Ontario Renal Network

Exploring Opportunities to Grow Home Dialysis in Ontario: Provincial Site Visit Report

September 2019

Ontario

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EXECUTIVE SUMMARY

The Ontario Renal Network (ORN) is committed to promoting and enabling dialysis at home. To drive growth in home dialysis, a provincial home dialysis prevalence target of 28% was set during Ontario Renal Plan 2. Currently, 25.8% of dialysis patients are on a home modality.[1] Between 2015 and 2018, the ORN conducted site visits of 15 Regional Renal Programs (RRPs) to understand local challenges and successes in growing home dialysis, through focused discussions with administrative and clinical leadership and staff across all renal teams. Based on these site visits, several themes of common challenges and successful practices across the RRPs became apparent.

Key challenges to growing home dialysis included:

Home First Culture

- Varying levels of physician and staff comfort and education regarding home dialysis contributed to inconsistent acceptance of home dialysis as the preferred option for suitable patients.

Integration of Renal Care Teams

- Lack of formal communication and collaboration mechanisms between multi-care kidney clinic (MCKC), home dialysis, in-centre dialysis, and transplant teams impacted coordination and continuity of care for patients.

Patient Recruitment

- Strict selection criteria for home dialysis training prevented marginal patients from being considered as candidates for home dialysis.
- Modality education did not emphasize home dialysis as the best option for appropriate patients.
- Modality selection was often portrayed as an irreversible decision, rather than one that can be revisited throughout the patient journey.
- Use of transition units for home dialysis education and training was inconsistent.
- Lack of formal processes to identify home dialysis candidates within the urgent start population and candidates for home to home transitions was evident.

Capacity and Resources

- Limited physical space and human resource constraints impeded growth of home dialysis.

Satellites

- Satellites were not equipped to identify home dialysis candidates or provide home dialysis modality education and training.

Peritoneal Dialysis (PD) Catheter Outcomes

- Poor outcomes detracted from the promotion and uptake of PD.

Successful practices for increasing home dialysis prevalence included:

[1] As of Q4 2018/19

Promoting a Home First Culture

- The presence of an institutional buy-in and belief, across all teams, that every patient should be considered for a home modality was observed.
- Consistent staff education was in place to build strong comfort and awareness of home dialysis.

Improving Integration of Renal Care Teams

- Regular rounds, attended by all teams, to review potential home dialysis candidates minimized teams operating within silos and reassured patients of continuity and coordination of care.

Optimizing Patient Recruitment

- A broad selection criteria for home dialysis training provided opportunities for marginal patients to try home dialysis.
- Building partnerships with home and community care providers supported patients that required additional assistance for home dialysis.
- Early modality education followed up with recurring conversations about modality decisions enabled patients to dialyze at home, if and when appropriate.
- Systematic approaches identified urgent start patients and potential transitions from in-centre dialysis or PD to home hemodialysis.

Addressing Capacity and Resource Constraints

- Flexible hours of operation for home dialysis training accommodated patient schedules.
- Staffing for anticipated growth of the home dialysis program and implementing succession planning to mitigate staff attrition ensured staff were able to provide dedicated time on home dialysis education, training, and support to patients.

Additional Considerations

- Identification of home dialysis champions and implementation of rounds to review potential home dialysis candidates at satellite units reduced the reluctance of satellite staff to promote and enable home dialysis.
- Investigating the causes of poor PD catheter outcomes allowed programs to implement local strategies for improvement.
- Innovative methods to support patients were implemented to promote and enable home dialysis uptake.

While home dialysis prevalence is influenced by unique program and patient specific factors, learnings presented in this report may be adapted to local settings, where applicable, to improve home dialysis practice and performance. An opportunity exists to formalize knowledge sharing between programs in the form of mentorship to improve home dialysis culture, education, policies, and patient awareness.

INTRODUCTION

For the past decade, the Ontario Renal Network (ORN) has committed to enabling patients living with end-stage renal disease (ESRD) to have access to dialysis in their place of residence. The second Ontario Renal Plan (ORP 2, 2015-2019), included strategic objectives to establish a community-first approach to kidney care and to ensure infrastructure and services were in place to enable home dialysis. To drive growth in home dialysis, the ORN set a provincial prevalence target to have 28% of all dialysis patients on a home dialysis modality by 2019.

