BCRenal
Provincial Health Services Authority

Value-Added RRP Dollars from Industry Support Innovation, Improve Renal Care

Over the past fiscal year, kidney care teams continued to adapt to and build upon the lessons learned from the COVID-19 pandemic in order to continue supporting patients and each other. They also continued to seek opportunities to improve care, as reflected in this document. At BC Renal, we extend our heartfelt gratitude to everyone in our kidney care network for your continued dedication.

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Value-added regional renal program (RRP) funds from provincial renal contracts negotiated by BC Renal (BCR) and the Provincial Health Services Authority improve care for patients and quality of work-life for kidney care providers across BC.

The majority of these funds are allocated to health authority renal programs (HARPs) to meet diverse needs at the local level, while a portion of the money is used to support cross-provincial initiatives of the BC renal network.

Value-Added Funds Support Provincial Initiatives

COVID-19 Pandemic and Value-Added Funds

Due to the lingering impact of the COVID-19 pandemic, some planned provincial and regional projects and initiatives for the 2021-2022 fiscal year were put on hold or timelines were extended. Value-added funds continued to be used to support a number of pandemic-focused provincial projects, including an evaluation of the shift from in-person clinical visits to mixed virtual and in-person care across BC's kidney care clinics, as well as continued development of a toolkit to enhance team-based and collaborative models of care in BC's dialysis units.

In addition, value-added dollars were used in part to enhance BC Renal's emergency response to the winter 2022 floods in BC's Lower Mainland region, which saw a number of kidney patients being cut off from their regular treatment facilities and kidney care supply chains.

Patient Education Tools

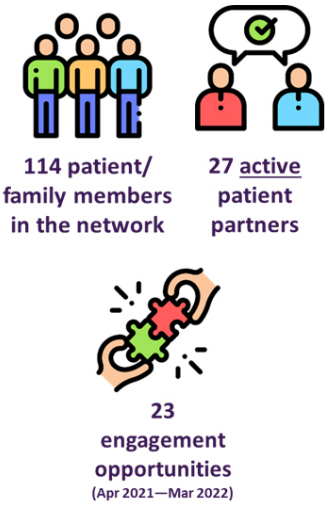
Value-added dollars continue to support the development and enhancement of a range of patient education resources that promote patient self-management and improved health outcomes. These include patient handouts and tools on a range of topics such as kidney transplantation, polycystic kidney disease, diet and nutrition, dialysis, medications, palliative care, home blood pressure monitoring and emergency preparedness.

Province-Wide Patient Experience Survey

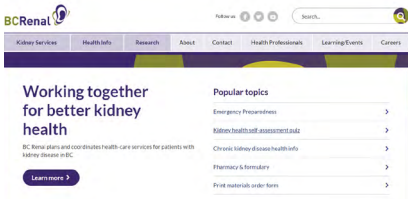
As a part of our commitment to ensuring high quality kidney care in British Columbia, in early 2022, BC Renal invited all patients actively receiving dialysis or kidney care from a clinic in any of the health authority renal programs across the province to participate in a patient experience survey. This marked the fourth time that BC Renal has conducted the standardized chronic disease management survey and the first time that pediatric patients and their families were invited to provide feedback about their care experience at BC Children's Hospital. In total, almost 4,000 patients participated in the survey by phone, online or by mail. A series of reports – provincial, by care modality (e.g. hemodialysis, peritoneal dialysis, etc.) and health authority specific – are to be shared with the community this fall and posted on the website. Of note, provincial action planning in response to the 2022 survey results is to be integrated into the BC Renal strategic planning process for the new 2023-2028 strategic plan.

Supporting Meaningful Patient Engagement

Guided by the BC Renal Patient and Family Engagement Framework published in 2019, BC Renal continued to support and advance meaningful patient engagement across our provincial committees and key activities. As of March 31, 2022, 114 patients and family members were part of the network, with 27 actively participating across 16 provincial committees and working groups, as well as taking part in other engagement opportunities. We also worked to advance patient and family engagement with other provincial partners, by providing consultation to PHSA programs, contributing to the development of peer engagement at The Kidney Foundation of Canada – BC and Yukon Branch, and partnering with the Patient Voices Network on the development of resources.



BC Renal Website



Value-added dollars continue to support ongoing development and improvement of the BC Renal website. New information and tools for patients and care teams are added to the website on a regular basis, as well as our YouTube channel. Both the website and our YouTube videos are trusted sources of information for kidney care providers and patients, not only across BC, but around the world. This year, our website had over 361,000 page views and reached nearly 61,000 new users. Between March 2021 – March 2022, our YouTube videos had nearly 193,000 views.

PROMIS Enhancement
PROMIS is an integrated, provincial registry and clinical information system for renal and transplant care provided to over 27,000 patients in BC. It provides real-time, accurate data to over 1,500 users, supporting a broad range of clinical, administrative, QI and research activities, all of which are focused on two key outcomes: better health for kidney and transplant patients, and the best use of healthcare resources. Over the past year, PROMIS implemented several enhancements driven by the Transplant First project, including improved tracking of transplant referrals. Another RRP-supported project is a proof of concept initiative that will import a hemodialysis prescription that was created in another clinical information system.

