

## **START Project Report 3**

**October 1, 2016 to June 30, 2017**

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October 15, 2017

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## Executive Summary

### Background

The **S**tarting dialysis on **T**ime, **A**t home, on the **R**ight **T**herapy (START) Project is an initiative of the Kidney Health Strategic Clinical Network (SCN)<sup>TM</sup> in partnership with Alberta Kidney Care, and the Northern and Southern Alberta Renal Programs (NARP and SARP). The START Project draws on the prior successes and work of the Canadian Kidney Knowledge Translation and Generation Network (CANN-NET) and the Canadian Society of Nephrology (CSN) focused on optimal timing of dialysis initiation, as well as an initiative piloted in SARP (Calgary Zone) between 2013 and 2015 to standardize and optimize the process of dialysis modality selection. The START Project will address the Kidney Health SCN's strategic goals of improving the appropriate timing of dialysis initiation and maximizing the safe and effective use of peritoneal dialysis (PD) in Alberta.

### Report Updates

This report focuses on the cohort of patients who started dialysis between October 1, 2016 and June 30, 2017, and who meet the criteria for analysis and reporting. The data presented in this report include the target metrics and key performance indicators, as well as new and granular detail on the following:

- Reasons for admission in patients who start dialysis as inpatients;
- Contraindications and barriers to PD;
- Modality education;
- Dialysis choice and reasons for not choosing PD; and
- PD technique failure.

The cohort of patients in Medicine Hat who meet the criteria for analysis and reporting has also increased to 10 patients. Therefore, we are now able to report program data for the current reporting period.

Finally, this report presents the data for each of the three major sites in Edmonton separately as requested by the stakeholders in Edmonton, rather than as one program. These sites are: Grey Nuns Hospital (GNH), Royal Alexandra Hospital (RAH) and University of Alberta Hospital (UAH).

### Data Highlights

Based on the data that have been collected as part of the START Project between October 1, 2016 and June 30, 2017, we have observed the following:

- The mean estimated glomerular filtration rate (eGFR) of patients starting dialysis electively as outpatients is already at the target for the project (below 9.5 ml/min/1.73m<sup>2</sup>), and only 13% of outpatients started dialysis with an eGFR above 9.5 ml/min/1.73m<sup>2</sup> provincially. This is a decrease of 3% compared to the historical period<sup>1</sup>.
- Nearly all patients who were deemed eligible for PD were offered the therapy, and the overall choice rate provincially was 59%. This is consistent with prior literature suggesting that, when patients make an informed choice, approximately 50-60% of patients will choose PD.

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<sup>1</sup> All references to the historical period and historical data refer to the 12 months immediately preceding the commencement of the START Project.

- The results to date indicate a wide variation in choice rate, ranging from 27% in Lethbridge to 84% at Edmonton Grey Nuns Hospital (GNH).
- Eighty-seven percent (87%) of patients in Alberta who chose PD also received PD within the first 6 months of starting dialysis.
- During the first 9 months of the START Project, 30% of new patients in Alberta received PD as their first form of dialysis therapy. Thirty-seven percent (37%) of new patients received PD within 6 months of starting dialysis therapy; this number ranged from 10% in Medicine Hat to 54% at Edmonton's GNH.
- Since the introduction of the START Project, there has been a 12% increase in the percentage of new patients who received PD within 6 months of initiating dialysis compared to historical data.

### **Innovation Collaborative**

The START Project is enriched by an Innovation Collaborative comprised of three workshops between June 2017 and March 2018. During these workshops, teams of front-line staff and other key stakeholders from across Alberta utilize the detailed information collected as part of the START Project about the processes that drive important patient and program outcomes, and develop, implement and monitor strategies for maximizing the safe and effective use of PD, and ensuring patients are starting dialysis at the appropriate time. The first Innovation Collaborative Workshop took place on June 22, 2017 in Red Deer.

### **Next Steps**

The second Innovation Collaborative is scheduled for December 11, 2017. During the action plan cycle between the first and second Innovation Collaborative workshops, teams will work with the support of the START Project Co-chairs and Working Group to develop, implement, monitor and refine strategies to maximize the safe and effective use of PD and improve the timing of dialysis initiation in their programs.

The START Project Team will also continue the standardized assessment of new patients starting dialysis through multidisciplinary meetings and standardized documentation of the process of modality selection. The next START Project Report will include data for the 12-month report period from October 1, 2016 to September 30, 2017.

## Background

*Below, we have provided a brief summary of the background and development of the START Project. A more detailed overview can be found on pages 6 and 7 of the [first START Report](#).*

In partnership with the Kidney Health Strategic Clinical Network™ (KH SCN) and Alberta Kidney Care (AKC), the Northern and Southern Alberta Renal Programs (NARP and SARP) are participating in the “**S**tarting dialysis on **T**ime **A**t home on the **R**ight **T**herapy” (**START**) Project. Multiple sites across Alberta are participating in the START initiative, which runs from March 2016 to March 2018.

The START Project is a combination of two complimentary initiatives that directly address and support the Kidney Health Strategic Clinical Network’s (SCN’s) goals of improving the appropriate timing of dialysis initiation and maximizing the safe and effective use of PD in Alberta.

The first initiative involves implementing a novel system of standardizing and optimizing the process of dialysis treatment selection through the use of multidisciplinary meetings to ensure that all patients with kidney failure are identified, assessed for eligibility, offered appropriate treatments, and allowed to make an informed choice about their dialysis treatment. A focused, web-based data collection tool is being used to support and document this process.

The second initiative involves the testing and implementation of knowledge translation tools representing guidelines for the timing of dialysis initiation that were developed by a committee comprising members of the Canadian Kidney Knowledge Translation and Generation Network (CANN-NET) and the Canadian Society of Nephrology (CSN).

These initiatives will be enriched by a series of three Innovation Collaborative workshops between June 2017 and March 2018 during which front-line staff and other key stakeholders will build on the detailed, granular information about the processes that drive important patient and program outcomes, and develop, implement and monitor strategies for maximizing the safe and effective use of PD, and ensuring patients are starting dialysis at the appropriate time.

The first Innovation Collaborative took place on June 22, 2017 in Red Deer. The second Innovation Collaborative is scheduled for December 11, 2017. Teams who participated in the first Innovation Collaborative will be invited to return to share their progress and continue to implement and monitor strategies for maximizing the safe and effective use of PD, and ensuring patients are starting dialysis at the appropriate time.

## Objectives

The overall, high-level goals of the START Project are to:

- maximize the safe and effective use of peritoneal dialysis (PD);
- ensure that patients are starting dialysis at the appropriate time;
- improve patient outcomes and experiences; and
- reduce costs to the health care system.

The specific targets that have been set for this project based on the key performance indicators are:

1. To achieve a minimum 5% absolute increase in new patients being treated with PD within 180 days after initiating dialysis; and
2. To achieve a minimum 5% percent absolute reduction in the percentage of patients who start outpatient dialysis with an estimated glomerular filtration rate (eGFR) of greater than 9.5 ml/min/1.73m<sup>2</sup> (CKD-EPI).

## **Timelines and Reporting**

The START Project runs from March 2016 to March 2018. All programs across Alberta that participate in the dialysis modality assessment and dialysis initiation processes are participating in the START Project. The START Project team has been capturing prospective data on all new patients starting dialysis and those receiving pre-emptive transplants since October 1, 2016.

This is the third of a series of reports that serve as a mechanism for knowledge translation, audit and feedback, of the provincial practices of programs across Alberta in order to improve appropriate timing of dialysis initiation and maximizing the safe and effective use of PD in Alberta. Every three-months from October 2016 onward, the START Project Team provides all participating sites with a high-level quality improvement report to track their progress on achieving the above objectives.