Since the beginning of ORP 1 in 2012, the number of patients receiving dialysis in Ontario increased by 17.0%, while the number of home dialysis patients increased by 38.2%.[2] The home dialysis prevalence rate increased from 21.9% to 25.8%.[3] Currently, 25.8% of dialysis patients dialyze at home, with 20.8% receiving peritoneal dialysis (PD) and 5.0% receiving home hemodialysis (HHD).[4] Although there has been an overall increasing trend in home dialysis prevalence, on average, home dialysis prevalence rates in Ontario have plateaued in the last three years.

The ORN recognizes that there are a multitude of inflow and outflow factors that impact home dialysis prevalence, such as selection and referral of patients to home dialysis programs, home dialysis training success, changing demographics in the overall dialysis population, and attrition from home dialysis due to various factors. Regional Renal Programs (RRPs) in Ontario experience the impact of these inflow and outflow factors in different ways due to variations in program size and regional contexts. To better understand local successes and challenges to growing home dialysis, between 2015 and 2018 the ORN conducted targeted site visits at 15 RRPs in Ontario with the following objectives:

- To engage local leaders and champions in identifying and addressing local challenges to improve home dialysis performance and to determine what type of support the ORN can provide.
- To identify potential enhancements and opportunities to strengthen processes and modifiable factors that impact home dialysis patient recruitment, training, and retention.
- To develop recommendations for the program to implement in the short term.
- To identify common challenges and strategies that can be shared at a provincial level.
- To determine where mentorship may be valuable.

The purpose of this Provincial Site Visit Report is to summarize themes of successes and challenges in growing home dialysis that emerged during site visits across the

[2] From Q4 2011/12 to Q4 2018/19
[3] From Q4 2011/12 to Q4 2018/19
[4] As of Q4 2018/19

province. This report outlines how site visits were conducted, key findings from across the province, and successful practices for improving home dialysis uptake. Specific recommendations to individual programs are not discussed in this document. Although RRPs in Ontario vary in regional and local characteristics, an understanding of the overarching successes and challenges for home dialysis can support improvements in local practice at all RRPs. Additionally, there is an opportunity to share best practices through mentorship to address common challenges among RRPs in Ontario.

HOW WERE SITE VISITS CONDUCTED

Between 2015 and 2018, 15 RRPs across Ontario were visited by the ORN. RRPs selected for targeted home dialysis site visits varied in their home dialysis prevalence rate and their home dialysis growth rate. Some programs were selected because they were significantly below provincial home dialysis prevalence targets. Some were selected because they were historically strong performers in home dialysis, while others were selected because they had experienced significant recent growth. Some RRPs also proactively invited the ORN for a site visit to discuss their overall home dialysis prevalence, or to have a focused discussion on either PD or HHD specifically. Programs visited by the ORN were regionally distributed across 12 of the 14 Local Health Integration Networks (LHINs) in Ontario. Although not all 27 RRPs were visited, those visited represented a diverse cohort of renal programs across the province (see Appendix).

Site visits were led by Dr. Philip Boll, the ORN Provincial Medical Lead (PML) for PD, and Dr. Philip McFarlane, the ORN PML for Hemodialysis, with support from ORN staff. Participants from the RRPs typically comprised of the Regional Director, Program Director, Regional Medical Lead, Nephrology Division Head, PD and HHD Medical Directors, nephrologists, PD and HHD staff (typically including clinical, non-clinical, and technical staff), and Multi-Care Kidney Clinic (MCKC) staff. In some cases, the meeting was also attended by the Vice-President, Chief Nursing Officer, and Patient and Family Advisors. All of the participants demonstrated strong leadership and were well-prepared to share local successes, identify challenges, and possible solutions. The attendees were very engaged and enthusiastic about opportunities to improve care for patients.

Site visits were coordinated one to two months in advance of the visit. Coordination involved identifying key stakeholders and participants, arranging availabilities, and preparing materials for the meeting. In preparation for the site visit, a program-level home dialysis profile was provided. The profile presented characteristics of the home program and patients, demographics, and statistics for home dialysis prevalence and initiation. The profile also contained information on home dialysis patient inflow and outflow, and information on home hemodialysis funding for recent quarters. The structure of the site visits evolved over time as the ORN adapted its approach based on learnings from previous visits. In later site visits, RRP attendees were sent a survey in advance to understand factors that impact home dialysis at their program. Survey results were shared with RRP participants prior to the visit, as part of the program-level home dialysis profile.

