



1. You're Flagged

Abbotsford Hemodialysis and Peritoneal Dialysis Unit

Leader: Kim Norman

Team members: Katie Cave, Sandra Davidson

Having a health informatics system, the Clinical Program Indicator (CPI), applied to clients within the Fraser Health Renal Program has facilitated program wide practice improvement initiatives, allocation of resources, validation of required services, and assistance in knowledge transfer by improving the accessibility and quality of information.

The benefits our programs have noticed from using CPI Reports are timely referrals to nephrologists, improved communication and collaboration between health care professionals, and the ability to keep accurate statistics for renal patients from the Abbotsford Kidney Care Clinic, Peritoneal Dialysis Unit and Hemodialysis Units. Its implementation has also assisted non-renal staff identify which modality of renal treatment a patient is receiving (see CPI Report example below).

The costs associated with inefficient communication result in not only inadequate clinical time management but also poor or delayed treatment planning. By using the CPI flagging system the units are able to efficiently track and provide follow-up care to patients when they visit an Emergency Room or are admitted to any facility in the Fraser Health Authority.

ALLERGIES AND PATIENT ALERTS			
PATIENT:	EDMTEST, MICHELLE	A/G: 16	F
ACCT. #:	AB000408/11	LOC: AB.ER	ADMIT: 16/06/11 1207
ATTEND DR.:		RH:	STATUS: DEF ER
ALLERGIES/ADVERSE REACTION:		UNIT #: AB00002020	
Penicillins			
CRITICAL CARE INDICATORS:			
CLINICAL PROGRAM INDICATORS:			
Registered to FHA Renal Program:		Y	
Tx Modality:: Home+Peritoneal Dialysis		Tx Location:: AB Peritoneal Dial. Unit	
END OF REPORT: ADM.PAT.zcus.adm.fornrg.canada.allergies.alerts			

2. Use of Replavite/Renavite in Adult Chronic Kidney Disease Patients

Vancouver Island Health Authority

Leader: Eileen Carolan

Team members: Christine Frohloff, Julia Steel, Jane Tosney, Jennifer Zinnetti

This review was completed to assure safe practice in light of the April 2010 *Journal of the American Medical Association (JAMA)* report with high-dose B vitamins.¹





1. A referral to a CKD dietitian is advised for diet review, nutrition assessment and recommendations regarding vitamins supplements.
2. Replavite/Renavite renal vitamin formulations are appropriate for use in people with CKD.

CKD patients are at high risk of developing nutrient deficiencies. Based on current knowledge the following "Indications for Use" are recommended when prescribing Replavite/Renavite for CKD patients.

Indications for Use of Replavite/Renavite for CKD Patients

- Eating less than 50% of meals and/or consuming less than 1500 kcal/day
- Chronically poor or erratic eating habits
- Reduced appetite, nausea, vomiting, taste changes or food aversions
- Undesirable weight loss

¹For this discussion CKD refers to non-dialysis patients.

3. Providence Health Care's Licensed Practical Nurse Nephrology Training Program and Community Dialysis Collaborative Nursing Model

Providence Health Care

Leader: Lora J. Jensen

In 2009 the Providence Health Care (PHC) Renal Program implemented a collaborative nursing model in the community dialysis units where licensed practical nurses (LPN) trained in hemodialysis work closely with registered nurses (RN) to deliver hemodialysis care. In order to accomplish this, PHC developed and implemented a LPN Nephrology Training Program. The LPN nephrology training program consists of a 12-week program that includes 8 weeks of classroom and clinical time with an instructor followed by a 120-hour practicum (over approximately 4-weeks) during which the LPN preceptors with an experienced hemodialysis-trained RN and LPN. Following successful completion of the course, the LPNs have the knowledge and skill necessary to provide safe, competent care to patients requiring hemodialysis. Over the past two years, PHC has offered the LPN nephrology training program on three occasions, with 4-8 students in each class.