These reports will be used to inform Innovation Collaborative Learning Sessions to be held in June 2017, December 2017 and March 2018. The focus of these meetings is to:

- identify barriers to the safe and effective use of PD in their program;
- identify barriers to improving the appropriate timing of dialysis initiation;
- develop and implement interventions to address those barriers; and
- monitor progress to ensure we can achieve sustainable change.

## **Privacy Statement**

In accordance with Alberta Health Services' (AHS') privacy standards, we have a duty to disclose health information with the highest degree of anonymity possible and in a limited manner. In order to comply with this standard, we are only able to report on program and site-specific data when the total cohort of patients is greater than or equal to 10 patients. Therefore, for sites and programs where the total cohort of patients is less than 10, we are required to suppress that data and cannot include that program in the report. We will work with the specific sites and programs that are affected in order to communicate relevant and useful information with them about their programs.

Based on the above constraints, we were not able to report on program data for Medicine Hat and Lethbridge for the reporting period ending December 31, 2016, and were not able to report on program data for Medicine Hat for the reporting period ending March 31, 2017.

For this report, however, we are able to report on program data for all sites for the period ending June 30, 2017.

## START Project Team

### Co-Chairs

- Dr. Rob Quinn
- Dr. Rob Pauly
- Tracy Schwartz

### START Project Practice Lead

- Farah Mohamed

### The START Project Working Group

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- Adriane Lewin

### Alberta Kidney Care Leadership

- Cathy Osborne
- Dr. Kailash Jindal
- Dr. Dan Muruve
- Janice Stewart
- Carol Easton
- Sandi Vanderzee

We acknowledge the front-line staff responsible for championing the START process and ensuring the collection of high-quality data to support the project:

- Jeanette Bigford\*
- Sherri DeBoer
- Danielle Fox\*
- Suzanne Gergely\*
- Jeri Grieco\*
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- Rhonda Reimer\*
- Lisa Ryan\*
- Joanne Selin\*
- Tracy Zeiler\*

*\*Indicates that front-line staff or manager is also a participant in the START Innovation Collaborative Learning Sessions.*

We also acknowledge the participation of the front-line staff who are championing the START Project as participants in the START Innovation Collaborative Learning Sessions:

- Rachel Atwood
- Cheryl Carleton
- Alanna Colosimo
- Lisa Davies
- Owen Gaskill
- Janis Heal
- Deborah Johnson
- Rene King
- Victoria Krizsan
- Donna Mallach
- Julie Nhan
- Valerie O'Leary
- Myrna Poettcker
- Janice Thompson
- Sylvia Zuidema

## **The START Project: Implementation**

*Below, we have provided a brief summary regarding the implementation of the START Project to date. For a more detailed explanation, please see pages 23 and 24 of the [first START Report](#).*

The initial implementation of the START Project involved standardizing the assessment of all new patients starting dialysis in Alberta from October 1, 2016 onward through the use of multidisciplinary meetings. The main purpose of these meetings is to ensure that all patients who start dialysis are identified, assessed to determine their eligibility for home dialysis, educated about their treatment options, and allowed to make an informed choice in selecting their dialysis modality. Patients remain on the roster at the multidisciplinary meeting until they have completed the process.

Baseline data related to a patient's demographics, the complete process of modality selection and the circumstances surrounding the timing of dialysis initiation are documented using a consistent coding scheme. This ensures that the same cohort of patients is captured at each program and that consistent variable definitions are applied. The data are captured using an electronic data platform and are centrally reviewed for consistency in coding, accuracy, and completeness.

## **Patient Population: Cohort Creation**

*Below, we have provided a brief summary regarding the patients who comprise the cohort selected for analysis and reporting. For a more detailed explanation, please see pages 23 and 24 of the [first START Report](#).*

The following patients are registered in the data collection platform:

- Any patient with end-stage kidney disease in the opinion of their nephrologist
- Any patient with acute kidney injury requiring dialysis for at least 28 days
- Any patient receiving a single outpatient dialysis treatment
- Failed transplants initiating dialysis
- Dialysis patients transferred into a program from another center

For the purposes of reporting, the patient population consists of all patients registered in the system who meet the inclusion criteria above, with the exception of patients who transfer in from another program already on dialysis therapy (prevalent transfers in).

We focus on the cohort of patients who started dialysis in program across Alberta and who have completed baseline assessment. The baseline assessment can take up to 3 months to complete, depending on the circumstances surrounding dialysis start. There will be several patients in each program who still have baseline assessments pending and will not be included in the current report. All registered patients who have completed baseline assessments and who started dialysis between October 1, 2016 and June 30, 2017 are included in this report.

## Patient Population: Description of Cohort and Patient Characteristics

A total of 541 patients were identified in Alberta during the first 9 months of the START Project (October 1, 2016 – June 30, 2016). The final cohort for analysis and reporting consists of 399 patients (see Table 1, below). The following types of patients were excluded from the cohort:

**Excluded:** Patients who were inappropriately registered and did not meet criteria for registration in the program (n=13)

**Transient patients:** Patients who are from another program, and start dialysis with the intention of returning to their home program (n=12)

**Pre-emptive transplants:** As transplants, these patients are excluded from the dialysis population (n=9)

**Transfers into program:** These patients are removed from the analysis because they are prevalent patients who have already been on dialysis for a time when they come into the respective Alberta program (n=28)

**Baseline assessment pending:** these patients are excluded from the analysis until their baseline assessments are completed, at which point they will be added to future cohorts for analysis (n=80) (see **Patient Population: Cohort Creation**, above).

Generally, the patients described above are excluded from the analysis because they do not provide usable information regarding drivers of incident PD utilization or timing of dialysis initiation. However, they are captured because they drive resource utilization.

Baseline characteristics of incident patients for each program are shown in Table 2, below. To date, the mean patient age ranges from 51.1 years at Edmonton GNH to 67.4 years in Calgary. Comorbid illnesses tend to be more frequent in older populations, as expected. The proportion of new patients who started dialysis as inpatients was also highest in Medicine Hat (70%) and lowest at Edmonton GNH (24%). The proportion of patients who had received predialysis care was highest in Medicine Hat (90%).

	Alberta	Calgary	Lethbridge	Medicine Hat	Red Deer	GNH	RAH	UAH
<b>Total patients registered</b>	<b>541</b>	<b>188</b>	<b>36</b>	<b>18</b>	<b>70</b>	<b>27</b>	<b>58</b>	<b>144</b>
Excluded	13	3	0	1	7	0	0	2
Transient patients	12	10	0	1	0	0	0	1
Pre-emptive transplants	9	5	0	0	0	1	0	3
Transfers into program	28	10	4	3	5	0	3	3
Baseline assessment pending	80	36	3	3	15	1	7	15
<b>Final cohort for analysis and reporting</b>	<b>399</b>	<b>124</b>	<b>29</b>	<b>10</b>	<b>43</b>	<b>25</b>	<b>48</b>	<b>120</b>

**Table 1:** New patients who started renal replacement therapy across Alberta between October 1, 2016 and June 30, 2017 and creation of the final cohort for analysis and reporting

