

# Decreasing Incidences of Peritonitis thorough Home Visits and Retraining

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## Purpose

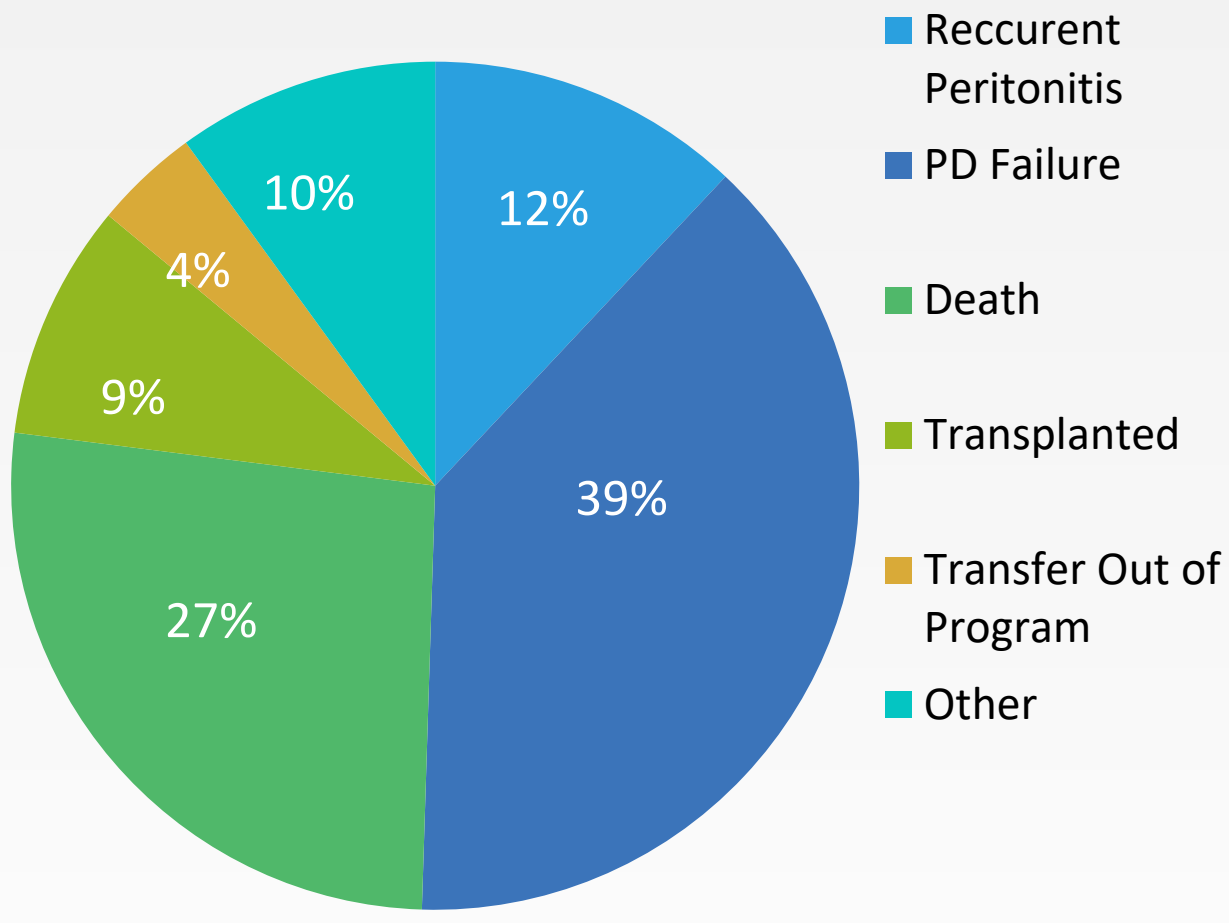
To describe the impact standardized home visits and retraining have on the incidence of peritonitis in our peritoneal dialysis population.

## Background

Humber River Hospital (HRH) is an academic community hospital with a comprehensive nephrology program encompassing the Multi-Care Kidney Clinic, Transitional Care Unit, Home Dialysis Program, and In-Facility Hemodialysis.

