Research Explained

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Identifying best practices in interstage care: using a positive deviance approach within the National Pediatric Cardiology Quality Improvement Collaborative
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About this study

Why is this study important?

- Many babies born with a damaged or under-developed heart ventricle have three different heart surgeries during their first few years, usually called staged surgeries. The time between the first surgery (called stage 1 or the Norwood Procedure) and the second (stage 2 or Glenn palliation) is called the **Interstage Period**.
- One of the most important goals of people caring for babies with single ventricle heart defects such as HLHS is to reduce the number of deaths in the **Interstage Period**, between the first and second heart surgeries. This is one of the reasons why the National Pediatric Cardiology Quality Improvement Collaborative (NPC-QIC) was formed.
- If we learn more about what the kind of care is being done during the **Interstage Period** by hospitals which have the lowest death rates, other hospitals could copy those best practices and reduce deaths.

How was this study performed?

- The researchers started by creating a questionnaire and then interviewing staff at 4 hospitals with relatively higher death rates and 7 hospitals with relatively lower death rates. Then they compared the results to see what kind of practices seemed likely to affect death rates.
- A new questionnaire was created using what had been learned from the first round. This new questionnaire was sent to 36 other hospitals.

What was the goal of the study?

- To find out if particular ways in which the best hospitals took care of kids during the interstage period might be linked with lower death rates.
- To find out about differences in how hospitals manage the interstage period.

What were the results of the research?

- There were 20 potential best practices identified and then analyzed across the 36 centers.
- Of these 20, only one was found likely to make a difference in death rates.
    - How often the care team talked officially with each other about the results of their surgery and follow-up care.
    - Most of the hospitals with relatively lower death rates talked officially at least once a month, and hospitals with higher death rates talked officially less often.

What are the limitations of this study?

- The number of centers contributing patients is still relatively small and each sites' focus on improvements over time makes identifying best practices difficult.
- Changes to practice over time cannot be accounted for in this analysis since data was collected at only one time point.
- This study only includes patients that were discharged following stage I Norwood surgery and does not included patients that were never discharged from the hospital or died following stage 1.

What it all means

- There was only one practice that seemed to be related to lower death rates.
- We learned that the staff at hospitals with relatively lower death rates talked with each other more often in formal or official meetings about the results of interstage care.
- Hospitals where the staff met to talk about their results four times a year had more deaths than hospitals where the staff talked every month.
- This study suggests that when people on a health care team discuss their results more frequently, they look for better ways of taking care of their patients and families.