BC Kidney Days Supports Knowledge Translation
Value-added funds support the annual BC Kidney Days (BCKD) conference. Pre-pandemic, BCKD brought together up to 500 clinicians and administrators from across BC, other parts of Canada and the United States to discuss the latest research, trends, clinical treatments and surgical breakthroughs in kidney patient care. The conference provides education, networking and knowledge-sharing opportunities that support the delivery of optimal care to patients with kidney disease. In 2021, with the ongoing uncertainty of COVID-19, BC Renal shifted focus to peer connection and collaboration, providing virtual sessions for nephrologists, social workers, dietitians, pharmacists, biomedical technologists, patient partners and various nursing groups. The week also included an interactive poster forum and the presentation of the Wilma Crockett Memorial Award.

Support for Provincial Committee Initiatives
Value-added funds support the ongoing work of a range of BC Renal provincial committees (Kidney Care, Hemodialysis, Home Hemodialysis, Peritoneal Dialysis, Palliative Care, Pharmacy, Glomerulonephritis, Renal Administrators, etc.). These committees provide a forum for province-wide, multidisciplinary collaboration and knowledge sharing related to kidney disease care and management. The committees are involved in a range of projects and produce a variety of evidence-based, provincial guidelines that help improve the care of kidney patients in BC. Guidelines and patient education tools developed by these committees are available on the BC Renal website at www.bcrenal.ca in the 'Health Info' and 'Health Professionals' sections.

Kidney Month Campaign and World Kidney Day
In March (Kidney Health Month), BC Renal once again collaborated with the Kidney Foundation of Canada – BC and Yukon Branch on a multifaceted kidney health public awareness campaign, with a focus on at-risk populations. The primary goals of the campaign are to:

- increase awareness of the importance of kidney health and kidney disease risk factors (and that kidney disease affects 1 in 10 people);
- direct people, especially at-risk populations, to complete our online kidney health self-assessment.

This year's campaign featured a brand-new online kidney health assessment and website (KidneyHealthCheck.ca), a comprehensive advertising campaign (Facebook and Instagram, including Chinese/Punjabi targeting, and TransLink bus-wrap ads) and an organic social media campaign.

Emergency Preparedness
With the increasing frequency of forest fires, floods and extreme heat events in recent years, emergency preparedness is more important than ever. During Emergency Preparedness Month each May (as well as throughout the year), BC Renal helps raise awareness about emergency preparedness among kidney care teams and patients through e-blasts, social media posts and promotion of various resources, including an emergency preparedness booklet and wallet

card. In 2022, this included guidelines for health professionals on preparing for hemodialysis staffing emergencies. For more information and resources, see the emergency preparedness pages on the BC Renal website.

Nephrology Fellows
A key component of the BC Renal mandate is to support knowledge development through research and teaching, as well as succession planning within the broader renal network. One strategy to achieve this goal is the funding of a number of clinical (advanced nephrology, palliative care, glomerulonephritis care), administrative and research fellowships as well as short-term administrative course work. More information is available on the BC Renal website – go to www.bcrenal.ca and click on 'Careers'.

Kidney Check: Identifying Kidney Disease and Diabetes in Indigenous Communities
BC Renal continues to collaborate with the Can-SOLVE CKD network, First Nations Health Authority and HA renal programs to execute the screening program to rural and remote Indigenous communities. The Kidney Check program includes kidney, diabetes and blood pressure monitoring, as well as culturally appropriate, individualized follow-up and support to rural and remote Indigenous communities, with the goal of screening 1,000 participants by the end of March 2023. Embedding cultural safety and humility in the delivery of these services is a key objective. By April 2022, a total of 218 participants were screened (that number increased to 328 as of October 2022). The Kidney Check team maintains regular communication with participating First Nations communities to assess the safety and readiness of those communities to resume testing, and complete virtual training for in-community RNs to enable screening activities to resume. The team continues to support referral to follow up care as needed for previously tested individuals.

Value-Added Funding Supports Regional Programs and Local Innovation

The needs of kidney patients are diverse, and the use of value-added funds at the renal program level supports local initiatives in tune with community needs, while staying aligned with provincial direction. Around the province, regional and local projects and activities funded in part with value-added dollars in the 2021/2022 fiscal year included the following:

First Responder Fellowship Training – BC Children's Hospital
This year, the BC Children's Hospital (BCCH) renal program continued to allocate value-added dollars to the in-house first responder fellowship training program. A nephrology fellow completed his first year of training and was able to move into the Royal College of Canada certification track. He will complete a quality assurance project during his second year. In addition, a new nephrology fellow has successfully begun their training with plans to complete a renal research project in the upcoming two years.

Ambulatory Blood Pressure Monitoring (ABPM) Program – BC Children's Hospital
Diagnosis and management of hypertension for children with kidney disease is accurately evaluated with 24-hour automated ambulatory blood pressure monitoring. In fact, the BCCH renal program has observed over the years that improved BP management of children with kidney disease may potentially reduce the burden of kidney failure and cardiovascular disease in adulthood. Value-added funds

"Improved BP management of children with kidney disease may potentially reduce the burden of kidney failure and cardiovascular disease in adulthood.

enabled the program to courier ABPM equipment to patients who live in communities all across the province, supporting equitable access to this valuable tool. The program noted enhanced care of patients across the entire province, especially during and in the wake of the pandemic, through the accessibility of home blood pressure measurements for patients.

Pathway Development Projects – BC Children's Hospital
The BCCH renal program traditionally spends a portion of its allocated value-added dollars to support its pathway development team in a variety of ways.