<b>Patients by site</b>	<b>Calgary 124</b>	<b>Lethbridge 29</b>	<b>Medicine Hat 10</b>	<b>Red Deer 43</b>	<b>GNH 25</b>	<b>RAH 48</b>	<b>UAH 120</b>
Age mean (Std)	62.4 (13.6)	64.8 (15.7)	67.4 (14.7)	61.6 (13.5)	51.1 (14)	55.4 (16.7)	56.6 (14.6)
Age median (IQR)	64 (54, 72)	62 (55, 79)	71 (67, 77)	62 (56, 72)	53 (41, 58)	59 (41.5, 68)	56 (47, 67)
BMI mean (Std)	28 (6.7)	31.8 (13.5)	32.5 (6.5)	29.8 (8.1)	29.6 (9.6)	26.7 (6.7)	30 (8.7)
Male (%)	74 (60)	15 (52)	6 (60)	23 (54)	15 (60)	27 (56)	75 (63)
Diabetes (%)	73 (59)	19 (66)	4 (40)	24 (56)	12 (48)	26 (54)	57 (48)
Coronary Artery Disease (%)	40 (32)	6 (21)	4 (40)	13 (30)	1 (4)	10 (21)	18 (15)
Congestive Heart Failure (%)	32 (26)	7 (24)	5 (50)	3 (7)	2 (8)	4 (8)	9 (8)
Cerebrovascular Disease (%)	13 (11)	3 (10)	3 (30)	5 (12)	2 (8)	2 (4)	8 (7)
Peripheral Vascular Disease (%)	11 (9)	1 (3)	2 (20)	4 (9)	0 (0)	5 (10)	8 (7)
Cancer (%)	21 (17)	6 (21)	1 (10)	3 (7)	1 (4)	5 (10)	14 (12)
Started Dialysis As Inpatient (%)	71 (57)	15 (52)	7 (70)	23 (54)	6 (24)	29 (60)	38 (32)
Started Dialysis In ICU (%)	10 (8)	4 (14)	2 (20)	4 (9)	2 (8)	6 (13)	8 (7)
Any Predialysis Care (%)	102 (82)	20 (69)	9 (90)	34 (79)	19 (76)	38 (79)	105 (88)
4 Months Predialysis Care (%)	92 (74)	16 (55)	8 (80)	31 (72)	18 (72)	35 (73)	100 (83)
12 Months of Predialysis Care (%)	81 (65)	13 (45)	7 (70)	24 (56)	9 (36)	24 (50)	80 (67)

**Table 2:** Comparison of patient characteristics across Alberta, for new patients starting dialysis between October 1, 2016 and June 30, 2017

## Timing of Dialysis Initiation (October 1, 2016 – June 30, 2017)

### Key Performance Indicators: Timing of Dialysis Initiation

*This section briefly summarizes the rationale for selecting the below key performance indicators as a measure timing of dialysis initiation. For a more detailed summary please see pages 29-30 of the [first START Report](#).*

The key performance indicators used to measure the timing of dialysis initiation are:

1. The mean eGFR of outpatients starting dialysis; and
2. The percentage of outpatients starting dialysis with an eGFR above target.

The target eGFR chosen was based on the results from the IDEAL trial where an intent-to-start patients at a creatinine clearance of between 10 ml/min – 14 ml/min was compared to an intent-to-start patients at a creatinine clearance of 5 ml/min – 7 ml/min. The target eGFR level, below which patients who develop symptoms should be considered for dialysis initiation in the START project, reflects the mean level of kidney function at dialysis initiation in patients randomized to the intent-to-defer strategy.

The inclusion of patients with acute kidney injury (AKI) introduces problems for the calculation of eGFR because serum creatinine is not in steady state. Prior data showed that this artificially inflates eGFR to start in a program and skews results if they have higher rates of inpatient starts. The START Project will focus on eGFR in outpatient starts for our key performance indicators for timing of dialysis initiation.

### Metrics: Timing of Dialysis Initiation

*For a detailed analysis regarding the selection of the below targets, please see pages 16-17 of the [first START Report](#).*

The targets for the key performance indicators related to PD utilization for the START Project, based on the historical data are as follows:

**Target 1:** To reduce the mean eGFR at the start of dialysis to  $< 9.5 \text{ ml/min/1.73m}^2$

**Target 2:** To reduce the proportion of outpatients starting dialysis with an eGFR  $> 9.5 \text{ ml/min/1.73m}^2$  to 11%

### Results: Timing of Dialysis Initiation

Provincially and at all sites, the mean eGFR at the start of dialysis in outpatient starts has remained near the target mean eGFR established at baseline, at 7.3 ml/min/1.73m<sup>2</sup>. The baseline values for each of the Edmonton sites and Red Deer was based on the NARP average in the preceding year. It is unknown if there were important differences at baseline between programs, but they are very similar so far (see Table 3 and Figure 1, below).

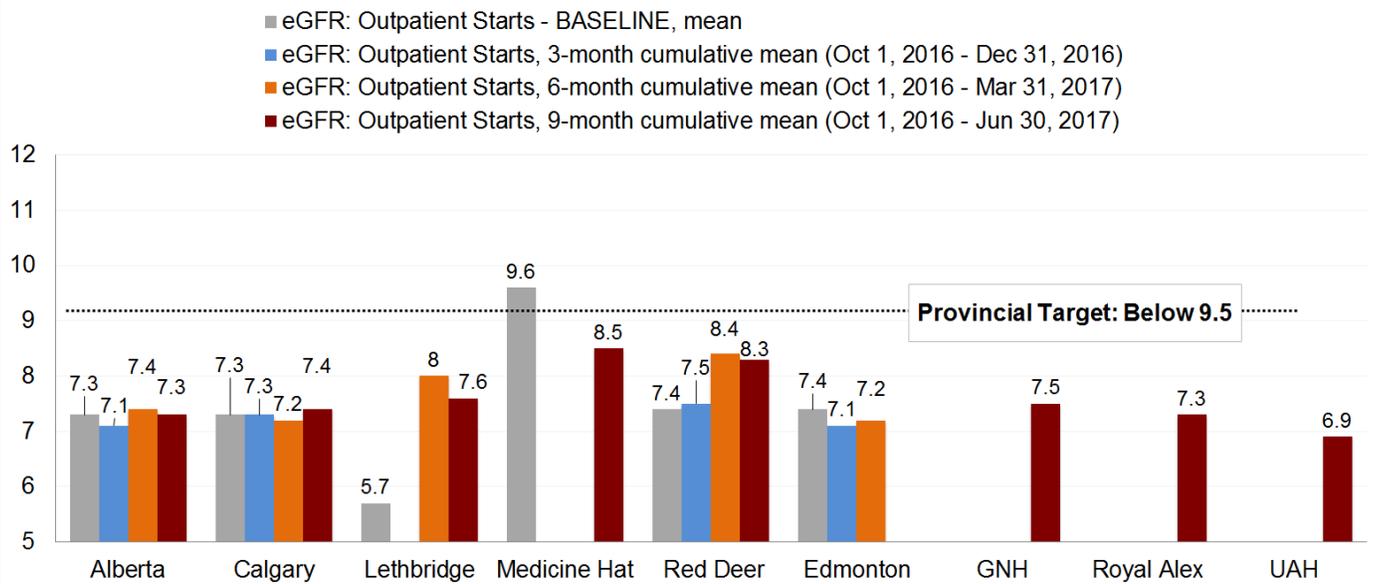
The cumulative averages for the past three reporting periods are also presented in Figure 1. Note that for Edmonton, the mean eGFR at baseline and for the prior two reporting periods are reported Edmonton-wide as this is how the data were previously analyzed. For this third reporting period, the Edmonton data are presented by site.

Thirteen percent of outpatients started with an eGFR above the target of 9.5 ml/min/1.73m<sup>2</sup>, a drop of 3% from the baseline.