In general, site visits took place over four hours and were structured around the following three areas: 1) an overview of the RRP, 2) a tour of the home dialysis, in-centre dialysis, MCKC units, as well as transition units where applicable, and 3) discussions with all renal teams about the successes and challenges in growing home dialysis. Discussions often occurred in smaller groups to encourage participation from

all RRP staff. Semi-structured discussion questions were used to guide conversation regarding core topics, such as patient recruitment, training, retention, modality education, and assisted dialysis. At the end of the site visit, the ORN and RRP leadership debriefed on the day's learnings, outlining initial observations, and discussing next steps. For more recent site visits, program-level reports summarizing the key challenges identified and providing recommendations for improvement in the uptake of home dialysis were provided to the RRP afterwards.

COMMON CHALLENGES TO GROWING HOME DIALYSIS

Common challenges in promoting home dialysis uptake were recognized during the site visits. This section outlines the key challenges identified. It is important to note that not all RRPs experienced each of these challenges, but that these observations were common among many of the sites.

Home First Culture

The absence of a strong, consistent Home First culture was recognized as being an underlying challenge to the promotion of home dialysis at many RRPs across the province. A Home First culture can be defined as the belief among nephrologists and staff that every ESRD patient is a potential candidate for home dialysis as a starting point. Among RRPs that lacked a strong Home First culture, it was identified that there was an inconsistent belief in home dialysis as the best therapy for appropriate patients. A lack of Home First culture could be attributed to low physician and staff comfort with one or both home dialysis modalities and non-standard staff education of home dialysis, leading to inconsistent messaging across the program.

PHYSICIAN AND STAFF COMFORT LEVEL AND EDUCATION REGARDING HOME DIALYSIS

Varying levels of knowledge and comfort of physicians and staff with home dialysis modalities tended to be as a result of poor awareness of the clinical benefits of home therapies and minimal contact with home dialysis patients. Likewise, inconsistent staff education on home dialysis, particularly HHD, was observed as a barrier to home dialysis.

In MCKC, lack of physician and staff comfort and experience with home modalities negatively impacted the identification of potential home dialysis candidates and the opportunity for tailored patient education on home dialysis. Clinician bias and experience often resulted in programs only offering home dialysis options to the youngest and healthiest patients. Similarly, in-centre staff had limited interaction with home dialysis patients and tended only to interact with patients who had had adverse outcomes with home dialysis (e.g. peritonitis resulting in a transition from PD to in-centre). As such, in-centre staff may have been hesitant to promote home modalities as viable options to patients, especially in-centre patients who were struggling on that modality and may have potentially benefited from a switch to a home modality. Lastly, clinicians at some sites, where HHD utilization was low, struggled to identify scenarios where HHD would be preferable to PD.

The lack of standardized education for all renal staff on home dialysis modalities often impeded informed modality selection by patients, as patients may not have received consistent information about home dialysis. Patients may have been deterred from choosing home dialysis if they received differing messages from teams across the program. All renal teams in a RRP may not have been fully aware of the clinical benefits of PD and HHD.

Integration of Renal Care Teams

A major barrier observed at multiple RRPs was a lack of integration among teams. Communication and formal mechanisms of information sharing and collaboration (e.g. rounds) between the home dialysis, MCKC, in-centre, and transplant programs were limited or non-existent. Operating in silos impacted the coordination and continuity of care for patients.

The absence of integration among teams limited the number of referrals to the home program and hindered the growth of overall home dialysis prevalence. Systems for information flow or referrals varied among sites, as some used paper-based documentation and others used electronic health records. Additionally, at some programs, each team within the renal program had its own information management system, making information flow difficult between teams.

At some sites, it was indicated that a single nurse was often the only individual discussing modality options with patients. However, this individual may not always have had the resources to follow patients as they transition from MCKC to home dialysis or in-centre dialysis. With better integration among teams, programs could rely on open communication to support consistent patient modality education and better care coordination throughout the patient journey, rather than one individual bearing the burden of this responsibility.

Patient Recruitment

SELECTION CRITERIA FOR HOME DIALYSIS TRAINING

It was identified at RRPs visited that strict selection criteria for home dialysis training was a barrier to growing home dialysis prevalence. For programs with a low home dialysis prevalence rate but a high training success rate it could be concluded that the program was being too selective in offering home dialysis as an option. Programs with high training success rates may have conservatively selected only the best candidates for home training which could have stunted the potential growth of a home program, as not all patients were being considered for home modalities. Marginal patients could present with challenging barriers to home dialysis, such as being elderly, having multiple comorbidities, or requiring assistance. However, in many cases, marginal patients have proven to be successful on home dialysis. Broader acceptance criteria could provide training opportunities for marginal patients and improve home dialysis prevalence at programs.