4. Longitudinal Evaluation of Pain Management in Hemodialysis Patients

St. Paul's Hospital, Providence Health Care

Leader: Marianna Leung

Team members: Beverly Jung, Fong Huynh, Tinnie Chung, Stan Marchuk, Mercedeh Kiaii, Clifford Chan Yan, Ronald Werb, Monica Beaulieu

Background: Pain is often under-recognized and under-treated in hemodialysis patients. Effective pain management improves patients' quality of life.

Method: This prospective cohort study compared the prevalence, severity and management of pain at baseline and 1 year after pain protocol implementation.



Results: At baseline and 1 year, 33.5% vs. 38.9% of patients reported to having pain, respectively. On the Short Form Brief Pain Inventory, the mean worst pain scores were 5.69 ± 2.81 vs 5.72 ± 3.03 , respectively. At 1 year, fewer patients reported severe pain, 26% vs. 19%, and not receiving any treatment, 29.6% vs. 16.7%. More patients received analgesics at 1 year; 35.2% vs. 44% received opioids while 55.6% vs. 85% received acetaminophen.

Conclusion: The prevalence and severity of pain were similar 1 year later although fewer patients reported severe pain. A significant proportion of patients continued to report pain despite increased use of analgesics.

5. Seeing the dawn: A nocturnal nursing perspective at St. Paul's Hospital

6D Hemodialysis Unit, St. Paul's Hospital, Providence Health Care

Leader: Neil Penalosa

Team members: Jeanette Feizi-Farivar, Leilani Borja, Milka Ogweno, Carolyn St. Germaine

Following months of recruitment struggles, Providence Health Care, in collaboration with Vancouver Coastal Health and with BC Provincial Renal Agency launched its pilot In-center Dependent Nocturnal Hemodialysis Program on January 18, 2011.

A thrice weekly dialysis session which run for eight hours per session is the standard prescription, which may be adjusted based on operational and on patient's needs. Patient hook up time starts at 2030H while take off time commences at 0430H. Patients are expected to be out of bed by 0615H.

With the physical absence of a nephrologist, each dialysis session becomes nurse-led, which promotes a sense of independence, armed with task-specific protocols.

Some nights in the dialysis unit, however, can be challenging as many patients have multiple co-morbidities which required more nursing time.

Empowered with patients' claim of service satisfaction and with every nurse's commitment, perseverance and determination to work together for the success of the project, the nursing team has remained motivated to deliver safe and effective care.

However, amidst all praises for the current success of the project, is the question of whether or not the nocturnal nursing team can endure the demands of the job.

6. Re-designing Chronic Kidney Disease (CKD) Services in Northern British Columbia, Canada

Northern Renal Program

Leader: Sushila Saunders



Background and context: Early identification and treatment of Chronic Kidney Disease (CKD) can result in the prevention and/or delay of complications related to decreased kidney function. The Northern Renal Program CKD clinic located in Prince George, BC is the only outpatient renal clinic in Northern Health; a health authority serving the health care needs of approximately 300,000 people residing over an area of approximately 600,000 square kilometers.

Project: In September 2009, the Northern Renal Program began a project to redesign the services of the CKD clinic to better meet the needs of residents in Northern BC. Nephrology nurses from across the country have given input to assist us in this endeavor. This poster presentation will report on the process of the project, emphasizing the need to draw from a myriad of resources both nationally and at the provincial level.

7. Go Kidneys! Nutrition Edutainment for the Renal Program at Providence Health Care

Providence Health Care

Leader: Jennifer Hrushkin

Team members: Jiak Chin Koh, Linda Lim, Leonora Chao, Winphia Koo, Janet Katalinic, Clara Sohn, Beverley Lau, Jennifer Messina, Vicky Ngo

Providing effective nutrition counseling to patients following renal diets can be challenging for the renal dietitian. The fact that kidney disease is chronic contributes greatly to this challenge, as patients have heard the nutrition information repetitively and the information is usually presented in a traditional manner in a clinic setting. Edutainment, according to the New World Encyclopedia,¹ is a “form of entertainment designed to educate as well as to amuse.” We designed the Go Kidneys! game wheel in an effort to include edutainment in our nutrition counseling. Using the Go Kidneys! wheel helps to engage the interest of our learners and lessen any anxiety that they may associate with diet counseling. This education technique presents information in a fun, exciting and interactive manner. We hope that the positive, interactive learning experience with Go Kidneys! will translate into increased understanding and readiness to follow the diet in the renal patient population.

