Using a Logic Model to systematically evaluate an initiative to improve transition to home dialysis therapies (HDTs)

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Background

- The transition from choosing to initiating HDTs is not clearly defined or standardized for patients and staff.
- This may cause increased anxiety and unaddressed self-management for CKD patients.
- At BC Renal, a "Transition to HDTs" guidebook (the Guide) was designed for patients to outline a step-wise approach to transitioning to HDTs, to help address some of these concerns (Figure 1).
- Assessment of this intervention required a structured and practical evaluation strategy.

Objectives

- We aimed to use the Logic Model evaluation framework (Figure 2) to assess whether having a guidebook can improve patient and staff experience with transitioning to HDTs.

Methods

- The study ran over a 7-month period (Dec. 2018-Jul. 2019) at two pilot and two control sites.
- The **intervention strategies** included: 1)Training of front-line staff to use the Guide and 2)Dissemination of the Guide to patients.
- **Evaluation data** at baseline and at the 7 month point included: 1)% patient transitioned during study period, 2)Transition time between choosing and starting HDT, 3)Quantitative patient surveys, 4)Qualitative patient interviews, 5)Qualitative staff surveys, and 6)Structured feedback session with renal care staff.

Outcomes

- 43 patients were enrolled in pilot sites, 65 in control sites; 19 completed the study in each group (Table 1).
- There was improvement in the % transition and transition time between pilot and control (Figure 3).
- Patients' anxiety, illness knowledge and activation of resources improved after PD/HHD training at both pilot and control sites (Figure 4).
- During interviews, patients confirmed that the Guide was effective and helped retain knowledge.
- The staff felt that it did not increase their workload, and was a good communication tool, however was used inconsistently.

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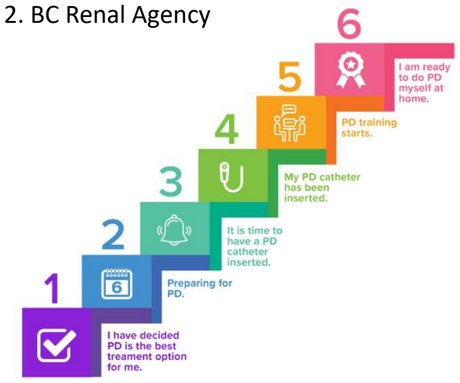

Table 1. Patient Demographics

	Step 1		*Step 6*	
	Pilot	**Control**	**Pilot**	**Control**
Age	64.57	64.36	61.26	59.75
Race (% identified Caucasian)	41.86	41.54	52.63	36.84
Gender (% identified male)	60.47	61.54	73.68	63.16
Total # of patients	43	65	19	19
Modality (# of patients)				
PD	30		16	
HHD	13		3	
HHD already on dialysis	12		3	

Figure 1. The Guide Steps 1-6 Summary

Inputs	Outputs	Outcomes
Mobilized Resources - Staff (Multi-disciplinary Team (MDT)) - Time - Materials for activities including creating and distributing literature	**Activities and Interventions**/ Specific processes to measure **Training of front-line staff to use the Patient Transition to HDT Guide (the Guide) with patients** - *Qualitative* **pre -implementation** survey of MDT - *Qualitative* interview/feedback session with MDT 7 months **post-pilot implementation** (unstructured) **Patient Transition to HDT Guide (the Guide) to support patients through the transition period from choosing HDT to initiating HDT** - % patients with HDT as planned modality who started on HDT - % HDT starts as outpatients - Mean length of time between first appointment at HDT orientation (where they receive the Guide – Step 1) and HDT start (Step 6) - Mean length of time between Step 1 and PD catheter insertion (Step 4) - Documentation of dates of each identified step of the Guide (Steps 1, 4 and 6) via an Excel tracking tool - # of patients that complete Step 1-6 with and without the guide (pilot vs control site) - *Qualitative* **pre-implementation** interviews with patients who have initiated HDT to aid in Guide design (structured) - *Quantitative* **pre and post-implementation** survey of patients who have chosen HDT at a **pilot and a control site** - Qualitative post-implementation interviews with patients who initiated HDT, who have been given the Guide during their transition to HDT (pilot)	**Outcomes for MDT** - Increased comfort with patient counselling with respect to transitioning to HDT - Increased understanding of patient journey with respect to transitioning to HDT - Improved ability to support patients through their transition to HDT **Outcomes for Patients** - Increase successful initiation of HDT (ie patient that chooses HDT actually goes on to HDT) - Decreased transition time from choosing PD to PD catheter insertion (Step 1 to Step 4) - Decreased transition time from PD catheter insertion to starting PD (Step 4 to Step 6) - Overall decreased transition time from choosing HDT to starting HDT (Step 1 to Step 6) - Improvement in self-management skills - Illness needs (knowledge/skill/ confidence) - Activating resources (identifying and accessing resources)