MODALITY EDUCATION & SELECTION

Some RRPs in Ontario have adopted a neutral approach to modality education and selection by sharing information about all modality options equally and enabling patient choice. While on initial assessment this approach may seem person-centered, upon further consideration it appears that in presenting all potential modality options in a neutral manner, patients may not have been encouraged to select the option that best fit their current clinical and social situation. In this scenario, clinicians expressed that some patients who would be good home dialysis candidates were not encouraged to pursue that option. Without encouragement and support, patients may have felt anxious to consider home dialysis. Education materials should have been tailored to a patient's medical and lifestyle needs and preferences, as opposed to presented in an equal or neutral manner. While in-centre dialysis may have been the most appropriate option in many cases, a Home First approach is about identifying appropriate patients and working together to determine if home dialysis is the best option for them.

Finally, most programs did not educate patients on the fact that a modality decision could be changed, and that if a patient was not doing well on their selected modality, the clinical team could identify other modality options. Few programs discussed kidney failure as a lifetime journey that would often take a patient through many treatments (e.g. over many years a patient may experience initial treatment with PD, then a clinical event requiring transition to HHD, followed by a transplant, and ultimately transition to in-centre dialysis after graft failure). The stress of getting a modality decision "correct" often directed patients to in-centre dialysis, as it was perceived to be a safer option.

TRANSITION UNITS

Transition or new-start units currently exist in approximately half of the 27 RRPs in Ontario. While the purpose of transition units vary across programs, many of them are used to provide home dialysis education to new start patients with the intent to facilitate their transition to home dialysis. However, at some of the programs visited, transition units were restricted in their ability to support uptake of home dialysis as a result of limited physical space, insufficient dialysis stations, and a lack of dedicated staff. Ways in which to maximize the effectiveness of transition units was a challenge discussed during the site visits.

HOME TO HOME TRANSITIONS

Home to home transitions occur when a patient on PD transitions to HHD. At many programs, this represented an opportunity to keep patients on home dialysis and mitigate against attrition to in-centre dialysis. However, due to many factors, including lack of integration and communication among teams, programs struggled with the identification of potential candidates for home to home transitions. Programs faced challenges in improving home to home transition rates in the absence of a defined process for identification of failing PD patients (e.g. rounds).

URGENT STARTS

Urgent starts occur when patients with advanced chronic kidney disease (CKD) unexpectedly require dialysis. The urgent start population is highly disadvantaged as they have received minimal or no pre-dialysis care and education by the renal care team before starting dialysis. Urgent start patients may have expressed interest in a home modality, but were likely to start on in-centre dialysis instead due to clinical and logistical restraints. Once patients started on in-centre dialysis, they tended to be reluctant to consider home dialysis. At some programs, there was no formal process for identifying urgent start patients so that they could be provided the same modality education that they would have received if their renal disease had been identified earlier and they received care in an MCKC setting.

There is an opportunity to improve communication between in-centre, satellite, MCKC, PD, and HHD teams to promote home modalities to urgent start patients. The absence of a systematic approach to identifying urgent start patients and offering timely modality education and training was an impediment identified in the provincial site visits.

Capacity and Resources

Capacity constraints and inadequate human resources for home dialysis were observed as themes across the RRPs in Ontario. Many programs were limited in the physical infrastructure required to promote and enable home dialysis effectively. Additionally, staffing turnover and recruitment was identified as a challenge faced by several renal teams in the province. Hours of operation were also highlighted as an impeding factor for patients when considering home dialysis training.

PHYSICAL SPACE

One of the recurring capacity constraints discussed during the site visits was the current usage of physical space for effective promotion of a home dialysis modality. The current space configurations at many RRPs precluded the prospect of peer support and home dialysis training in group settings. Many of the renal programs visited were designed to offer home dialysis training to one patient at a time. While this may have been appropriate for some patients, others may have benefited from group learning programs.

Additionally, limited physical space hindered the prospect of peer support, as patients were unable to build relationships with other patients also receiving home dialysis education and training. Peer support was identified by Patient Advisors as a key facilitator of informed modality selection and an important support during home dialysis training.