¹<http://www.newworldencyclopedia.org/entry/Edutainment>

8. Chronic Kidney Disease & Vein Preservation: A Provincial Approach

Province-wide

Leader: Rick Luscombe

Team members: Cathy Duerkson, Jocelyn Hill

Preservation of veins in patients with chronic kidney disease who may or may not be on hemodialysis is crucial for the successful future creation of arteriovenous fistulas and grafts. Frequent venipunctures and the indiscriminate use of peripheral intravenous lines can damage veins, impair the circulatory system and jeopardize future fistula or graft creation and/or function.



This poster presentation blazed a new trail by incorporating a multi-disciplinary, multi-centre and cross-continuum approach to the development and implementation of a provincial guideline on vein preservation in people with chronic kidney disease.

The guideline makes 4 recommendations, including an algorithm to assist health care providers in selecting the most appropriate vein for venous access sites. Educational material was also developed to support the implementation of the guideline and targets both health care providers and patients.

9. The Experience and the Journey – Changing hospital culture around having conversations about Advance Care Planning. A look into our In-Centre Hemodialysis Unit

St. Paul's Hospital, Providence Health Care

Leader: Glen Makiri

Team members: Julie-Anne Grose

We would like to map out our experience over the past year in introducing a comprehensive **Advance Care Planning** Initiative to our in-centre hemodialysis patients. Our focus will be on the experience and the journey in taking steps to change hospital culture around talking about EOL issues early-on while patients are not in medical crisis and can make informed decisions around their healthcare. We will identify key members of our team who have taken part in this initiative as well as discuss patient outcomes.

10. No Place Like Home

Home Dialysis Clinic, Royal Jubilee Hospital, Vancouver Island Health Authority

Leader: Susan Adams

Team members: Nancy Clogg, Joyce Mulgrew, Brigitte Reynen, Linda Watts and Lena Kobylarz

Our Home Dialysis Program held an open house for patients and their families on Saturday Jan. 29th from 11 am until 3 pm. Our theme was “No Place like Home” from the movie The Wizard of Oz. We realized this is a very stressful time for patients and family and hoped it would create a fun atmosphere. The staff at the clinic dressed up in costumes. We had three home peritoneal dialysis patients and two home hemodialysis patients take part to answer questions about their experience.

Our unit clerk Brigitte (Dorothy) greeted people as they arrived. Nephrologist Dr. Caroline Stigant attended and answered questions about the benefits of home dialysis. We had one room about Twin Bag exchanges for peritoneal dialysis (PD), another room was about the Cyclor used all night for PD. Stan, a home hemodialysis patient, was on dialysis during the open house. We had a technician Rob (The Mayor of Munchkin Land) from Gambro demonstrating water filtration and the Gambro hemodialysis machine. Our dietitian Nancy (Wicked Witch of the West) was showing the difference in diet with home dialysis modalities. Our social worker Joyce (Glinda, the good witch of the north) talked about travel when on PD or home hemodialysis. Our PD nurses Lena (the Lion), Holly (the Tinman), Shannon (Winged Monkey), Linda (Auntie Em) and home hemodialysis nurses, Claire and Sue (the Scarecrow) answered questions about the different modalities. Our door prize was a 19” HD Toshiba TV/DVD combo from Adams Electronics and was raffled off at the end of the day.





We had 48 people attend our first open house. Feedback has been very positive and we plan to make this a yearly event.

