

### BACKGROUND

MUSC pediatric CICU has a cumulative total adjusted cardiac arrest rate of 2.1 cardiac arrests per 1000 ICU days (national average is 4.8 cardiac arrests per 1000 ICU days).

However, amongst medical patients, the MUSC pediatric CICU adjusted cardiac arrest rate is above national average at 5.6 cardiac arrests per 1000 ICU days (compared to 4 cardiac arrests per 1000 ICU days).

Cardiac Arrest Prevention (CAP) is a 5 element bundle aimed at cardiac arrest (CA) prevention in the MUSC pediatric CICU.

After review, we discovered that the existing inclusion criteria for CAP excluded 70% of the medical patients who experienced a cardiac arrest.

Therefore, we implemented a change that broadened the medical patient CAP inclusion criteria in efforts to reduce the total cardiac arrest rate.

### AIM STATEMENT

Achieve 90% adherence rate for CAP in medical patients in MUSC pediatric CICU by March 31, 2022.

MUSC Pillar: Quality

### METHODS/INTERVENTION

Broaden the inclusion criteria for CAP for medical patients admitted to the pediatric CICU.

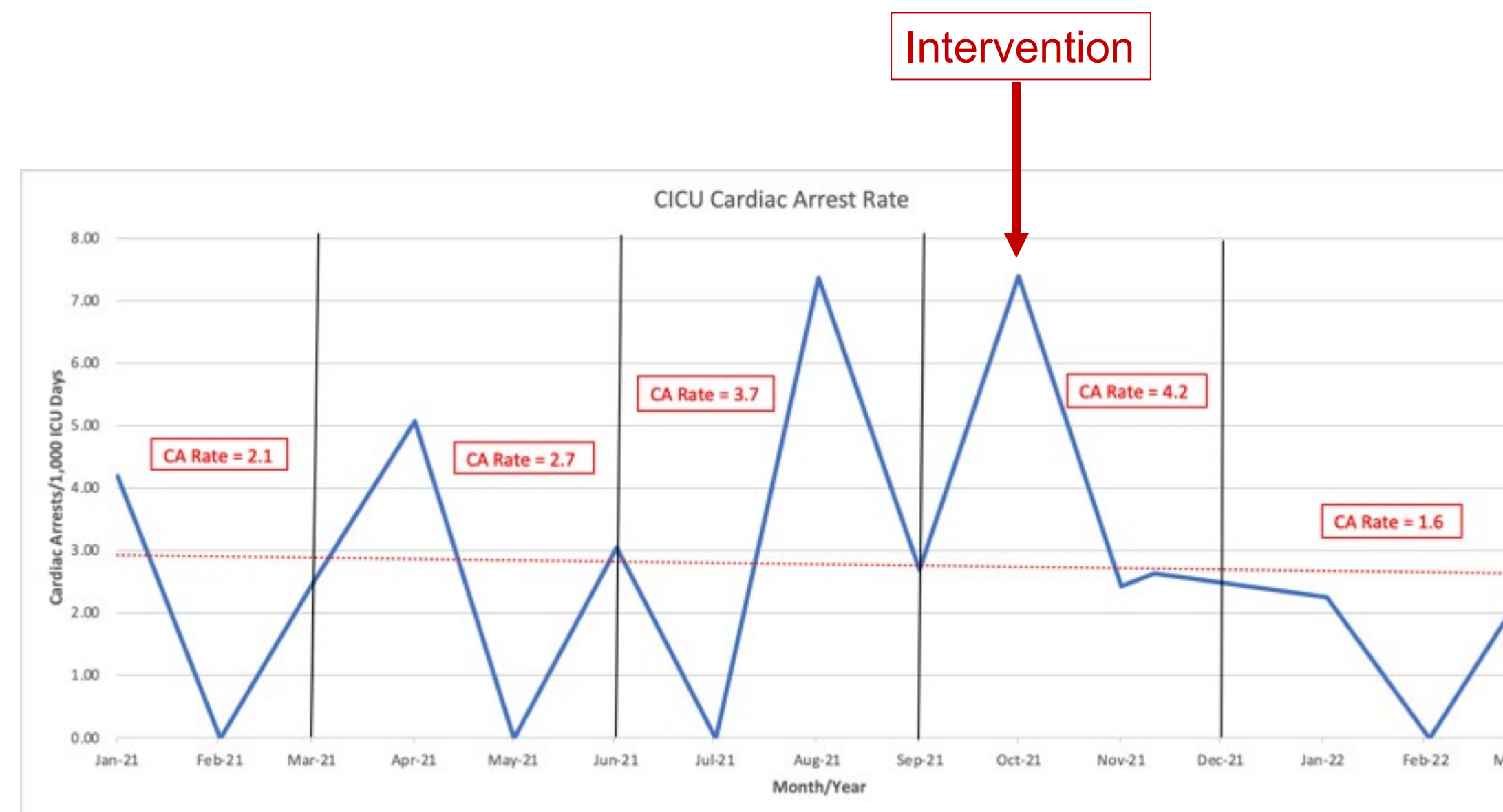
Provide education to pediatric CICU nursing staff, attending physicians, and pediatric cardiology fellows regarding the broadened inclusion criteria for CAP eligibility for medical patients.

Include CAP eligibility on physician and nursing handoff sheets and daily physician progress notes.

Measure CAP adherence rate for medical patients during Oct-Dec (Q2). Assess progress and consider changes to protocol. Measure CAP adherence rate for medical patients during Jan-March (Q3). Compare cardiac arrest rate from pre and post intervention.

### RESULTS

3-month period	CAP rate
Q4 AY2020	84%
Q1 AY2021	80%
<b>Q2 AY2021</b>	<b>75%</b>
Q3 AY2021	84%



### CONCLUSIONS

The specific aim of 90% CAP adherence for medical patients was not achieved.

Adherence for Q3 was improved compared to Q1 and Q2.

Despite failure to meet the CAP adherence goal of 90%, the cardiac arrest rate was lower in Q3 compared to Q1 and Q2.

While the 90% adherence goal was not met, there may have overall benefit because the total number of patients who received the CAP bundle still increased.

The increased number of CAP patients coupled with unprecedented patient volume in Q3 may have contributed to decreased CAP bundle adherence.

#### BARRIERS:

- Limited time due to busy CICU with high census and acuity
- Nursing staff turnover

### NEXT STEPS

Improve educational tools and frequency of education to new nursing staff with visual bedside cues.

Backup CICU attending physician will provide support for completion of CAP bundles.