As alluded to earlier, it was observed that the lack of physical space dedicated to promoting home dialysis impacted the ability to have dedicated transition or new-start

units at several programs. Due to limited physical space, transition units may have had insufficient dialysis stations available to train and educate all those interested in home dialysis. Consequently, patients may have begun treatment on in-centre dialysis instead and lost their initial interest in dialyzing at home once they grew accustomed to the in-centre environment

HUMAN RESOUCES

Human resource constraints were identified as a challenge at many home dialysis programs in Ontario. Staff turnover, in particular the departure of seasoned home dialysis nurses who acted as champions for one or both home modalities, impacted morale within teams. Programs have experienced difficulties in recruiting qualified individuals. Recurring changes in managerial roles and lack of succession planning has also resulted in instability and loss of leadership at some programs. These human resourcing challenges were partly attributed to the perception that renal teams were chronically understaffed.

Additionally, it was observed that key individuals who play important roles in modality education and selection were often tasked with many other roles and responsibilities. These roles typically reviewed potential home candidates, conducted one-on-one sessions with patients to provide home dialysis modality education, and ensured that patients received adequate preparation for whichever modality they chose. Often this role was fulfilled by the ORN Body Access and Home Dialysis coordinators. At some renal programs, the responsibility of providing modality education was designated to one individual, who may not have had sufficient time to provide education, facilitate modality selection, and also build a relationship with individual patients. During the site visits, Patient Advisors also indicated that these individuals were a crucial component in their CKD journeys, as they ensured informed decisions were made regarding their renal care. Programs that lacked dedicated staff for modality education experienced challenges in promoting and enabling home dialysis uptake.

Satellites

Another barrier highlighted in discussions with some RRPs across the province was the limited utilization of satellites to promote and enable home dialysis. Satellite units seek to ensure that patients can receive timely, high-quality care closer to home. However, it was suggested that the current satellite model presented challenges, as satellites were not resourced to provide home dialysis modality education and training closer to home; instead, they typically only provided in-centre dialysis services. Staff at satellites were not trained to facilitate modality selection or promote home dialysis as champions for PD and HHD.

Moreover, once transferred to a satellite unit, patients were rarely re-evaluated to discuss potential home modality options. It was indicated that satellite units located closer to home may have discouraged patients who would otherwise have been inclined to select a home modality due to geographical distance from the main sites. Satellites

were not viewed as an optimal environment for home dialysis uptake and were identified as a lost opportunity for patient home dialysis education and training, especially in cases where clinical or social situations would make a home modality more attractive than in-centre dialysis at the satellites.

PD Catheter Outcomes

Poor PD catheter outcomes were seen to detract from the potential uptake of PD. Patients may have experienced various complications with their catheter that resulted in the inability to start or stay on PD. Adverse PD catheter events could have a significant impact on the quality of dialysis care for PD patients. Some programs in Ontario indicated that staff were not comfortable recommending PD to potential candidates due to the poor PD catheter outcomes at their sites. Consequently, this has impeded their ability to grow their PD program.

Other challenges associated with PD catheter insertions and outcomes were the methods of insertion used and availability of resources. PD catheters can be inserted percutaneously, laparoscopically, or via open surgery. Although there is no available evidence regarding the best method of insertion, at some of the visited sites, PD catheter outcomes for percutaneous insertions have been poor. It was noted that a few RRPs referred patients to designated Centres of Practice to receive laparoscopic PD catheter insertions due to patient preference.

Additionally, securing dedicated operating room (OR) time for PD catheter insertions was raised as a challenge. Lack of dedicated OR time limited the amount of surgical PD catheter insertions a program could schedule and did not allow timely PD access creation for urgent start patients. Similarly, the availability of the interventional radiology suite could impact timely percutaneous PD catheter insertions by the interventional radiologists or trained nephrologists for urgent start cases. Urgent start patients may also have expressed interest in PD, but could end up on in-centre dialysis instead if appropriate resources for timely education and insertion were not available.

SUCCESS FACTORS FOR GROWING HOME DIALYSIS

This section summarizes successful practices that were observed at RRPs across the province. These key determinants of success can be implemented at other RRPs in Ontario to promote the uptake of home dialysis.