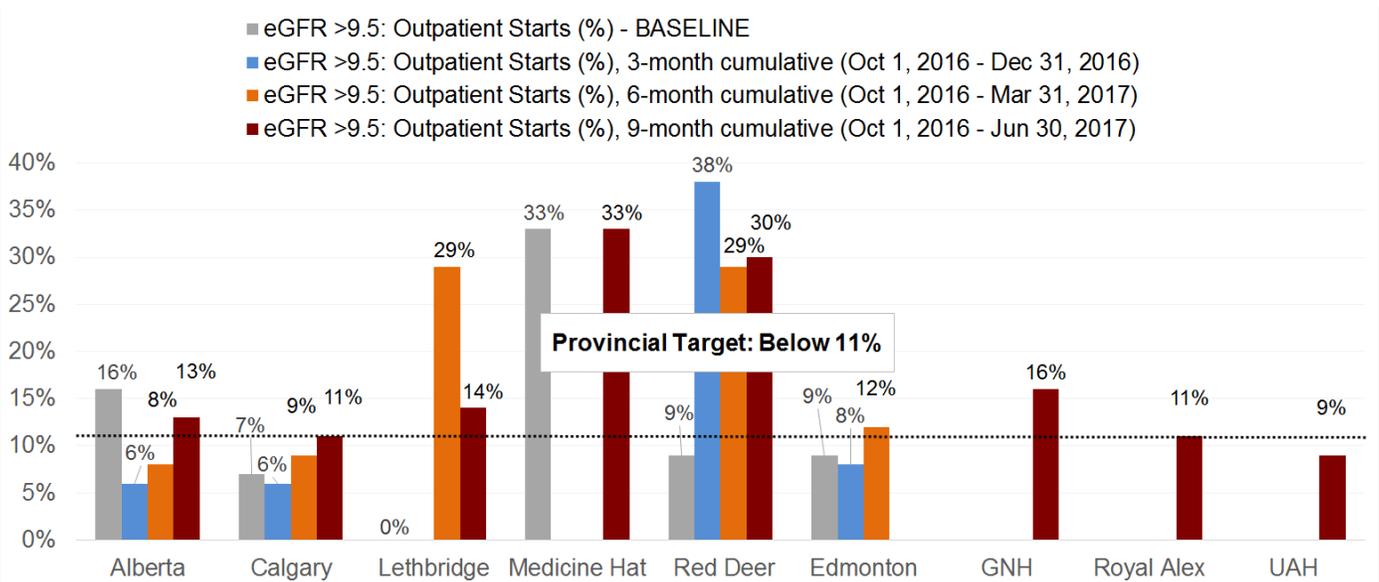
Provincially, we are working toward the target level for the START Project and some sites have already met this target. There is noticeable variability in the percentage of outpatients starting dialysis above the target eGFR ranging from 9% at UAH to 33% in Medicine Hat.

Outpatients by site	Alberta 210	Calgary 53	Lethbridge 14	Medicine Hat 3	Red Deer 20	GNH 19	RAH 19	UAH 82
eGFR: Outpatient Starts, mean (SD)	7.3	7.4 (1.8)	7.6 (2)	8.5 (2.1)	8.3 (5.1)	7.5 (2.8)	7.3 (2.2)	6.9 (2.4)
eGFR >9.5ml/min/1.73m <sup>2</sup> : Outpatient Starts (%)	27 (13)	6 (11)	2 (14)	1 (33)	6 (30)	3 (16)	2 (11)	7 (9)

**Table 3:** Mean eGFR of outpatients starting dialysis and the percentage of outpatients starting dialysis with an eGFR above the target mean (9.5 ml/min/1.73m<sup>2</sup>) across Alberta, between October 1, 2016 and June 30, 2017



**Figure 1:** Mean eGFR (ml/min/1.73m<sup>2</sup>) of outpatients starting dialysis across Alberta, between October 1, 2016 and June 30, 2017, as compared to baseline data from the prior 12-month period and the cumulative averages from the prior reporting periods



**Figure 2:** Percentage of outpatients starting dialysis across Alberta with a mean eGFR above 9.5 ml/min/1.73m<sup>2</sup> between October 1, 2016 and June 30, 2017, as compared to baseline data from the prior 12-month period and the cumulative averages from the prior reporting periods

## **Incident PD Utilization (October 1, 2016 – March 31, 2017)**

### **Key Performance Indicators: Incident PD Utilization**

*This section briefly summarizes the rationale for selecting the below key performance indicators as a measure of incident PD utilization. For a more detailed summary please see page 36 of the [first START Report](#).*

The key performance indicators used to measure incident PD utilization are:

1. the percentage of new dialysis patients treated with PD as their first treatment, and
2. the percentage of patients who receive PD at some point during the first six months of therapy.

PD use at dialysis initiation, by itself, may underestimate PD utilization in programs. This is particularly true if there are a large number of patients starting dialysis in the hospital. While some are treated urgently with PD, the majority start on in-center hemodialysis (HD).

If renal programs are organized and diligent, these patients are still identified, educated about their treatment options, offered their choices, and make an informed modality choice. If that choice is PD, converting a patient from HD to PD can take 6 months as patients must choose to do PD, have a PD catheter placed, get trained, and start on therapy. We therefore also report the percentage of patients receiving PD within 6 months of starting to capture this activity.

Please note that few patients registered to date have 6 months of potential follow-up time as data collection for this project commenced on October 1, 2016 (i.e. only patients who started dialysis at least 6 months prior to the end of this reporting cycle).

## Metrics: Incident PD Utilization

In most programs, there are six steps required to start a patient on PD:

1. Identify them;
2. Assess them for eligibility;
3. Offer them PD therapy;
4. They must choose PD therapy;
5. Have a PD catheter placed; and
6. Start therapy.

In order to understand drivers of incident PD use in a local program, we track the numbers of patients who make it through each step and benchmark performance against other programs. The numbers for all of Alberta between October 1, 2016 and June 30, 2017 are presented below.

*For a detailed analysis regarding the selection of the below targets, please see pages 16-17 of the [first START Report](#).*

The targets for the key performance indicators related to PD utilization for the START Project, based on the historical data are as follows:

**Target 1:** Twenty-five percent of all incident dialysis patients will receive PD as their first treatment modality

**Target 2:** Thirty percent of all incident dialysis patients will receive PD within 6 months of starting therapy

## Results: Incident PD Utilization

In Alberta, 399 patients started dialysis therapy during this reporting period. One-hundred nineteen (119) started on PD and 144 ultimately received PD during the first 6 months of treatment (see Figure 3, below).

Table 4, below, illustrates the percentages of patients who progress through the six-step process required to start a patient on PD across Alberta, and benchmarks the percentages across the provincial dialysis programs. Multiplying the percentages in a column yields the percent of new patients starting dialysis (represented below in Table 5). The result is that a 1% change in any step is equivalent. A program that performs well at each step will have a high percentage of new patients starting dialysis and receiving dialysis within 6 months of initiating dialysis therapy.

**Assessment:** Overall, 93% of patients were assessed for PD eligibility. Assessment rates varied between 66% in Lethbridge and 98% at Edmonton UAH. When the reasons that patients were not assessed were compiled, they were largely reasons that were beyond the control of the programs. For example, patients might have refused to be assessed, transferred out of the program, died prior to being assessed, or recovered kidney function making the assessment irrelevant.

**Eligibility:** The eligibility assessment is a structured assessment. However, the decision as to a patient's eligibility reflects the decision of a multidisciplinary team at a particular centre.

Eligibility rates varied between 33% in Medicine Hat and 83% in Calgary. Historically, eligibility rates have been in the range of 75-80% for high performing programs that were often treating older patients with higher rates of comorbidities. In this report, we also provide additional detailed information about eligibility rates including the percentage of patients with contraindications and or barriers to PD to better explain why eligibility rates varied.

**Contraindications** are certain medical or cognitive conditions that, if present, make it impossible for a patient to do PD therapy, in the opinion of the team.

**Barriers** are medical, social, cognitive, physical, social or residential barriers that, if present, may make it difficult to do self-care PD but can often be overcome with support.

**Choice:** Ninety-eight percent (98%) of patients who were deemed eligible for PD were offered the therapy, and the overall choice rate provincially was 60%. This is consistent with prior literature suggesting that, when patients make an informed choice approximately 50-60% of patients will choose PD. The results to date indicate a wide variation in choice rate ranging from 27% in Lethbridge to 84% at Edmonton GNH. Choice rates can reflect:

- the characteristics of a program's patient population (i.e. younger patients are more likely to choose PD);
- the level of assistance available in the home (i.e. patients are more likely to choose PD if they have home care or family assistance available);
- physician or provider bias; or
- how promotional a program is about home therapies.