The **childhood nephrotic syndrome clinical pathway** was initiated in 2013, and provides standardized, evidence-based, multidisciplinary and prescriptive clinical care for

children with this common chronic kidney disorder. Throughout the 2021-2022 fiscal year, the childhood nephrotic syndrome clinical pathway maintained operational momentum, despite the ongoing COVID-19 pandemic. In total, the pathway team enrolled 20 children with new onset nephrotic syndrome over the 2021 calendar year, and is currently on track to meet (if not exceed) a similar intake volume for 2022, having already enrolled 12 new patients so far. As part of the BCCH mandate to ensure equitable care across the province, the pathway team recently completed a quality improvement initiative to assess treatment fidelity and relapsing outcomes of children managed primarily in the Surrey and Prince George regional clinics. Early findings suggest that children with nephrotic syndrome receive similar care (e.g. steroid dosing at initial diagnosis) and experience comparable outcomes (e.g. number of relapses), regardless whether followed primarily at BC Children's Hospital or a regional clinic.

This work has also helped to identify areas for future improvement, including the timing of monitoring visits across all sites, to ensure appropriate checks for known steroid side effects during periods of peak steroid exposure. Results from this study presented at the upcoming 19th annual International Pediatric Nephrology Association (IPNA) conference in Calgary, Alberta, will improve future pathway iterations.

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Value-added funds also supported the development of a clinical pathway related to **congenital anomalies of the kidney**. This project focuses on defining the long-term outcomes of the BCCH patient population and determining risk factors for outcomes at early age to enable stratification of care. Congenital anomalies of the kidney are the most common cause of chronic kidney disease in children. The pathway team has previously demonstrated that children born with a single kidney, and those with multiple anomalies within this solitary kidney, are at higher risk for developing chronic kidney injury over time. As a continuation of this work, in April 2021, the team successfully published a novel report that identifies a third risk factor for chronic kidney injury: insufficient compensatory kidney growth, as identified by renal ultrasound within the first 6 months of life. In particular, the team found that standardizing kidney length to body length within this early time period is a reliable metric of kidney growth. This calculation removes the need for age-based nomograms or web-based calculators. The pathway team identified a threshold of kidney length to body length ratio, below which is associated with the development of chronic kidney injury. Collectively, all three of the risk factors will inform the development of a point-of-care risk assessment tool for the early identification of children at high risk for kidney injury, supporting an overarching risk-stratified clinical pathway. The pathway will guide more frequent and extensive follow-up for higher risk children.

The BCCH renal program is now tackling **a new pediatric hypertension clinical pathway** using their locally developed "recipe" for effective pathway design. The pathways will support province-wide standardized care for three of the top five most commonly seen kidney conditions at the BCCH renal program. To date, the pathway team has completed a 15-year historical audit of local practice (2000-2015), which contains comprehensive data about the clinical history, blood pressure readings, laboratory testing, and medications used for over 200

children referred to the centre for hypertension diagnosis and management. The completion of this dataset marks an important milestone in the pathway building process, as it will directly inform and provide local context for the pathway framework, and serve as a historical comparator group for benchmarking the impact of pathway-related care improvements in the future. A preliminary review of the data suggests that despite significant variation in both the number and types of diagnostic tests performed historically, only a small subset of these are actually helpful for identifying secondary hypertension causes. As a tool for streamlining hypertension investigations, the proposed pathway could therefore reduce unnecessary testing for patients and families, as well as save costs for the health care system. A poster presentation is planned at the International Pediatric Nephrology Association Congress in September 2022, and a manuscript on the effectiveness of diagnostic testing in evaluating etiology of pediatric hypertension has been submitted for publication.

Next steps in this project include: (1) engaging a diverse network of collaborators to enrich the pathway perspective, including community pediatricians and patient partners; (2) analyzing potential cost savings associated with pathway implementation; and (3) developing parent- and physician-focused educational handbooks. The process will increase awareness about pediatric hypertension, stimulate knowledge sharing, and support clinical pathway uptake in the wider BC community.

Pathway Development Support – BC Children's Hospital

The BCCH renal program has relied on value-added funds to print and distribute its childhood nephrotic syndrome physician handbooks and workbooks as important teaching tools supporting the large population of children with nephrotic syndrome across the province. The handbooks are used as teaching tools for patients, resident physicians at the BCCH, and general pediatricians across BC to standardize best evidence-based care.

Strength Assessments in Nutrition Practice (HGS and HHD Bike Loan) – Fraser Health

One of the key surrogate measures of protein-energy status and functional status in people living with CKD is the handgrip strength (HGS). A group of renal dietitians (RDs) at the Fraser Health (FH) renal program undertook a project to develop a two-part HGS training with theory and hands-on presentations for RDs based on current applicable literature. The project team also delivered HGS training for all FH renal dietitians and some non-renal dietitians as well as RDs from other parts of the province. HGS will be used in an upcoming "Exercise in home dialysis" project to evaluate muscle strength changes. All RDs are expected to use HGS as an adjunct to their nutrition assessment where they see benefit.

The same project team has been in charge of the home hemodialysis (HHD) bike loan feasibility project at FH. Patients received 3-month bike loans and staff received dynamometer training. The project demonstrated that loaning bikes to HHD patients is easy to implement, improves access to exercise equipment and can support teaching about the benefits of physical activity. Over 12 months, 24 HHD patients received a bike to try at home, and 20 patients completed surveys. Thirteen out of 20 patients (65%) used the bike 2 or more times per week, with a mix of patients using it on dialysis and patients using it off dialysis. The range of time spent biking was 15-120 minutes per session.