Promoting a Home First Culture

A strong Home First culture was evident at high performing RRPs. To support the Home First philosophy, sites with high home dialysis prevalence rates had institutional buy-in and belief that every patient should be considered for a home modality, unless there was a contraindication preventing a patient from doing home dialysis. Unstable medical or behavioral conditions, conditions that predispose abrupt unconsciousness, or unsuitable housing conditions are some examples of contraindications where home dialysis may not be appropriate. However, it was believed that modifiable risks, such as fear of cannulation or catastrophic events, should not prevent patients from being considered as home dialysis candidates. As long as a patient was able, motivated, and could follow instructions, they would be considered for home dialysis prior to exploring other treatment options. High performing sites emphasized a philosophy of “try” and the notion that just “trying” was a key success factor for patient success on home dialysis. This supports the need for flexible selection criteria for home dialysis patients, as even marginal candidates can be successful on a home modality if educated and trained effectively.

An underlying Home First culture contributed to high home dialysis initiation rates from the MCKC patient population. MCKC nurses focused on building relationships with patients from the beginning of their patient journey. Modality education was mainly conducted by the MCKC nurses. MCKC nurses at high-performing sites discussed personal goals with patients (e.g. getting married, having kids, continue working, etc.) and then encouraged the appropriate treatment options that would help achieve those goals. When appropriate, home dialysis was presented as the modality most likely to help achieve a patient’s goals of care. The ORN’s Home Dialysis Insights Report is a useful tool to identify if initiation on home dialysis is a potential area of improvement within programs.

Additionally, consistent staff support and belief in the Home First philosophy enabled overall uptake of home modalities. All staff, including the MCKC, PD, HHD, and in-centre teams believed that home dialysis was an optimal treatment option for selected patients. In-centre leadership and staff also supported a Home First approach and did not consider home dialysis to be a “competing” modality. A key factor for success was the presence of home dialysis champions across all teams in the renal program, who advocated and encouraged home modalities as an ideal treatment option for

appropriate patients. Expert staff were leveraged to mentor and coach colleagues on home dialysis to build comfort throughout the team.

In some successful RRPs, staff attitudes and comfort with home modalities, specifically HHD, were promoted through regular staff education. Dedicated home dialysis education sessions targeting all renal teams, including home dialysis, MCKC, and in-centre nurses, were essential to developing a Home First culture within the program. Additionally, in-centre staff attended existing patient education sessions to learn more about the benefits of home dialysis. Learning materials for staff education were standardized to support consistent messaging from staff to patients throughout the patient journey. Although conversations were not scripted and the patient received individualized care, the message of promoting home dialysis was uniform throughout successful programs.

One of the province's leading home dialysis program's alluded to a Home "Second" philosophy, which focused on revisiting the appropriateness of a home dialysis modality. For example, MCKC patients who began on in-centre dialysis were re-evaluated after a month to determine if home dialysis should be explored. Staff also indicated that if a program was solely focused on initial growth, the opportunity for transitions from PD to HHD, or vice versa, could also be missed. Home to home transitions were seen as an area of opportunity to mitigate attrition if all staff supported starting and maintaining home dialysis.

While a well-established Home First culture is often a strong predictor of high home dialysis prevalence, it was acknowledged at site visits that it takes a long time to build a person-centred Home First approach.

Improving Integration of Renal Care Teams

Each patient follows their own path for ESRD treatment during their lifetime and may experience many different dialysis and transplant modalities, including home dialysis options. Teams at well-integrated programs demonstrated effective and coordinated communication throughout the patient journey. It was observed at some sites that all members of the care team attended weekly rounds to discuss the status of all patients and review patients approaching a dialysis start. These rounds were attended by renal nurses, navigators, Body Access and Home Dialysis coordinators, technologists, and nephrologists from all teams, including MCKC, in-centre, PD, HHD, and transplant. At some RRPs, weekly rounds focused on reviewing potential home dialysis candidates so that teams could better coordinate the transition of patients to home dialysis.

Opportunities for staff to openly communicate and collaborate minimized the common challenge of teams operating within silos. Integration of teams facilitated knowledge transfer and increased staff comfort regarding home dialysis and its associated benefits. This also created a reassuring environment for patients, as there was open and consistent communication between teams regarding optimal care for the patient.

At programs with high home dialysis prevalence, it was observed that integration of teams improved empowerment of renal nurses and allied health staff to be involved in patient modality education and selection. Frontline nurses were empowered to make recommendations about patient modality selection. For example, if a nurse felt that a patient was able to do home dialysis, they would recommend to the nephrologist to try training the patient for home dialysis. Trust and autonomy for nurses and allied health staff allowed them to think creatively about aligning goals of care and modality selection. Support for frontline staff from nephrologists and leaders was evident at well-integrated programs, as there was open communication between the renal teams regarding modality selection.