ASSUMPTIONS (root cause analyses, prior learning/experience)	EXTERNAL FACTORS (barriers/facilitators)
- The guide is a useful tool for improving patients' Transition to HDT - Patients will be interested in reading the Guide - Patients will be able to understand the information in the Guide - The MDT staff will be reinforcing the key components of the Guide with patients	- Actual number of patients who go through the transition to HDT during the study period - Actual number of patients who read the Guide when given to them - Adequate health literacy to be able to read and understand the language in the guide - Preconceived notions and fears about HDT that may not be alterable - Workload of staff may not permit adequate discussions of the topics in the Guide

OVERARACHING GOAL:	Improve the patient experience in transitioning from choosing home dialysis therapy to starting home dialysis therapy.	**LOGIC MODEL DATE:**	December 11, 2018

Adapted from University of Wisconsin Extension Program Development and Evaluation resources: http://www.uwex.edu/ces/pdande/evaluation/evallogicmodel.html

Figure 2. The Logic Model Framework

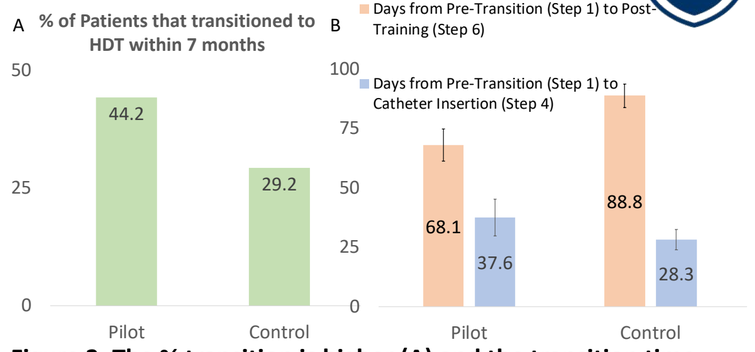

Figure 3. The % transition is higher (A) and the transition time is shorter in Pilot site patients (B).

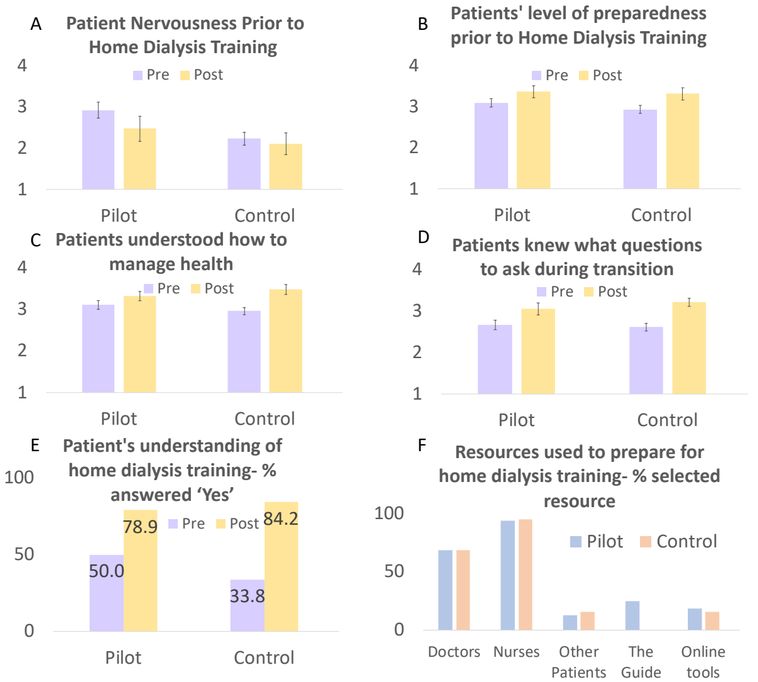

Figure 4 A-F. Patient nervousness & understanding is similar between Pilot & Control.

Conclusion

- The Logic Model was a successful evaluation tool for a large multi-intervention strategy to improve the transition to a HDT for our patients, which may be applicable to other complex healthcare system initiatives.
- The Guide may be helpful at reducing transition time and increasing number of transitions while improving patient anxiety and illness knowledge through improving communication between patients and health care providers.
- Future work is required to standardize the Guide's utilization.

Acknowledgements

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