Eighty-seven percent (87%) of patients in Alberta who chose PD also received PD within the first 6 months of starting dialysis. This ranged from 77% at Edmonton UAH to 100% in both Medicine Hat and Lethbridge.

A number of factors can influence whether or not a patient who chooses PD ultimately receives PD. Some examples of these factors include:

- patient willingness to proceed with training;
- delays getting a PD catheter placed; and
- the development of PD catheter dysfunction.

In the event that this step is identified as an area requiring intervention, the reasons that patients who choose PD are not receiving it can be explored in more detail.

Table 5, below, compares the percentage of patients across Alberta who received PD as their first dialysis therapy, or who received PD within six months of starting dialysis during this reporting period. Some highlights from this reporting period are:

Province-wide, 30% of new patients received PD as their first form of dialysis therapy ranging from 10% in Medicine Hat to 48% at Edmonton GNH.

Province-wide, 37% of new patients received PD within 6 months of starting dialysis therapy ranging from 10% in Medicine Hat to 52% at Edmonton GNH.

As at the end of June 30, 2017, it appears that province-wide changes in process (including standardizing the assessment and documentation of new starts) has been associated with a 12% increase in incident PD and has already surpassed the initial target set for the START Project.

Table 6, below, compares the percentage of new patients starting dialysis as inpatients across Alberta during this reporting period. Medicine Hat has the highest percentage of new patients starting dialysis as inpatients at 70% of their population, and Edmonton GNH has the lowest percentage of patients starting dialysis as inpatients at 24%. Inpatients starting dialysis in Medicine Hat, Red Deer and at Edmonton RAH did not receive PD as a first form of therapy.

Thirty-one percent (31%) of patients who started dialysis as inpatients on HD in Calgary received to PD within the first 6 months of starting dialysis, and compared to 7% in Lethbridge.



**Figure 3:** Flowchart illustrating the progression of patients through the six-step process required to start a patient on PD in Alberta, between October 1, 2016 and June 30, 2017 (Percentages refer to the percentage of patients making it from one step to the next. See site summary for site-specific flowchart.)

	<b>Alberta</b>	<b>Calgary</b>	<b>Lethbridge</b>	<b>Medicine Hat</b>	<b>Red Deer</b>	<b>GNH</b>	<b>RAH</b>	<b>UAH</b>
<b>Total patients</b>	<b>399</b>	<b>124</b>	<b>29</b>	<b>10</b>	<b>43</b>	<b>25</b>	<b>48</b>	<b>120</b>
% Patients assessed for PD	<b>93%</b>	95%	66%	90%	88%	88%	96%	99%
% Assessed patients eligible for PD	<b>77%</b>	83%	79%	33%	63%	86%	70%	81%
% Eligible patients offered PD	<b>98%</b>	99%	100%	100%	100%	100%	94%	97%
% Offered patients who chose PD	<b>59%</b>	63%	27%	33%	58%	84%	57%	57%
% Patients who chose PD who started on PD	<b>72%</b>	72%	75%	100%	36%	75%	82%	76%
% Patients who chose PD who received PD <6mo	<b>87%</b>	93%	100%	100%	86%	81%	94%	77%

**Table 4:** Table illustrating the progression of patients through the six-step process required to start a patient on PD in Alberta, between October 1, 2016 and June 30, 2017. (Percentages refer to the percentage of patients making it from one step to the next.)

	<b>Alberta</b>	<b>Calgary</b>	<b>Lethbridge</b>	<b>Medicine Hat</b>	<b>Red Deer</b>	<b>GNH</b>	<b>RAH</b>	<b>UAH</b>
<b>Incident patients starting dialysis</b>	<b>399</b>	<b>124</b>	<b>29</b>	<b>10</b>	<b>43</b>	<b>25</b>	<b>48</b>	<b>120</b>
% All patients who started on PD	<b>30%</b>	36%	10%	10%	12%	48%	29%	33%
% All patients who received PD <6mo	<b>37%</b>	48%	14%	10%	28%	52%	33%	34%

**Table 5:** Percentage of patients across Alberta and by region, who started dialysis on PD as their first modality or who received PD within six months of starting dialysis, between October 1, 2016 and June 30, 2017

	<b>Alberta</b>	<b>Calgary</b>	<b>Lethbridge</b>	<b>Medicine Hat</b>	<b>Red Deer</b>	<b>GNH</b>	<b>RAH</b>	<b>UAH</b>
<b>Inpatients by site (%)</b>	<b>189 (47)</b>	<b>71 (57)</b>	<b>15 (52)</b>	<b>7 (70)</b>	<b>23 (54)</b>	<b>6 (24)</b>	<b>29 (60)</b>	<b>38 (32)</b>
Inpatients that started dialysis on PD (%)	<b>15 (8)</b>	9 (13)	1 (7)	0	0	0	3 (10)	2 (5)
Started dialysis as an inpatient, received PD <6mo (%)	<b>35 (19)</b>	22 (31)	1 (7)	0	4 (17)	0	5 (17)	3 (8)

**Table 6:** Percentage of new patients starting dialysis as inpatients across Alberta, between October 1, 2016 and June 30, 2017

## Modality Education

In 2016, the NARP and SARP worked with patients and families to create and implement a provincially consistent, structured and multi-faceted approach to modality education. Implementation commenced in early 2016 in SARP and concluded with implementation in NARP in December 2016. Even so, the data below indicate that there is variability in the percentage of patients that receive formalized modality education, and the when patients are educated relative to the time they start dialysis. This information is presented below in Tables 7, 8 and 9.

Overall, 84% of patients across Alberta who started dialysis during the reporting period received structured modality education, ranging from 10% in Medicine Hat to 88% at Edmonton UAH. The majority of patients were educated prior to starting dialysis (64%), ranging from 10% in Medicine Hat to 70% in Calgary. Patients who do not receive structured modality education may receive informal modality education as part of a clinic visit, especially in rural centres.

	<b>Alberta</b>	<b>Calgary</b>	<b>Lethbridge</b>	<b>Medicine Hat</b>	<b>Red Deer</b>	<b>GNH</b>	<b>RAH</b>	<b>UAH</b>
<b>Total registered patients</b>	<b>399</b>	<b>124</b>	<b>29</b>	<b>10</b>	<b>43</b>	<b>25</b>	<b>48</b>	<b>120</b>
Patients who received modality education, ever (%)	334 (84)	112 (90)	18 (62)	1 (10)	36 (84)	21 (84)	40 (83)	106 (88)
Patients who received modality education prior to starting dialysis, overall (%)	257 (64)	87 (70)	15 (52)	1 (10)	25 (58)	18 (72)	28 (58)	83 (69)
Patients who received modality education within the first 90 days after starting dialysis, overall (%)	74 (19)	24 (19)	2 (9)	0	10 (23)	3 (12)	12 (25)	23 (19)

**Table 7:** Timing of modality education of new patients starting dialysis across Alberta between October 1, 2016 and June 30, 2017

	<b>Alberta</b>	<b>Calgary</b>	<b>Lethbridge</b>	<b>Medicine Hat</b>	<b>Red Deer</b>	<b>GNH</b>	<b>RAH</b>	<b>UAH</b>
<b>Total inpatients</b>	<b>189</b>	<b>71</b>	<b>15</b>	<b>7</b>	<b>23</b>	<b>6</b>	<b>29</b>	<b>38</b>
Inpatients who received modality education prior to starting dialysis (%)	75 (40)	40 (56)	4 (27)	0	9 (39)	0	11 (38)	11 (29)
Inpatients who received modality education within the first 90 days after starting dialysis, overall (%)	62 (33)	22 (31)	0	0	8 (35)	3 (50)	11 (38)	18 (47)