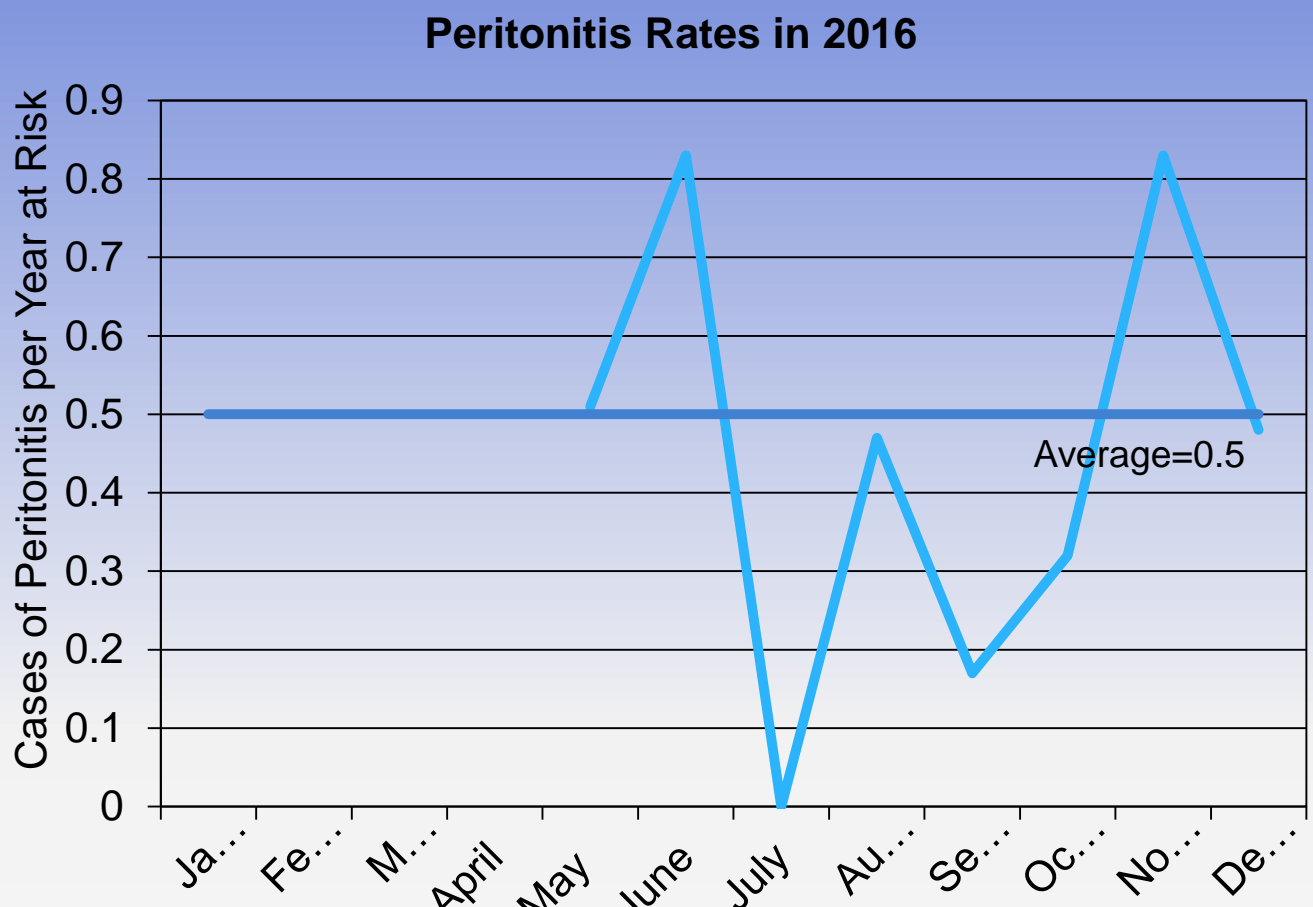
The home dialysis program offers training for hemodialysis and peritoneal dialysis. We have 91 prevalent hemodialysis and 84 prevalent peritoneal dialysis patients. The model of care entails primary nursing care with each nurse case managing 25 prevalent patients.

Data collected between 2016-2017 revealed that recurrent peritonitis was the 3rd leading cause for patient attrition to hemodialysis. Often times, patients that attrition from PD do not participate in the Home Hemodialysis program.