Optimizing Patient Recruitment

SELECTION CRITERIA FOR HOME DIALYSIS TRAINING

Programs could improve home dialysis recruitment by developing a formalized patient selection criteria. A broad acceptance criteria at programs provided more opportunities for marginal patients to try home dialysis. There have been many examples of patients that were considered marginal, but have proven to be successful on home dialysis once they began training.

Programs suggested that an older population of ESRD patients increased the difficulty of identifying potential home dialysis candidates and successfully training individuals. However, while home and community care support for home dialysis is highly varied among RRPs, some programs have engaged extensively with their LHINS and explored home and community care partnerships to identify appropriate supports for patients at home. Currently, assisted-PD is utilized widely at several RRPs, and personal supporter worker (PSW)-assisted HHD was piloted at a few participating programs.

MODALITY EDUCATION & SELECTION

A common success factor was for patient education on home modalities to begin early in the CKD journey, with repeated education throughout. Programs with high home dialysis prevalence have introduced education models that ensure patients received frequent home modality education. It was observed that goals of care conversations led to targeted education based on the patient’s clinical conditions and lifestyle preferences, as opposed to a neutral approach of presenting all modality options equally. Instead, benefits of home dialysis that fit with the patient’s lifestyle were emphasized. While the responsibilities of the Home Dialysis Coordinator varied across programs, modality education was a key focus for the Home Dialysis Coordinator in many programs.

Selecting a treatment modality could be decoupled from actually starting dialysis. Patient Advisors indicated that modality selection can be a daunting decision for patients and can be delayed as patients think making the decision means the treatment begins immediately thereafter. Home dialysis modality education could emphasize that no decision is permanent and the ability to change to or from a home dialysis modality is

always an option. To support continuous review of modality options, patients at some RRPs were revisited multiple times in their journey to discuss home dialysis. Successful programs also revisited in-centre patients to discuss how their treatment has progressed, goals of care, and exploring options for switching to a home modality. Ultimately, programs that had processes in place to re-evaluate patients who did not start on a home dialysis modality were able to support some patients to dialyze at home, if and when appropriate.

Patient Advisors recommended increasing the use of patient and family group education approaches and incorporating perspectives from current patients on home modalities to provide peer-to-peer education. Peer-to-peer support could be made accessible by embedding patient stories and experiences in assessments, education materials, training, and classes. RRPs could also support and leverage the local Patient and Family Advisory Council (PFAC) as a forum for peer-to-peer support.

REFERRALS TO HOME DIALYSIS

Another area where some programs had success was in referrals to home modalities. Systematic referral strategies and formalized processes such as weekly rounds were seen to be helpful in identifying potential home dialysis patients for training, re-education, or peer-support. Similarly, formalized processes were helpful in identifying transitions from PD or in-centre dialysis to HHD, as early identification of failing PD patients could improve home to home transition rates. Programs can leverage the data presented in the ORN's Home Dialysis Insights Report to identify if home to home transitions are an area of opportunity at their sites.

URGENT STARTS

To address urgent starts, it is essential that patients receive timely modality education to facilitate informed selection of a home dialysis modality or transplant options. Some programs had a systematic approach to identify urgent starts and leveraged their transition unit to provide modality education and training for new and urgent start patients. Others found it beneficial to initiate urgent start patients among other home dialysis candidates, as urgent start patients could benefit from dedicated time to explore modality options and make an informed decision in a peer-supported environment.

Addressing Capacity and Resource Constraints

Capacity constraints stemming from lack of physical space may require programs to reevaluate units and advocate with program leadership for increased investment in infrastructure. Programs could benefit from determining if physical spaces meet the current goals of the program.

Another way in which capacity could be increased at programs is to modify the hours of operation to accommodate additional patients. Flexible hours for home dialysis training, during evenings and weekends, have been implemented at some high-performing

programs to support and enable more patients to dialyze on a home dialysis modality. The very patients who may benefit most from a flexible or nocturnal dialysis schedule may also be the ones who cannot attend training during standard work hours. Programs also relayed support for open group training spaces, which allowed patients to benefit from group learning and peer-support.