**Table 8:** Timing of modality education of new patients starting dialysis as inpatients across Alberta between October 1, 2016 and June 30, 2017

	<b>Alberta</b>	<b>Calgary</b>	<b>Lethbridge</b>	<b>Medicine Hat</b>	<b>Red Deer</b>	<b>GNH</b>	<b>RAH</b>	<b>UAH</b>
<b>Total outpatients</b>	<b>210</b>	<b>53</b>	<b>14</b>	<b>3</b>	<b>20</b>	<b>19</b>	<b>19</b>	<b>82</b>
Outpatients who received modality education prior to starting dialysis (%)	47 (89)	47 (89)	11 (79)	1 (33)	16 (80)	18 (95)	17 (90)	72 (88)
Outpatients who received modality education within the first 90 days after starting dialysis, overall (%)	2 (4)	2 (4)	2 (14)	0	2 (10)	0	1 (5)	5 (6)

**Table 9:** Timing of modality education of new patients starting dialysis as outpatients across Alberta between October 1, 2016 and June 30, 2017

## Contraindications and Barriers

When a patient is assessed for PD eligibility, they are assessed with a view to identifying contraindications and barriers to PD.

Patients may have **contraindications** to PD. A contraindication is a medical or social condition that, by itself, makes it impossible for that patient to do PD.

Patients may also have **barriers** to PD. Barriers are medical, social, cognitive, physical, social or residential factors that, if present conditions that make it difficult to do self-care PD. These can often be overcome by providing assistance or support.

The percentage of new patients starting dialysis across Alberta who have contraindications or barriers to PD is presented below in Table 10. The frequency and type of barriers encountered by new patients starting dialysis is presented below in Table 11. Note that a single patient may experience multiple barriers.

Patients assessed for PD eligibility	Alberta 371	Calgary 118	Lethbridge 19	Medicine Hat 9	Red Deer 38	GNH 22	RAH 46	UAH 119
At least one medical or social contraindication to PD therapy (%)	53 (14)	15 (13)	0	3 (33)	9 (24)	1 (5)	8 (17)	17 (14)
No barriers (%)	136 (37)	56 (47)	3 (16)	1 (11)	11 (29)	9 (40)	13 (29)	43 (36)
At least one barrier to PD therapy (%)	182 (49)	47 (40)	16 (84)	5 (56)	18 (47)	12 (55)	25 (54)	59 (50)

**Table 10:** New patients starting dialysis across Alberta between October 1, 2016 and June 30, 2017 who were assessed for PD eligibility and who have contraindications or barriers to PD

Total patients with at least one barrier to PD (any type)	Calgary 47	Lethbridge 16	Medicine Hat 5	Red Deer 18	GNH 12	RAH 25	UAH 59
<b>Medical</b>	19	8	1	7	6	14	43
Abdominal aortic aneurysm	1		1		1	1	
Abdominal scarring	2	2		1	3	4	17
Bowel cancer	2						
Colostomy		1					
Diverticulitis		1					1
Future abdominal surgery planned		1					
Gastroparesis	1						2
Hernia	5	1		1	1	5	6
Inflammatory bowel disease	1					2	
Insomnia	1						
Nephrotic syndrome							1
Morbid obesity	9	1		4	3	3	19
Large polycystic kidneys	2	1		1		1	7
Other: Multilevel degenerative changes in the lumbar spine.	1						
Other: Patient has permanent tracheostomy		1					
Other: Left radical nephrectomy for renal mass; wait for healing before sending for PD catheter.		1					
Other: seizures, hypotension							1

**Table 11: Continues on next page ...**

Distribution and description of barriers to PD encountered by new patients starting dialysis in Alberta between October 1, 2016 and June 30, 2017 by type of barrier

	Calgary	Lethbridge	Medicine Hat	Red Deer	GNH	RAH	UAH
<b>Total patients with at least one barrier to PD (any type)</b>	<b>47</b>	<b>16</b>	<b>5</b>	<b>18</b>	<b>12</b>	<b>25</b>	<b>59</b>
<b>Physical</b>	<b>13</b>	<b>6</b>	<b>3</b>	<b>10</b>	<b>3</b>	<b>8</b>	<b>18</b>
Decreased hearing			1	2	1	2	1
Decreased manual dexterity	1		3	4	1	3	5
Decreased strength to lift PD bags	2	5	2	4	1	1	8
Decreased vision	4	1		2	1	5	5
Frailty	4		2	2	1	1	6
Immobility	5	3	1	6	1	3	9
Other: Patient has had glaucoma and a previous retinal detachment; therefore patient is not able to lift anything	1						
Other: chronic pain from gout; arthritis							1
Other: Unable to self transfer or feed self; 100% dependent for all ADL's							1
<b>Cognitive</b>	<b>21</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>13</b>
Anxiety	4		1		3	1	1
Dementia				1		1	
Language barrier	9				2	2	3
Learning disability							1
Mild cognitive impairment	4	4				1	3
History of non-compliance	2			2			2
Psychiatric disorder	1	1		1	2	1	1
Other: Cocaine use						1	
Other: Ethyl alcohol dependency, depression, prior medical non compliance					1		
Other: Nursing notes indicate "memory problems".	1						
Other: Polysubstance misuse HD case summary							1
Other: Wolf-Hirschhorn syndrome, developmental delay						1	
Other: no motivation							1
Other: poor memory							2
<b>Social or residential</b>	<b>10</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>7</b>
Employment	1		2				
Primary caregiver						1	3
Small living space	6	8			1	1	3
Other: Client lives in [rural] and is noted to be not coping at home. Given that [client] is not coping [client] is aware that PD would require moving to [city] where there is more support	1						
Other: living in [rural] with no transport	1						
Other: Patient recently lost [ ] job and had to relocate to [center] from [rural], does not have permanent accommodations yet						1	
Other: Patient lives outside town in [rural]	1						
Patient: lives by [self]	1						
Patient: will be placed in a full care nursing home							1
<b>Other conditions</b>	<b>0</b>	<b>1 (3.4)</b>	<b>0</b>	<b>1 (2.9)</b>	<b>0</b>	<b>2 (5)</b>	<b>3 (2.9)</b>
Imminent transplant		1				1	1
Moving out of region							2
Other: Dr. [ ] feels there is a non-compliance issue with this patient.				1			
Other: seizures						1	

**Table 11: Continued from previous page**

Distribution and description of barriers to PD encountered by new patients starting dialysis in Alberta between October 1, 2016 and June 30, 2017 by type of barrier

## **Modality Choice**

As part of the process of modality selection, patients who are receive modality education and are eligible for PD must then choose to pursue PD in order to receive it. As part of the START Project, we are documenting the reason why patients who are eligible for PD choose not to pursue PD. The reasons are presented in Appendix A.

## Technique Failure

As part of the START Project, we are also monitoring the causes of loss from PD therapy. In order to report this metric accurately, we identify patients who have received PD therapy and have had at least three months of potential follow up (i.e. they are part of the cohort selected for analysis and reporting, and started PD at least three months prior to the end of the reporting cycle). This allows us to observe patients for up to three months for causes of loss.

The rates of technique failure in this population, to date are illustrated below in Table 12. There are no other causes of loss to date from PD for this cohort.

	Calgary	Lethbridge	Medicine Hat	Red Deer	GNH	RAH	UAH
<b>Total patients with three months of potential follow up</b>	<b>31</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>10</b>	<b>10</b>	<b>27</b>
Patients who failed PD, technique failure (%)	4 (13)	0	0	0	1 (10)	0	2 (7)

**Table 12:** Causes of loss from PD in patients who have had at least three-months of potential follow up, and who started dialysis between October 1, 2016 and June 30, 2017

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## **Innovation Collaborative: Overview**

The START Project is enriched by an Innovation Collaborative comprised of three workshops taking place between June 2017 and March 2018. This report and subsequent reports will be used to inform the workshops being held in June 2017, November 2017 and March 2018.