Fellowship in Integrative and Functional Nutrition (IFN) in Clinical Renal Nutrition Practice – Fraser Health

The Fraser Health renal program invested a portion of the available value-added funds to retain a fellow in clinical renal nutrition practice to investigate the impact that integrative and functional nutrition practices can have on CKD patients. Specifically, the fellow researched how plant-based (PB) eating concepts influence well-being, evaluated the treatment of small intestinal bacteria overgrowth, assessed functional lab markers in the context of nutrition, and evaluated acceptance and tolerance of PB eating. The program found that knowledge translation of the benefits of PB eating and sharing of respective resources with patients could have a positive impact on wellbeing.

Using a Self-Management Approach to Develop Targeted Interventions for Patients with Chronic Excessive Interdialytic Weight Gains (IDWG): Phase 1 – Fraser Health

Instability in weight gains post-hemodialysis treatment complicates about a third of all HD treatments, putting patients at a higher risk of morbidity. Uncomplicated HD treatments where pre-HD weights are stable enough to conduct subtle ultrafiltration are more beneficial to patients.

The Fraser Health renal program undertook a project to understand if regular educational interventions may help improve self-management skills and motivate patients to participate actively in their own treatment. The project team selected a group of suitable patients and then designed and evaluated a patient engagement tool that illustrated the mechanisms of a self-management approach, coupled with intensive targeted interventions.

Consistent with initial expectations, the project team observed an improvement in patients' understanding of the importance of maintaining stable weight gains between treatments. The project also demonstrated feasibility of a compliance system that reinforces education and aligns with patient goal setting, in the clinical routine of point-of-care activities.

The renal program plans to undertake a second part of this study to identify its effects on a longer enrollment base and bigger sample size, as well as develop a resource for clinical staff to support patient education.

Renal Technician In-House Training Program: Phase 1 – Fraser Health

The renal program at Fraser Health recognized the need to improve and standardize the education and training for renal technicians (RTs), and chose to develop an in-house training program for these team members. During phase 1 of this initiative (April 2021 to March 2022), the training curriculum and materials (PowerPoint slides, videos, training manual, handouts, written exam and preceptorship assessment tools) were developed. On a pilot basis, ten RT students successfully completed the 1-week theory class, and progressed to their preceptorships.

The renal program observed that in-house training can be very successful when different roles within the program work collaboratively, and expectations and communication are clear and understood. They also identified a need for change management with respect to integrating the newly trained RTs into the existing team.

The FH renal program is open to partnering with other health authority renal programs and/or an educational institution, such as VCC or BCIT, to use the training process, structure and course materials developed for this in-house training as a foundation to build an online course that can benefit all renal programs in BC. Selected materials can also be used for short education sessions or orientations for new staff. While the online theory course would be applicable to all renal programs, clinical training and preceptorship can be provided by programs at their respective sites.

Ultimately, a provincially approved RT online course would help standardize RT hiring requirements across BC.

The FH renal program now plans a broader phase II implementation of the in-house training program, consisting of the 1-week theory course and the 6-week preceptorship, followed by an evaluation of the project.

Streamlining Screening of Patients for Transition to CDU – Fraser Health

The renal program at Fraser Health observed that the COVID-19 pandemic affected various processes and practices in the HD units, leading to delays in education about the use of CDU transition forms for patients transferring from in-centre HD. After auditing charts and surveying the kidney care team, the renal program supported the importance of implementing a standardized process to transition patients to the CDU

The survey results showed a large portion of staff members were unsure of when to fill out the CDU transition form and others stated they have not seen this form with their patient transfers. Staff members reported they did not receive the form in a timely manner, or the forms were incomplete, or assessments were inadequate. Survey respondents indicated they would like other team members to play a more active role in discussing patient suitability for transfer and to complete the forms.

Providing further staff education and defining roles and responsibilities were key actions to ensure the effective standardization of the transition forms. The in-centre HD leadership team and CDU leadership team have collaborated to:

- enhance education to staff about the importance of transition forms from in-centre HD to CDU HD;

- define roles and responsibilities for the primary nurse and transition nurse;
- develop a patient transition guide to ensure smooth transitions for patients between the units.

The renal program will continue transition rounds within FH for ongoing evaluation of transitions of the patient population and efficacy of the patient transition guide.

Tunneled Dialysis Catheter and TPA Review: Phase 1 – Fraser Health

The renal program at Fraser Health used a portion of the available value-added dollars to conduct a review of tunneled dialysis catheters and tissue plasminogen activator (TPA) use. Goals of the project included identifying factors associated with better and worse catheter outcomes and standardizing practice, which should lead to improved outcomes for patients, such as less need for catheter changes and exchanges, lower TPA use, and potentially fewer catheter infections. The project team tackled the first stage of the project – a retrospective review of PROMIS data on all catheters placed during a 1-year period (January 2019 - January 2020) and key variables as well as outcomes, including catheter failure. The project team selected 160 catheters for in-depth review. Once the retrospective review is completed and key learnings identified, the project team plans to initiate a prospective review looking at specific patient- and catheter-related variables and catheter outcomes.

Kidney Palliative Medicine Clinic Expansion: Phase 2 – Fraser Health

Aligning with the provincial integrated palliative nephrology project, the Fraser Health renal program continues to work towards supporting a palliative care approach as an integral part of their care culture. The program previously established palliative medicine clinics across Fraser North, with plans to expand the clinics to the Fraser South region. Over the last year, this expansion was finalized and through collaboration with the FH Palliative Care program, an additional physician FTE was secured to support the clinics and ensure sustainability. While the expansion supports increased access to palliative care services across the health authority, with kidney patients across modalities benefitting significantly from the clinics, the program also noted that Fraser East continues to experience challenges on this front. The success of this project highlights the need for palliative care services in this patient population and may provide a model for other HA renal programs to adopt.

