

# DELAYED MERT ACTIVATIONS AND PATIENT MORTALITY

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## BACKGROUND

The purpose of University Medical Center's (UMC) Medical Emergency Response Team (MERT) is early identification and intervention for patients at risk for clinical deterioration to improve patient safety and help prevent negative patient outcomes. Current research shows that delayed activation in a hospital's emergency response system is associated with increased patient morbidity, mortality, and length of stay (Padilla & Mayo, 2019). The following is a quality improvement (QI) project that highlights the importance of early detection of deterioration and timely MERT activation for decreasing patient mortality.

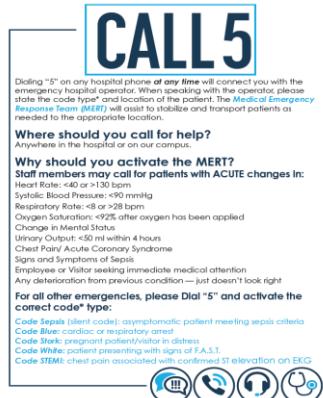
## PURPOSE

By examining when delays in MERT activations occur and identifying what trends and barriers exist to activating the emergency response system, we can work to decrease average length of stay and improve patient outcomes.

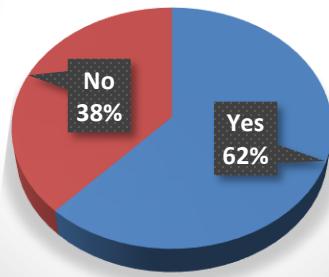
## METHODS

This QI project examines the relationship that delayed MERT activations has on code blue events. We analyzed data that included all code blue activations on the medical-surgical and intermediate care units from January 1, 2025 to May 31, 2025 to determine which patients met MERT criteria and/or had a documented decline in clinical condition within 48 hours prior to a code blue event.

CALL TYPE		Indicator								
Call Type	Jan	Feb	Mar	Apr	May	Jun		Benchmark	1Q25	2Q2
MERT	394	351	376	360	377	319				
Request	6	1	15	9	9	11				
Code BLUE	42	23	25	24	26	29				
Code WHITE	21	14	26	31	30	16				
OB Stork	33	27	13	30	15	15				
OB Stat	1	0	0	1	1	1				
Follow-up	28	25	32	32	25	15				
Code Crimson	1	2	2	2	2	1				
High Risk ID	1	1	2	0	1	1				
Code Sepsis	2	6	6	6	2	4				
Code Crimson	1	2	2	2	2	1				
Transport	1	0	1	0	0	1				
STEMI	2	2	1	1	1	1				
<b>TOTAL</b>	<b>533</b>	<b>454</b>	<b>502</b>	<b>498</b>	<b>491</b>	<b>415</b>				



## Met MERT Criteria <48 Hours Prior to Code Blue Event



## RESULTS

Of the 21 code blues activated on medical-surgical or intermediate care units, 13 of those had documentation of meeting UMC's established MERT criteria and/or clinical decline in condition within 48 hours prior to a code blue activation.

## CONCLUSIONS

Nearly 62% of the code blue activations occurring in the medical-surgical or intermediate care units showed signs of clinical deterioration or had documented clinical changes within 48 hours prior to the code blue event.

Through early identification of clinical deterioration and prompt activation of the emergency response team, we can work to decrease the number of code blue events and, in turn, decrease patient morbidity and improve patient outcomes.

## REFERENCES

Padilla, R. M., & Mayo, A. M. (2019). Patient survival and length of stay associated with delayed rapid response system activation. *Critical Care Nursing Quarterly*, 42(3), 235-245. <https://doi.org/10.1097/cnq.0000000000000264>

