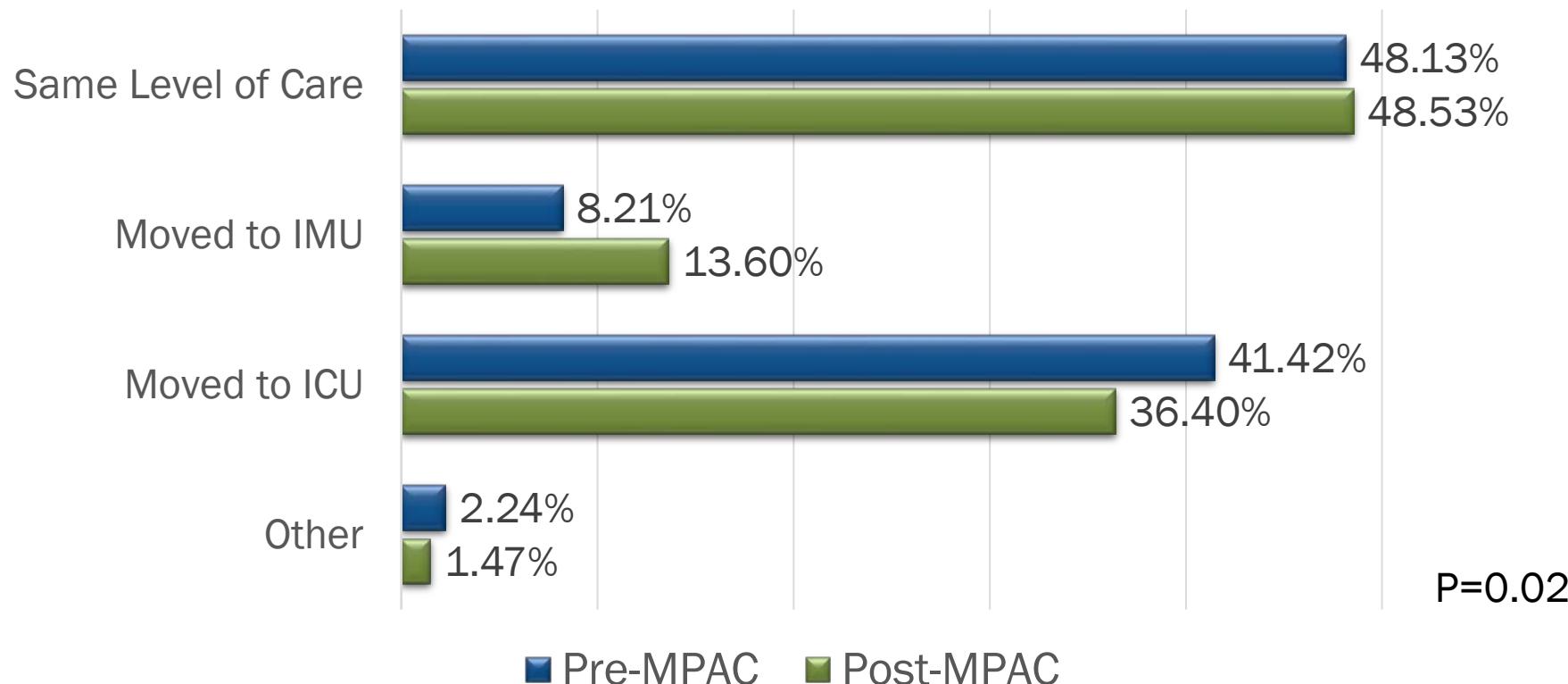


	Pre-MPAC N=536	Post-MPAC N=544	p-value
Age at time of Admission (Years)	64.66	64.56	0.92
Gender			0.72
Male	265 (49.44%)	263 (48.35%)	
Female	271 (50.56%)	281 (51.65%)	

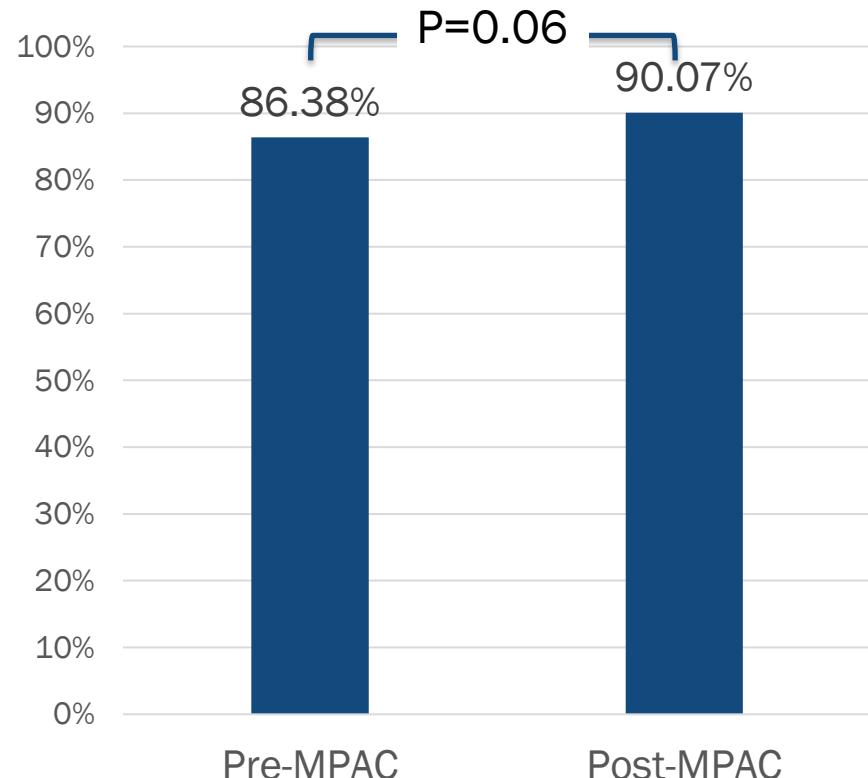
RRT Activation Time Was Reduced Significantly



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)	<0.001
Other	-		

Conclusion

- 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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