Quality Improvement – Interior Health

The Interior Health (IH) renal program continued to utilize a dedicated coordinator to support, manage and oversee regional and site-specific quality improvement activities and projects across IH. This model has proven highly successful, allowing the program to ensure continuity and sustainability of innovative projects and developments across the health authority and support the ongoing development of an engaged workforce. The program has shared learnings from this model with partners across the province, and other programs have expressed strong interest in trialing a similar approach on a proof-of-concept basis to improve their QI initiative accomplishment and success rates.

Culinary Medicine Project at Kelowna General Hospital – Interior Health

The renal dietitians (RDs) from the KGH renal program undertook a project to better understand and promote the benefits of plant-based protein (PBP) diet for people living with chronic kidney disease (CKD). The dietitians began by completing a literature review to determine the latest evidence regarding PBP and its health benefits, followed by an environmental scan to create a library of resources for other RDs related to culinary medicine, plant-based protein and diet self-management. Subsequently, the project team recruited clients with different levels of CKD to participate in a focus group or complete a survey to determine base knowledge and challenges in integrating PBP in their diet. The feedback collected from this exercise served as a basis for the development of a list of criteria to build a PBP diet tool. The learning from this project and the tool will be shared with RDs across Interior Health and the province for utilization with CKD clients during education sessions in clinics. The project team also plans to create a user-friendly and engaging format for the tool and provide easy access

to it for clients and clinicians with the support of IMITS. Also in the plans is to seek feedback from RDs across the province to improve the tool, as well as create a basic nutrition class for clients with CKD to support self-management earlier in the disease process.

Collaborative Supportive Care at Kootenay Boundary Regional Hospital: Phase 2 – Interior Health

The Interior Health renal program previously identified missed opportunities to support patients in shared decision-making at key moments of transition along the kidney care journey. The program had noted that delivery of care aligned with decisions made through meaningful, patient-centred conversations could be disrupted by incongruent messaging from team members. To address this challenge, the Kootenay Boundary Regional Hospital (KBRH) renal program had trialed a more collaborative decision-making approach (using more consistent messaging) during critical transitions in care. In phase II of this project, the KBRH renal team assembled and trialed a Renal Transitions Toolkit as a resource for patients and clinicians to better navigate the difficult and often distressing transitions between modalities of kidney care and patient health conditions, particularly at the end of life. The program noted that highly engaged on-the-ground team members are key when testing and implementing changes in clinical practice. The program indicates it is important to have an intentional approach to support recognition of conservative care as a valid option in the management of kidney disease. The next step will include a practice gap analysis for renal end-of-life care and broader palliative care across Interior Health.

Home Hemodialysis Transition Training – Interior Health

The IH renal program undertook an assessment of the home hemodialysis program to better understand gaps in training across the health authority and to ensure sustainability. The assessment provided insight regarding priorities and areas of focus for local teams. In the continuation of this initiative, nurses trained to support patient transitions to home hemodialysis will have the opportunity to practice skills they acquired with newly trained patients.

Roll-out of the V-Scan Ultrasound Guided Needling Device – Island Health

The Island Health renal program invested a portion of available value-added funds in the purchase of ten V-Scan ultrasound guided needling devices for hemodialysis units. A systematic roll-out and education plan was deployed using staff who had previously expressed an interest in being part of a Vascular Access Champion Community of Practice. The nurse champions provided formal, hands-on education on the use of the V-Scan devices to their respective HD unit teams. Those who received the education and staff who delivered the education reported appreciation for this new technology and its implementation across the renal program. The program believes the new ultrasound devices and skills developed by staff will support a number of goals, including:

- optimizing clinical advantages of ultrasound-guided needling and vascular access assessments for pre-dialysis and dialysis patients in a timely and reliable manner;
- aligning with BC Renal vascular access best practice standards at each appropriate care delivery point.

“Those who received the education and staff who delivered the education reported appreciation for this new technology and its implementation across the renal program.

The renal program plans to further develop the Vascular Access Champion Community of Practice model across the health authority, as well as ensure that staff incorporate use of the ultrasound device and their skills in their everyday work.

Best Practices in Delivery of HD Technical Training – Island Health
Looking for ways to enhance and better standardize the education and training of renal technician staff members, the Island Health renal program conducted an environmental scan of processes and practices across the province, with a full needs assessment planned for the near future. The findings confirmed there is wide variation in training of new renal technicians, and a full-fledged program and/or processes to support the development of ongoing competency or annual review of competencies do not exist. The renal program plans to continue working on this project, with the intention to develop a consistent and seamless set of resources and professional development activities for renal tech staff members. Recommendations from the Island Health project will be shared provincially.

Kidney Services Priorities Planning Sessions – Island Health
With the support of value-added funds, the Island Health renal program conducted two inclusive and collaborative priority-planning sessions (one in Victoria and one in Nanaimo) with members of the island-wide team, including leadership, nephrologists, nursing, allied health staff, and patient partners. Collectively, participants developed a shared purpose statement: To provide exemplary care for people with kidney disease, by supporting each other to put what matters most to patients and families at the heart of everything we do, so that kidney patients can have the best possible quality of life through all stages of their care journey. The participants also identified five key priority goals with related objectives and strategies, incorporated into the renal program work plan.