During these workshops, teams of front-line staff and other key stakeholders from across Alberta will utilize the detailed information about the processes that drive important patient and program outcomes collected as part of the START Project, in order to:

- Identify barriers to the safe and effective use of PD in their program;
- Identify barriers to improving the appropriate timing of dialysis initiation;
- Develop and implement an action plan to address those barriers; and
- Monitor progress to ensure programs can achieve sustainable change.

Progress and improvements will be measured using a balanced score card as a tool. The period of time between each Innovation Collaborative is an action period, during which teams will implement and refine the strategies developed during the workshop and monitor their progress using their balanced score card.

The first Innovation Collaborative Workshop took place on June 22, 2017 in Red Deer and was attended by teams from Edmonton, Red Deer, Calgary, Lethbridge and Medicine Hat.

### **Pre-Collaborative Meetings**

Prior to the first Innovation Collaborative, the START Co-Chairs invited all teams participating in the Innovation Collaborative to pre-collaborative meetings. One meeting was held for each of the participating teams, and meetings were held approximately one month prior to the Innovation Collaborative.

At these meetings, the START Co-Chairs and the START Practice Lead presented the data contained in this report. Team members were encouraged to discuss the data and determine where their programs were strong, where they might consider focusing efforts to improve the use of PD in their programs, and to ensure patients in their programs start dialysis at the appropriate time.

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## **The START Project: Next Steps**

### **Multidisciplinary Meetings and Documentation**

Participating sites will continue standardizing and optimizing the process of dialysis treatment selection to ensure that all patients with kidney failure are identified, assessed for eligibility, offered appropriate treatments, and allowed to make an informed choice about their treatment. Participating sites will also continue to utilize a common web-based platform for data collection and reporting.

### **Second Innovation Collaborative**

The second Innovation Collaborative for the START Project will be held on December 11, 2017. Teams who participated in the first Innovation Collaborative will be invited to return to share their progress and continue to implement and monitor strategies for maximizing the safe and effective use of PD, and ensuring patients are starting dialysis at the appropriate time.

Between now and then, the participating sites will work on revising and implementing the action plans developed during the first Innovation Collaborative. Sites will track their progress on their uniquely selected measures, as well as the province-wide metrics that are mandated as part of the START Project, using their balanced scorecards.

The START Co-Chairs and START Working Group will continue to support the teams during the action period as they work toward their common and site-specific goals.

### **New Data Elements**

Modifications to the data collection platform have been made to capture additional detail required to provide more granular reporting around timing of dialysis initiation and to help inform interventions as we move forward.

Starting in August 2017, sites will standardize the documentation of carefully selected information related to the timing of dialysis initiation in outpatients, including symptoms present at the time of dialysis initiation, the reason for dialysis initiation, nursing and physician factors related to the start of outpatient dialysis. This data will be analyzed to provide granular and detailed information regarding the circumstances under which outpatients start dialysis and allow teams to use this information to improve the provision of care to their patients. This data will be made available to the teams participating in the second Innovation Collaborative.

### **Edmonton Data Update**

Following the pre-collaborative meetings and the Innovation Collaborative, teams in Edmonton expressed a desire to review the data presented in this report according to their patients' home site. For new patients initiating dialysis, their home site is defined as the site out of which their primary nephrologist practices and is one of: University of Alberta Hospital, Grey Nun's Community Hospital, and the Royal Alexandra Hospital. This data will be provided to teams from Edmonton who attended the first Innovation Collaborative workshop.

## **Questions and Comments**

Please direct any questions, comments, or suggestions regarding this report or the START Project to:

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## Appendix A

The tables below illustrate the reasons why patients who were eligible for PD during the reporting period did not choose to pursue PD. These reasons are entered directly by the front-line staff who are documenting their patients' modality assessment using the standard format implemented as part of the START Project. The content of these comments have been omitted to the extent that the contents might identify a patient within a program.

### Calgary

[Date] CKD nurses progress note- advises pt has chosen HD. unable to find any other documentation indicating why pt decided not to pursue PD

Patient chose to pursue PD if she required ongoing dialysis. It was decided that her dialysis would be stopped and renal function would be monitored. Should she develop uremic symptoms or GFR decline further, dialysis would be restarted ...

Pt has been offered PD multiples times and declined. No reason documented.

Patient decided he and his physician preferred he continue HD per [role] investigation. as per [nephrologist] [date]- [Patient] likes the social aspect of in-center HD. She is not interested in PD/home therapy at this time.

Pt frail. Daughter concerned about caring for pt at home, including doing dialysis

Pt quite reluctant to pursue peritoneal dialysis as he feels he will not be able to perform this on his own. Pt lives in [rural]. (Source: consultation note from [nephrologist] [date])

Pt had chosen PD and was assessed by access surgeon. [started on HD and then decided not to switch]

Pt stated " he does not want to do dialysis at home. He prefers to go to a facility to have hemo done"

did not want to do home therapies

Pt declined PD as she doesn't want to do dialysis at home advises she lives with her daughter and lives in a very small living area that wouldn't accomodate the PD supplies

Patient's doctor indicated that transplant was imminent so patient was started on HD.

Patient's first choice if transplant was not available at time of needing dialysis was PD.

Patient decided that she would stay on HD as she felt her transplant would be in the near future and it would not be worth the time to train on PD. She said she would consider it in the future if her [person] is found not to be a viable donor ...

Patient's first choice for modality was incentre HD. She had previous experience with PD which was stopped due to catheter dysfunction. No other explanation provided per charting in [system] progress notes.

Patient stated she likes to swim and also to sit in the hot tub with her grand children so decided she preferred hemodialysis. She also mistakenly thought it would be easier to travel with HD. Per [system] clinic notes.

He stated he did not want to do home therapies. Is also hoping for renal recovery

### Table 1A: *Continued on next page ...*

Reasons why new patients starting dialysis in Calgary between October 1, 2016 and June 30, 2017 who were eligible for PD chose not to pursue PD

unable to find indication why pt chose to do in center HD
Pt was on PD for 4 years prior to transplant. Pt had multiple pd peritonitis's. As per nursing progress note [date], pt felt burnt out, tired and frustrated with PD.
Patient decided she did not want to do a self care modality. She didn't want to bring her medical treatment in to the home. As per her NC [Name], many conversations were had between her, [nephrologist] and patient regarding this and she stayed ...
as per pt-very concerned with her body image "is very proud of her flat stomach and doesn't want a tube sticking out " likes to swim Wants to keep her home like and her medical life separate
Pt chose hemodialysis, due to his many abd surgeries and [name of] syndrome
Patient unwilling to commit to a modality choice. She never gave a reason why she didn't want to pursue PD until today [date], indicated to writer, [name] RN, on the phone that she is no interested in a home therapy. Wants to do in ...
Patient had chosen PD when had modality education on [date]. Unfortunately was very uremic when presented for the session. After consultation with [nephrologist] was sent to ER directly from the session. Required urgent initiation of dialysis ...
Patient is hopeful his donor will have work-up completed quickly and be able to donate a kidney to him. He decided to stay on HD until transplant as he is hopeful transplant will happen in the next 2-3 months. If his donor is not able to donate ...
Pt and family initially chose PD. Pt started urgent HD as K+ 7.3.
Did not choose to persue PD as he was going to [place] and did not want to be on PD in [place]. (PD is available in [place]).
Pt expressed some interest in PD but declined to choose PD at this time. Pt is hoping for renal recovery. Sees [nephrologist] at the end of [month] and will discuss ? renal recovery at that time
as per [date] progress note- pt does a lot of heavy lifting on a daily basis and didn't want to do PD has had multiple family members on PD
As per [educator] note he declined to indicate if PD was of interest to him as he is hoping to recover his kidney function.
She was not interested in pursuing a home therapy at the time of requiring dialysis start. She wanted in center HD after her modality education class but did express some interest in PD. She may consider PD at a later time but not interested a
Pt did not want to hear about home modalities
modality education completed when pt on hemo. Pt unsure if wanting to switch