## Problem

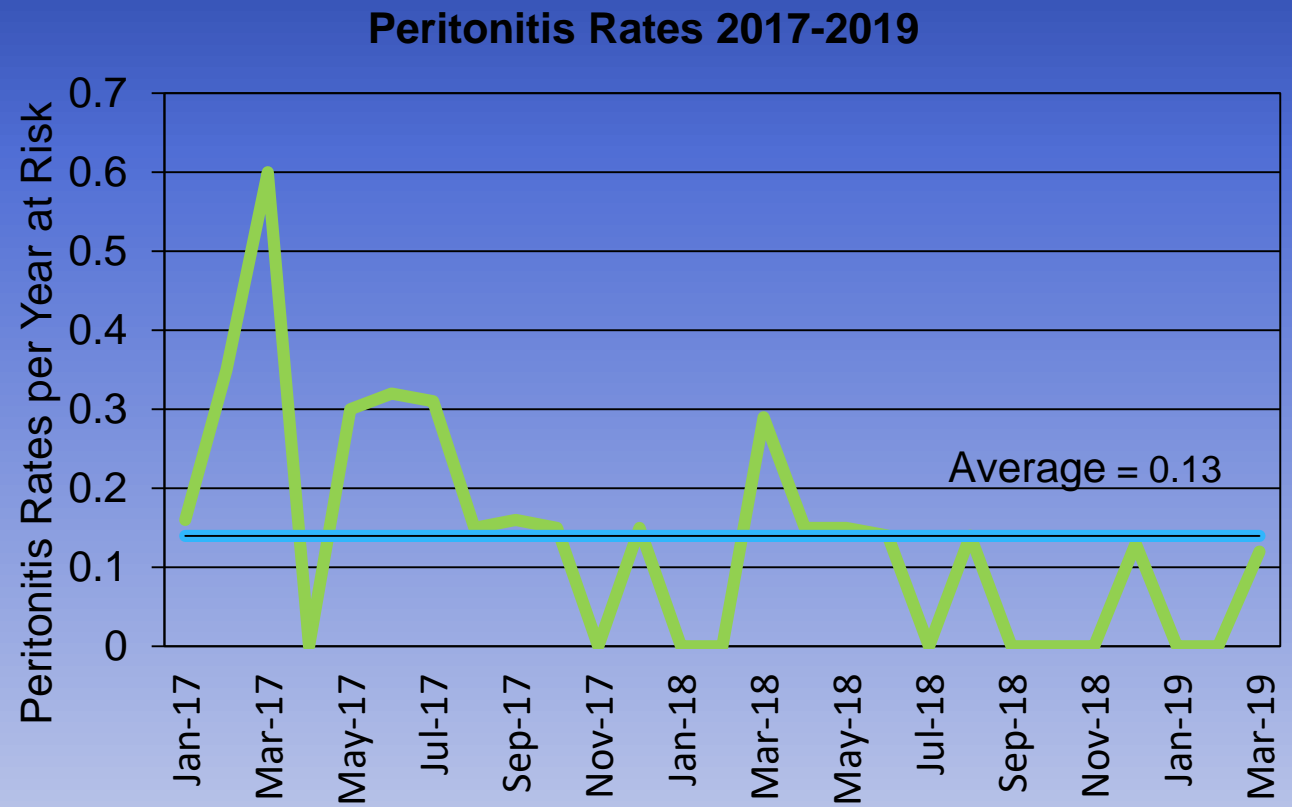
Recurring peritonitis is a leading cause for modality failure, hospitalization, overall mortality, and significant cost associated with the management of each event (Kam-Tao et al., 2018; Cho & Johnson, 2017; Jiang et al., 2015). Data collected through the Ontario Renal Network's Quality Improvement Initiative that began in May 2016 revealed that HRH had 0.5 cases of peritonitis per year at risk, which made HRH the second lowest performing center in Ontario. The provincial average in comparison was 0.22 cases of peritonitis events per year at risk



## Actions Taken

- We initiated a number of quality improvement initiatives targeted at reducing the peritonitis rate in our PD population:
- Standardized home assessments post-peritonitis event to identify home environmental risk factors and deviation from trained techniques. A study found that home visits amongst other activities correlated to a lower peritonitis rates rather than the presence of specialized personnel, nurse-patient ratio or training time (Ibrahim & Abdelsattar, 2015)
  - Through the data gathered from home assessments, we developed a tailored approach to retraining and coaching prevalent patients to mitigate consistently identified environmental risks and patient behaviours
  - Monthly meetings with stakeholders (Home Dialysis team, IPAC representative, Baxter representative, Home Dialysis Coordinator, Nephrologist PD champion and Home Dialysis Manager) to review individual root-causes of each peritonitis event, and performed consistent evaluations of the selected antibiotic therapy, adherence to ISPD EBPG, and interventions directed at each patient's unique risk factors.

## Results



## Next Steps

We will continue to use the standardized home assessment to identify risk factors and develop patient centered approach to retraining and coaching of patients. We will continue to meet on a monthly basis as a team to discuss root-causes of each peritonitis event and increase competency among staff.

Moving forward, we will develop a standardized home assessment tool for initial home visits to help identify high risk patients at the onset of home dialysis training. Through this process, we will be able to develop a plan of care and ongoing follow up routine for each patient with the goal of mitigating risk factors associated with technique failure and peritonitis.

## Citation

- Jiang L., Feng S., Yang L., Jiang S., Zhan Z., Song K., & Shen H.(2015). Early peritonitis is an independent risk factor for mortality in elderly peritoneal dialysis patients. *Journal of Kidney & Blood Pressure Research*, 40 (3), 215-224.
- Yeoungjee C., Hatay H., & Johnson D., (2017). Centre effects and peritoneal dialysis-related peritonitis. *Nephrology Dialysis and Transplantation*, 32 (6), 913-915.
- Kam-Tao L., Szeto C.C., de Arteaga J., Fan S., Figueiredo A., Fish D., Goffin E., Kim Y., Salzer W., Strijk D., Teitlbaum I., & Johns D. (2018). ISPD Peritonitis Recommendations: 2016 update on prevention and treatment. *Peritoneal Dialysis International*, 36 (5), 481-608
- Ibrahim, F. A. & Abdelsattar, A.H. (2015). Home Education Impact on Peritoneal Dialysis-Associated Peritonitis Episode. *American Journal of Nursing Science*, 4(4), 154