In addition to positive overall feedback in the post-session evaluation surveys, participants expressed appreciation for the multidisciplinary and interactive nature of the sessions, and the in-person discussion and connections with colleagues from across the island. The first in-person events conducted since the start of the pandemic, they also provided an opportunity to build team resilience for the winter ahead.

The resulting program goals, objectives and work plan will be used to guide and prioritize key initiatives and projects over the coming 2-3 years, and will provide the framework for the renal program to select annual RRP and PD projects. In addition, the renal program has implemented a structured annual planning cycle to review, refresh and re-prioritize the work plan as part of the Renal Quality Management System. The program work plan will be in alignment with BC Renal strategic priorities and directives, as well as the Island Health strategic framework.

The Island Health renal program plans to continue working on the deployment strategy to identify critical projects for the coming years, which will require leveraging the program's quality committee structure to establish clear accountability for action, monitoring and reporting on progress. The program has scheduled a follow-up session in the fall of 2022 to review, update and reprioritize objectives for 2023.

Cultural Safety Education – Island Health
The Island Health renal program organized two in-person, professionally facilitated experiential learning workshops for over 60 staff from across the health authority, including leadership, direct care clinical staff and nephrologists on colonization and historical and ongoing anti-Indigenous racism. Participants reported a greater understanding and significant emotional impact from learning about the experiences and intergenerational impact on Indigenous peoples in BC from pre-colonial times to the present day. The workshops also provided an opportunity for in-person connection and collaboration across teams.

The events demonstrated a commitment to cultural safety, and participants committed to continue holding each other accountable for implementing their learning in everyday actions. Following the workshops, the Central Island renal team started a learning journey group, and continues to partner with Aboriginal health

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leaders to support cultural safety for all patients and staff at both the Nanaimo community dialysis and hospital units.

The workshops are aligned with the recommendations of the In Plain Sight report and the new provincial legislation BC Declaration on the Rights of Indigenous Peoples Act (BCDRIPA). Simultaneously, the Island Health renal program continues to look for creative ways to offer experiential workshops to more direct care staff, explore opportunities to bring truth and reconciliation principles into daily work, continue to engage with staff to bridge learning and direct patient care, and work with local Indigenous communities to provide a more culturally safe experience for patients.

Enhancing Communication for Safety – Island Health

Observing that inconsistency in language and behavior may have contributed to a lack of psychological safety within the Royal Jubilee Hospital (RJH) renal unit, the Island Health renal program invited a consultant from Island Health Human Resources to support and train RJH first-level leaders on an accountability and communications framework. The subsequent use of consistent and similar language by the leadership team ensured that staff and other partners understood the value placed on staff safety and person-centered care. In parallel, the renal program discovered the new way of communicating required continual practice and follow-up by all team members until behaviors and language became automatic and the "new normal."

The renal program continues to support the change in communication practice by providing similar education for the Renal Leadership Committee membership; facilitating weekly huddles for the RJH clinical nurse leaders with a focus on communication; and facilitating safety huddles with the whole RJH kidney care team.

Dialysis Workforce Improvement: Integration of Employed Student Nurses (ESNs) into the in-centre dialysis teams – South and Centre Island – Island Health

As clinical staff shortages continue to put pressure on renal programs across BC, Island Health has been working on new health human resources strategies for recruitment and retention, in alignment with the provincial HD Workforce Strategy.

One aspect of this process was the introduction of employed student nurses (ESNs) in the dialysis units on a pilot basis across the island.

Concurrent project in the South and Centre Island had slightly different timing and sequencing to suit each context. By following the same project implementation plan and progress reporting, the project teams were able to learn from each other and apply learnings in real time. Professional practice, ensured alignment with requirements for ESN roles.

The project implementation committee included a dialysis nurse lead to support robust staff engagement processes to ensure all impacted direct care staff had an opportunity (via in-person and/or online forums) to be heard and to share their thoughts and ideas on how to move this initiative forward. A staff engagement and communication plan ensured that engagement and information sharing continued through all stages of the initiative. Overall, the project increased transparency and direct care staff engagement in decisions, and staff reported that the ESN roles added value within the in-centre units.

The renal program was successful in recruiting ESNs in part because the program provided each new employee with structured check-ins with leadership during their time in the role. Despite some early assumptions that ESNs might not find the renal clinical setting challenging, there was a lot of interest in the positions, which the program hopes to nurture further in the coming years, as current ESNs share their experiences with others in their school communities and networks.

This experience has informed the Island Health renal program's change management process for

integration of other roles in the unit as the program moves to team-based care, laying the foundation for the introduction of LPNs in the in-centre units in the fall of 2022.

Based on these results, the renal program plans to continue recruiting ESNs on an annual basis as standard operational work, and integrate the ESN role as a standard member of the dialysis team. There may also be an opportunity for project-based practicums for the 3rd and 4th-year RN students. Furthermore, the program will continue to engage with staff early in improvement or change initiatives using a variety of mechanisms, such as surveys, in-person meetings, and newsletters. Application of lessons from this project to future initiatives supports the transition to team-based care.

Renal Quality Management System: Phase 2 – South Island and Centre Island – Island Health
Building upon the foundational work completed the year before,

In the future, the renal program plans to continue with the implementation of the expanded quality committee structure, including the addition of patient partners, while ensuring clarity of roles and responsibilities, effective information flow and decision-making processes.