**Table 1A: Continued from previous page ...**

Reasons why new patients starting dialysis in Calgary between October 1, 2016 and June 30, 2017 who were eligible for PD chose not to pursue PD

**Lethbridge**

Waiting for transplant. Postponed placement of PD catheter.
Did not want abdominal catheter. Would prefer to have staff perform in center hemodialysis
since initial education, patient prefers current therapy of HD. Patient has limited mobility and tracheostomy. Prefers to have nurses provide care in center.
in preliminary workup for transplant. Has [multiple] living donors willing to donate.
Wanting to stay on HD. likes HD in [rural]. HD fits her lifestyle at this moment.
Did not want PD. Wanted to do HD in center to have nurses to procedure.
Cancer has returned to [organs]. Not wanting to pursue PD. Will remain on HD until unable to manage and stop therapy.
Patient not wanting to do PD. Wanting to have in center HD.
Did not want PD. Did not want catheter in abdomen. Afraid of doing own therapy and afraid of infections. Wanting to have in-center hemodialysis with nurses performing care. Did touch base with patient after starting dialysis and continues to no
Not interested in PD. Not a candidate related to colostomy surgery.
Patient not wanting tube in abdomen. Wanting to do HD in center or possibly conservative care if her quality of life decreased. Husband not able/willing at this time to support home therapy.

**Table 2A:** Reasons why new patients starting dialysis in Lethbridge between October 1, 2016 and June 30, 2017 who were eligible for PD chose not to pursue PD

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## Medicine Hat

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Family physician advised against it. Pt is a [labourer] and concerns over heavy lifting at work. When discussed PD with patient, patient is unionized so employer would be able to accommodate lifting restrictions.

Per CKD RN and [nephrologist] pt chose hemo as she lives alone and after family meetings with her two sons she chose hemo and had fistula created.

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**Table 3A:** Reasons why new patients starting dialysis in Medicine Hat between October 1, 2016 and June 30, 2017 who were eligible for PD chose not to pursue PD

**Red Deer**

It is not very clear by the charting by the CKD nurse why PD was not discussed further but it is charted that patient and his family chose HD.
PD catheter referral to be submitted sooner to [Date]. See comments below.
Patient booked for Home Dialysis Advanced Education Class dated [Date]. He did not show for class and writer attempted to rebook for [Date] class but [Patient] said he may have to work.
Writer spoke with [Patient] on [Date] and he stated that he lives alone, already has a fistula in place and ambulates by wheelchair. He does not want to pursue home dialysis. [Patient] made decision to have fistula placed while in pre-dialysis at CKD clinic.
Chose to remain on HD at this time.
Patient chose HD and had a fistula inserted prior to starting dialysis.
Spoke with patient and she has no interest in learning more about home dialysis treatments.
Patient decided on having an AVF created

**Table 4A:** Reasons why new patients starting dialysis in Red Deer between October 1, 2016 and June 30, 2017 who were eligible for PD chose not to pursue PD

**Edmonton RAH**

moving to the[foreign country] - no PD program
believed that she would not follow through on a home Therapy, would keep putting off her treatments until another day and would likely become ill.
new acute start, overwhelmed, receiving cyclophosphamide unable to make decision at this point. will see again
Patient offered PD, refused due to denial of illness and need for treatment.
at this time pursuing living donation. if no living donor will go to PD
pursuing living donation renal transplant first. will do PD if no donor
Patient overwhelmed with diagnosis of renal failure and dialysis initiation. Currently living in a small basement suite with no support in [city] as all family is in [foreign country]. Patient is hopeful for living donor transplant ...
Patient did not want to pursue PD, no clear reason given.
Patient failed to attend Modality Education class despite scheduling same several times. According to [system] notes from access RN, patient did not want PD as he enjoys swimming.
Patient felt that she could not tolerate PD due to increased pressure in her abdomen. Patient also has longstanding history of constipation. Source - CKD clinic notes [Date] [RN]
Family felt HD would be better for the patient, patient wanted to pursue the modality that he felt was easier for his family. Source - progress note [Date] [NP]
Patient's father is on home hemodialysis, patient states has a negative view of home therapies due to family exposure and is not interested in same.

**Table 5A:** Reasons why new patients starting dialysis at Edmonton RAH between October 1, 2016 and June 30, 2017 who were eligible for PD chose not to pursue PD

**Edmonton GNH**

Reason not given, patient's children were translating, unclear as to how much information was given to patient. The family decided against PD, plan is to meet with them again.
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Patient was not interested in PD, chose in-center HD
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not interested
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**Table 6A:** Reasons why new patients starting dialysis at Edmonton GNH between October 1, 2016 and June 30, 2017 who were eligible for PD chose not to pursue PD

**Edmonton UAH**

primary care giver for husband with dementia and no other consistent support person able to be in the home at all times
[Did not want PD]
unsure if he will be able to maintain his employment with PD due to heavy lifting. is exploring HHD
states no space for equipment and not interested in home dialysis.
preferred home hemodialysis due to OR waitlist for PD catheter. pateitn has since had a perforated bowel with temporary colostomy
prefers HHD
pursuing HHD
patient felt that he could not commit to the self management required for PD
states brother was on PD in ON and had very poor outcomes. will not consider PD for this reason. is pursuing HHD
rapid weight loss continues, 40lbs in 6 months, [recovering from surgery], remains very weak and frail.
chose HHD
[ does not want to consider PD at this time. will approach her again in 6-8 weeks]
fearful of dialysis at home, denial of impending need for dialysis
currently undecided, exploring home hemodialysis
patient refused to consider PD or any form of dialysis, started with a GFR of 2. will revisit
undecided
reluctant to make a decision, fearful
low motivation to consider any home therapies.
later referral to CKD, undecided. [date] - very poor memory, dementia not documented however pateint does not remember his HD schedule and arrives at unit on any given day and time for HD
does not wish to do home dialysis
family fearful to doing dialysis at home, refused to consider
chose HHD
patient does not speak english, lives in isolated community with no family supports. daughter feels that her mother would not be able to do PD at home, she refuses to consider
dependent on parents, has not attended school, cannot read or write. mother feels he is unsafe to pursue PD
chose HHD
will relocate to [rural] until feet have healed and able to ambulate. will follow up at that time
chose HHD, training started [date]

**Table 7A: Continued on next page ...**

Reasons why new patients starting dialysis at Edmonton UAH between October 1, 2016 and June 30, 2017 who were eligible for PD chose not to pursue PD

wants to do HHD, does not like idea of PD catheter tube hanging from abdomen
does not want to do any dialysis at home as she feels it would not be safe with her 4 young grandchildren that she is raising. also anticipates moving to [another province on x date]
patient is in AB temporarily for work, returning home to [other province] in 6 months with plans to do HHD
did not want to do home dialysis, willing be moving to [other province], states has potential living donors and will pursue this when she relocates
her [person] has almost completed her evaluation as donor. anticipated that pateint may go to surgery for transplant in less than6 months
Patient feels that in-center is his best option for now, not interested in doing PD again (had been on PD in the past prior to transplant)
has chosen HHD,
has chosen HHD, assessment completed
Patient chose Home Hemodialysis
Patient chose Home Hemo
not willing to review or consder home dialysis at this time

**Table 7A: Continued from previous page ...**

Reasons why new patients starting dialysis at Edmonton UAH between October 1, 2016 and June 30, 2017 who were eligible for PD chose not to pursue PD