From a human resource perspective, one strategy that has been successful at some RRPs has been to staff for the anticipated growth of the home dialysis program. This enabled teams to partake in activities that contributed to the growth of the home dialysis program without being stretched for resources. For example, one site indicated that additional staffing allowed the PD team to conduct home visits more frequently, therefore supporting patients to stay on PD. Since this could be unrealistic and difficult to plan for, some programs have leveraged creative ways to redistribute responsibilities and support staff to provide dedicated time on education, training, and support to patients, as needed.

In terms of recruitment, a few RRPs have had success in hiring enthusiastic graduates from nursing school and training them on home dialysis, rather than exclusively recruiting candidates with previous dialysis experience. Modifying the staff recruitment requirements helped to increase interest and the number of applicants. Programs also reduced staff attrition by establishing leadership development programs to retain talent. Programs also implemented succession planning.

Additional Considerations

SATELLITE MODEL

There is an opportunity to improve the utilization of satellites for home dialysis. While few programs have been able successfully leverage satellites, some discussed the idea that rounds could be implemented to revisit potential satellite patients who could be appropriate candidates for HHD. Nurses, physicians and members of the renal care team could follow a “primary” model, where staff at the satellite unit remain responsible for the home patient. This may reduce the reluctance of satellite staff to move patients to home dialysis modalities. Technological innovations, such as e-health, could assist with this care model.

Additionally, identifying PD and HHD champions at satellite units could help instill a Home First culture and provide support for patients located away from the main home dialysis unit. Similar to in-centre patients, HHD could be promoted as a possible option for patients who start at satellite units. Larger satellites could be leveraged as home dialysis training units, transition units, or provide respite for HHD patients who live close to satellites. While this would be an innovative model of care, re-envisioning the usage of satellites to promote and enable home dialysis could result in an increased uptake of home dialysis.

PD CATHETER OUTCOMES

Some programs with poor PD catheter outcomes have conducted root cause analyses and implemented local strategies for improvement. The root cause analysis could consider a variety of reasons for PD failure, such as an evaluation of the method of insertion, operators, peritonitis infection rates, catheter complications, training effectiveness, and comorbidities. For example, a site may have experienced poor PD catheter outcomes due to the type of insertion method (e.g. percutaneous insertion). In this case, encouraging the use of another insertion technique (e.g. laparoscopic insertion) could potentially improve PD catheter success. To support the improvement of PD catheter outcomes, the ORN is developing a PD catheter success project that will examine PD catheter outcomes and complications in Ontario and provide actionable data for quality improvement initiatives.

INNOVATION

High-performing sites in Ontario have dedicated resources and infrastructure to support home dialysis, but have also focused on innovation in patient care. Innovative methods of patient care included creative educational tools, such as apps and report cards, to help patients manage their treatment. One program has implemented a virtual ward to allow patients to have appointments with their care team via telephone and direct messaging. Providing home dialysis training in a room that replicates a home environment for patients prior to going home was another inventive use of resources. The use of simulation teaching helped to minimize the amount of home visits conducted by staff and ensure patients were ready to perform dialysis independently prior to launching on home dialysis.

LOOKING FORWARD

Renal programs across the province shared many common themes of successes and challenges they experienced in promoting and enabling home dialysis. Recognizing that there are a multitude of both program and patient factors impacting the uptake and growth of home dialysis, programs should assess what learnings from others can be adopted or adapted in their local environments. An understanding of common facilitators and challenges for home dialysis can lead to improvements in practice and performance at all RRPs.

Promoting and enabling dialysis at home is a continuing focus of the ORN and is outlined as a strategic objective of ORP 3. To further support programs in growing home dialysis, the ORN is developing a provincial Home Dialysis Mentorship Model that will provide a framework for programs to continue sharing learnings and best practices related to home dialysis. The provincial themes related to successes and challenges in home dialysis outlined in this Provincial Site Visit Report will serve as a key input for mentorship among the network.

APPENDIX

List of Regional Renal Programs Visited
Grand River Hospital
Halton Healthcare Services
Kingston Health Sciences Centre
Lakeridge Health
London Health Sciences Centre
Mackenzie Health
Peterborough Regional Health Centre
Sunnybrook Health Sciences Centre
St. Joseph's Healthcare Hamilton
St. Joseph's Health Centre Toronto
Timmins and District Hospital
The Ottawa Hospital
University Health Network
William Osler Health System
Windsor Regional Hospital