Island Health continued its initiative to design, develop and implement a systematic and consistent approach to quality management activities across the health authority renal program. Operationally, these changes are most visible in how the Island Health Renal Quality Council sets its agenda and utilizes time, brings topics forward for information, review and approval, includes the voice of patients and families in renal program work, and monitors outcomes via the collection and review of quality indicator data.

Last year, the renal program continued its focus on the development and implementation of tools, workflows and practices that optimize effectiveness and efficiency in the quality management system. The program identified a need for additional program quality subcommittees (home dialysis, kidney care clinics, vascular access, transplant, data quality) to enable regional oversight of quality planning, assurance and improvement activities for each modality, and began the planning and implementation of this change.

The renal program also selected key quality indicators for each program area to focus on, and established standardized processes for monitoring and evaluation that supported action and quality improvement, and increased transparency across the program. Streamlined standard workflows for the development, tracking and approval of program clinical standards (procedures, guidelines, order sets, etc.) were developed and implemented. In addition, a tracking mechanism for RRP and PD-funded project activities was developed and implemented to support centralized oversight, coordination and administrative functions.

Furthermore, the renal program initiated a recruitment process through the Patient Voices Network for patient partners to join the Renal Quality Council. In anticipation of patient partners joining the council, operations leaders completed the required readiness activities.

In the future, the renal program plans to continue with the implementation of the expanded quality committee structure, including the addition of patient partners, while ensuring clarity of roles and responsibilities, effective information flow and decision-making processes. The program will also develop an evaluation strategy for the implementation of the quality management system to enable continuous quality improvement, and to optimize effectiveness, efficiency and functionality within the context of a broader organizational clinical governance improvement initiative.

Evaluation of The Summit Community Dialysis Unit – Island Health
In 2020, Island Health established a 4-bed hemodialysis unit within The Summit long-term care (LTC) facility in Victoria, the first of its kind on Vancouver Island, providing dialysis care for LTC residents who meet the acuity criteria for an in-centre unit. Last year, the Island Health renal program conducted an evaluation of the impact the new Summit CDU had on patients, care teams, care planning and delivery processes, as well as the operational budget. Data collection methods included chart reviews, a patient experience survey, staff and physician experience surveys, and cost analysis.

The evaluation found that patients, staff and nephrologists reported a positive impact on the patients' quality of life as a result of receiving dialysis in their LTC facility. Survey respondents, including patients, HD staff, nephrologists, and LTC staff, felt that replication of this model of dialysis care could be considered for other LTC facilities.

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The evaluation also showed that staffing costs for the unit were on par with other CDUs across the island; however, supply costs were the highest in the health authority. This was attributable to the purchase of special-order filter cartridges for the mini water treatment systems that were used initially prior to the installation of the portable reverse osmosis (RO) machines (as The Summit does not have a water room and a traditional CDU RO system). This spike in costs was anticipated to be temporary, with costs likely to return to levels comparable with other CDUs after the portable ROs were installed. Travel costs savings in the 2021-2022 fiscal year were approximately $170,000, as transport of patients to/from hospital was no longer required. At full capacity, annual travel cost savings would be approximately $370,000.

> The evaluation found that patients, staff and nephrologists reported a positive impact on the patients' quality of life as a result of receiving dialysis in their LTC facility.

Simultaneously, the evaluation uncovered some challenges, including suboptimal communication and transfer of information between the HD and LTC teams. This was due in part to the fact that the Royal Jubilee Hospital HD unit still uses paper-based documentation and orders, while The Summit has transitioned to an electronic health record system. In addition, patients and HD staff noted some concerns about the frequency of on-site nephrologist visits, due to their busy schedules.

The evaluation data and analysis will be used to inform future decisions regarding potential replication of this dialysis care model in other facilities within the Island Health renal program, and will guide monitoring efforts as the unit is being stabilized as part of the larger renal program. The Summit CDU also offers an opportunity to develop an optimal funding model for unique units like this one elsewhere in the province.

Identifying Pathways on a Kidney Patient's Journey – Northern Health

The Northern Health renal program undertook a series of multidisciplinary meetings to conduct a needs assessment and develop goals and a framework for the kidney patient's journey with a focus on NH specifics. As a result, the program identified the following goals:

- Create a living communication tool for the multidisciplinary team members to ensure effective linking of vital patient information.
- Narrow or alleviate the gap in patient-focused goals, which had the potential to affect patient outcomes.
- Improve continuity and provide consistent goal-orientated care, progression and achievement.

To help achieve these goals, the program developed a framework consisting of four patient criteria pathways, including:

1. Optimizing for Transplant and Independent Modalities: Ensuring education, access and follow-up are completed in a timely manner to achieve transplantation or independent modality.
2. Optimizing Renal Replacement Therapies: Focusing on a "stable" hemodialysis patient unable to be transplanted or participate in an independent modality with a goal of maintaining or improving their quality of life. Prioritizing overall health status, goal setting and patient education to prevent comorbidities.

3. Improving End of Life Care: Improving the quality of the end of patients' lives by supporting the appropriate dialysis, medication, dietary and social or community supports as patients begin to decline. Optimizing the person and family behind the patient versus the medical interventions.
4. Overcoming Challenges: Focusing on patients with adherence, mental health, behavioral, substance abuse or social concerns to assist them in harm reduction strategies and support them in modifying behaviors.

The framework is being implemented in the care of all HD patients and will subsequently be evaluated for improvements, and to determine if it can be adapted to non-dialysis CKD patients.

