

# Implementing and Evaluating Outcome Metrics in Pediatric Solid Organ Transplant Patients at British Columbia Children's Hospital



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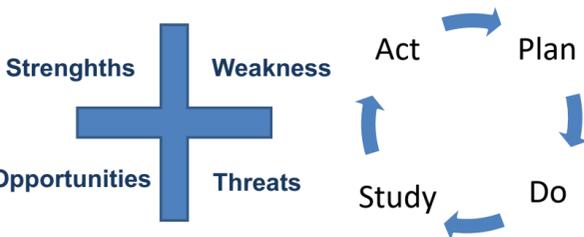
## Background

Post-transplant patients experiencing hospital admission is a major challenge for the health care system since it results in high financial burden and poor health outcomes.

The goal for this project is to implement a continuous data collection method so that the information can be used as a quality assessment tool to analyze patient outcomes and guide evidence-based practice and policy making at BCCH to improve PSOT (pediatric solid organ transplant) patient outcomes, thereby decreasing financial burdens and mortality rates.

## Methods

- Longitudinal study over 3 years
- Retrospective chart review from PROMIS, PowerChart and health records from Sep 2017 to present.
- Organization assessment was guided by applying SWOT (strengths, weakness, opportunities, threats) model.
- PDSA (Plan, Do, Study, Act) change cycles as a model of improvement to improve the evaluation of post solid organ transplant patient outcomes.



## Results

Table 1: Most common Re-hospitalization Causes	Number (out of 202)	Percentage (%)
Infection VIRAL	35	17.33
Infection Bacterial	35	17.33
Dehydration/Elevated Creatinine	35	17.33
Rejection	24	11.88
Acute kidney injury/ kidney failure	18	8.91
Electrolyte abnormalities	17	8.42

Table 1.

- A policy outlining the process of data collection was developed
- Early identification of key resources and stakeholders helped ensure a smooth process. This enhanced communication and receptivity to new ideas.
- Regular meetings assisted in timely approval of the new policy. Team meetings helped to engage staff, capture feedback and consider different perspectives.

## Challenges and Future plans

### Challenges

Sustainability of the data entry was found to be a challenge. Staff turn over, missing information in health records, and the use of different databases to collect the data were challenges that resulted in a slow progression of implementing the project.



### Future Plans

The future plans for the project is to the analyze data that has been collected and to make changes based on the information to our current clinical guidelines. As well as evaluate if improvements or changes that can be made to current practices that will improve pediatric post solid organ transplant patient outcomes.

## Discussion

•The data shows infection and dehydration/elevated creatinine as being the most common cause for admission post solid organ transplants at BC Children's Hospital. The findings are consistent with other studies in terms of the main causes for post-transplant hospital admission. The percent of each cause for hospitalization of the total has been presented in table1.

•The DCCR (Data Collection for Client Rehospitalization) was developed to collect data and was tested and evaluated using PDSA cycles.

•Future considerations would include utilizing an electronic platform for collecting and entering data. Strategies to facilitate electronic data collection need to be explored since current studies show that "Electronic and handwritten documentation consumed equal amounts of time and structured entry, compared to handwriting, may encourage more detailed records (M. Apkon,2000).

•Initially re-hospitalization data was compiled into an Excel spreadsheet. The data will be imported to REDCap (Research Electronic Data Capture) a secure web application for building and managing online surveys and databases.

## References

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