

Research Explained

High Acuity Therapy Variation Across Pediatric Acute Care Cardiology Units: Results from the Pediatric Acute Care Cardiology Collaborative Hospital Surveys

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About this Study

Why is this study important?

- In 2017, the PAC³ Collaborative distributed a [survey to understand the care practices in the acute care cardiology units \(ACCU\) across hospitals](#). This survey included questions on how things were done on the unit, the structure of each unit, and how resources were used. In 2019, a second survey was sent out with similar questions.
- We describe how member hospitals of PAC³ use high acuity therapies (more intensive therapies) differently, assess whether the acuity therapy scores changed from 2017 to 2019, and if the acuity therapy scores were higher at hospitals with a higher surgical volume.

How was this study performed?

- Online surveys were sent to all PAC³ hospitals in 2017 and 2019. These surveys had 15 questions about acuity therapies in ACCUs, and if there was a “yes” answer, there were additional questions regarding that acuity therapies. These questions covered topics such as inotropic infusions (intravenous medications that improve heart function such as milrinone and dopamine), treatment of pulmonary hypertension (high pressure in the lungs), treatment of arrhythmias (problems with heart rhythm such as supraventricular tachycardia/SVT), respiratory care such as CPAP etc.
- Each hospital was given 1 point for each question with a positive answer about the types of therapies offered in their ACCU. These points from 44 survey questions were added to give the hospital’s acuity therapies score.
- Statistical tests were done to look at the consistency in surveys done in each hospital, and to see if there were any differences in the survey results between 2017 and 2019. The results were also compared to see if more of these therapies are done at hospitals that perform more surgeries.

What were the results of the research?

- 31/34 (91%) centers completed the 2017 survey and 26 centers the 2019 survey. This study includes answers about acuity therapies from the participating centers.
- A large difference was found in the types of therapy that are offered on ACCUS in PAC³ hospitals.
- In the two years between the surveys, we saw differences in many respiratory therapies offered in ACCUs. More of these hospitals reported that they use higher-level respiratory care, such as CPAP on ACCU in 2019 than they did in 2017.
- The acuity therapies scores from both surveys were higher for the hospitals that do more surgeries compared to those that do not do as many.

What are the limitations of this study?

- These surveys were only sent to hospitals that are a part of PAC³.
- The results of the surveys may not represent hospitals that are not involved in PAC³.
- This paper is based on the PAC³ hospital surveys but does not look at the ACCU registry database that began in February of 2019.

What is the impact of this study?

- The hospital surveys describe the differences in care practices in the ACCU at PAC³ hospitals.
- Many more ACCUs among participating centers used more advanced respiratory therapies in 2019 as compared to 2017.
- Participation in the PAC³ collaborative may allow centers to learn from one another and adopt practices that provide higher level of care in ACCUs while maintaining safety.
- Further study of outcomes such as survival and hospital length of stay using data from the collaborative database is necessary to identify use of which acuity therapies in the ACCU will affect these outcomes. Based on these results, participating centers can learn from each other.