Supporting Renal Program Modality Transitions – CRASH Project: Phase 2 – Northern Health

Since the 2017-2018 fiscal year, the Northern Health (NH) renal program has been developing a pilot transition/navigator nurse role to support patients through their non-dialysis CKD care and orient them to the different dialysis modalities, as well as assist "parachute" patients who have to start dialysis abruptly. In addition, the transition nurse coordinated the local implementation of the provincial CRASH Curriculum project. The CRASH curriculum provides standardized education about home dialysis modalities to "unplanned dialysis start" patients. Last year, based on the success of the transition/navigator nurse role, the renal program was able to advocate for the permanent part-time position and transitioned it into regular renal program operations in April 2022. The program notes this initiative demonstrates how value-added funds can help launch a quality improvement pilot project, which later becomes part of regular operations based on its proven value. The ability to have a permanent transition/navigator nurse has improved the program's ability to provide consistent and sustainable assessments and support for the education needs of patients. The nurse is also able to assume a wider range of responsibilities in addition to home therapies, including support for transplant referrals and processes for HD patients and the Transplant First project.

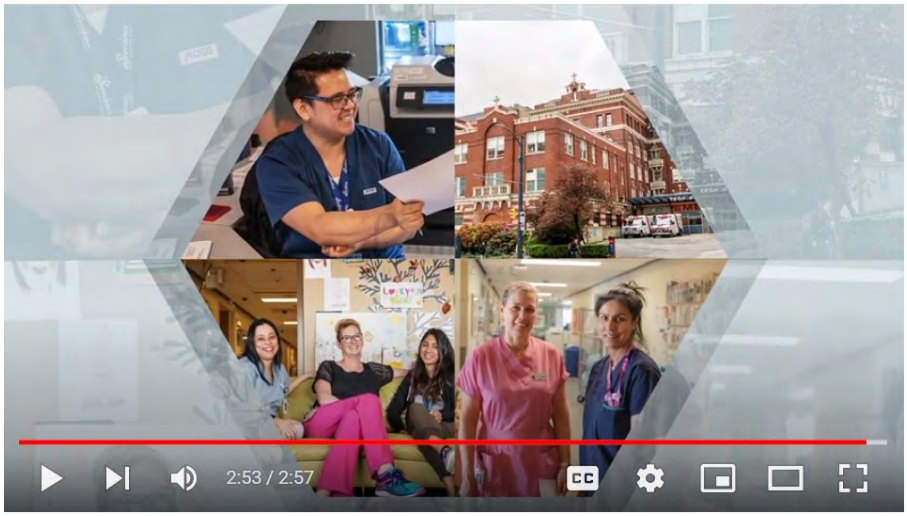

Image © Providence Health Care

Nursing Recruitment Video – Providence Health Care

In times when recruitment and retention of highly qualified health care staff has been challenging, the renal program at Providence Health Care (PHC) invested part of the available value-added funds in the creation of a professional video that highlights the work areas within the renal program and supports recruitment of new staff. In particular, the video showcases the different nursing careers available across the spectrum of kidney care and provides current staff and potential new team members with insight into nursing opportunities. The PHC renal program shared the video with BC Renal and offered it to other programs across the province to generate interest in the renal profession and ultimately assist in filling vacant nursing positions. The video can be viewed here: https://www.youtube.com/watch?v=xdtLx83FApw.

Intradialytic Exercise Program – Providence Health Care

Following the success of similar initiatives in other renal programs across the province, the Providence Health Care renal program purchased exercise bikes for the HD unit for patients to use while undergoing dialysis treatments. To assist patients, the program hired a rehabilitation assistant who manages the exercise initiative. Patients are also required to undergo an assessment by a physiotherapist, organized within the renal program, prior to beginning the exercise regimen. The usual workflow is for the rehab assistant and physiotherapist to approach appropriate patients within the unit to provide assistance and instructions on utilizing the bikes, and then follow up with the patients to see if the bikes continue to be used, and how the patients perceive the benefits to their health experience over time. Overall, the renal program notes that this initiative helps to both improve patient mobility as well as improve overall patient experience while attending dialysis. With the success

of the exercise initiative and its positive impact, the renal program is currently looking for ways to integrate it into operations on a sustainable basis as well as improve scheduling of the bike use via online solutions.

Enhanced Staff and Patient Education

Providing kidney care staff with ongoing access to training and education is a significant contributor to job satisfaction, quality of work-life, and helps ensure the highest standards in patient care.

Value-added funds continue to help team members engage in ongoing professional development, discuss emerging trends and stay current on the latest evidence-based kidney care practices and standards.

Following the COVID-19 pandemic, many educational opportunities have moved to virtual or hybrid (in-person plus virtual) modes of delivery, with RRP value-added funds used to sponsor health authority staff participation in a variety of local, provincial, national and international conferences, workshops and events relevant to chronic kidney disease and therapies. Funds were also used to support staff taking advanced education courses relevant to their role and in support of kidney care services, as well as certifications such as the CNeph(C) examination. Some health authority renal programs reported increased uptake of virtual and hybrid events by staff following a decline in attendance during the COVID-19 pandemic.

Value-added funds also enabled BC Renal and the health authority renal programs to produce and distribute a variety of patient safety and education materials (such as DVDs, online videos and pamphlets).

Both the health authority renal programs and BC Renal are committed to using value-added funds to support quality improvement in program and optimal patient care. To ensure continuity and consistency in the use of the funds, guidelines stipulate they cannot be used for ongoing operational expenses or for costs historically covered by health authority budgets.

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