11. Applying Prognostic Strategies to Prioritize ACP in HD from Theory to Practice

Fraser Health Authority

Leader: Alexandra Kruthaup-Harper

Team members: Dr. Mohamud Karim, Dr. Gerardo Carpenito, Dr. Susan Cooper, Terry Satchwill, Bonnie Chu, Tracene Coulter, Wendy Rafuse, Martin Duffy, Kathleen Piper, Bruce Macdonald, Deborah Reilly, Lucy McGillivray, Gillian Mowat, Kim Norman

Renal research focusing on prognostication for the purpose of prospectively identifying patients at highest risk of mortality within the next 6 months to 1 year is emerging. Our HD program has an annual mortality rate of approx. 20% yet lacks a formalized process for recognizing individuals at high risk of dying. Applying prognostic practices in the clinical setting enables staff to prioritize those in greatest need of a palliative approach that includes advance care planning. The challenge however with many of these prognostic strategies is how to incorporate them into routine clinical practice. Over the coming year, we will trial 3 prognostic approaches evaluating their effectiveness and feasibility in clinical practice.

- i. Integrated Prognostic Model
- ii. Sentinel Events (MI, AKA, Malignancy, Clinical Judgment)
- iii. New HD starts \geq 80 yrs.

12. Descriptive Profile of individuals with End Stage Renal Disease Receiving Dialysis: Factors Related to 25 hydroxy Vitamin D Inadequacy

Northern Renal Program

Leader: Danielle DeGagne, Lisa George

Team members: Stefanie Finch, Shelley Pallot

The purpose of this research project was to determine circulating 25-hydroxy vitamin D status of patients with End Stage Renal Disease (ESRD) undergoing peritoneal dialysis (PD) in the Northern Health catchment area and hemodialysis (HD) in the Prince George Renal Clinic and to investigate any relationship between patient characteristics and 25-hydroxy vitamin D status.

The literature supports the hypothesis that the patient population with ESRD on dialysis are more likely to have lower 25 hydroxy vitamin D levels than the population without kidney disease due to dietary restrictions and impaired synthesis and metabolism of 25 hydroxy vitamin D.

Results: The results indicated that 78.8% of the total study sample had inadequate 25 hydroxy vitamin D levels. There were no significant correlations between 25 hydroxy vitamin D status and length of time on dialysis, ethnicity, age, or BMI. There was also no significant correlation between the markers of bone mineral metabolism and 25 hydroxy vitamin D levels.



Conclusions and Implications for Practice:

- Renal Dietitians to advocate for initial testing of 25(OH)D status in patients with ESRD on dialysis, and semiannual or annual follow-up.
- If a patient with ESRD on dialysis is found to have an inadequate 25(OH)D level, an exploration of the underlying causes and possible methods of correction should be discussed with the patient and health-care team.
- An exploration of the safest and most effective way to correct adequate 25(OH)D levels among patients with ESRD on dialysis is warranted.

13. Longitudinal Review: Outcomes of Bedside PD Catheter Insertions

Vancouver Coastal Health and Providence Health Care

Leader: Donna Murphy-Burke

Team members: Manish Jain, Suneet Singh, Paul Taylor

Longitudinal research study in PD in which all PD catheter insertions done at SPH and VGH over the last 5 years were retrospectively reviewed. The purpose was to show the outcomes of non-surgical bedside PD vs. surgical catheter insertion. A paper is in the final stages of review and will be submitted to a peer reviewed journal shortly.

14. Developing and Implementing Provincial Framework for End of Life (EOL) Care for Chronic Kidney Disease (CKD) Patients

Fraser Health Authority, Providence Health Care, Vancouver Island Health Authority

Leader: Donna Murphy-Burke

Team members: Mohamud Karim, Marianna Leung, Clifford Chan Yan, Ron Werb, Gaylene Hargrove

Despite medical advances and improvements in technology, substantial numbers of patients both on and off dialysis die each year. In the province of British Columbia, 515 dialysis and 280 chronic kidney disease (CKD) patients approaching the need for dialysis opted for conservative care in 2008. Given the growing number of patients under the care of nephrology patient, we identified the need for a provincial framework to provide high quality end-of-life care for CKD. In 2009 the hard, practical work of moving from idea to practice became a reality. A formal document was developed where the key elements of EOL care were defined "End of Life Framework: Recommendations for a Provincial End of Life Care Strategy." These elements of EOL care for renal patients are Patient Identification, Advance Care Planning, Symptom Assessment and Management and Care of the Dying Patient/Bereavement.