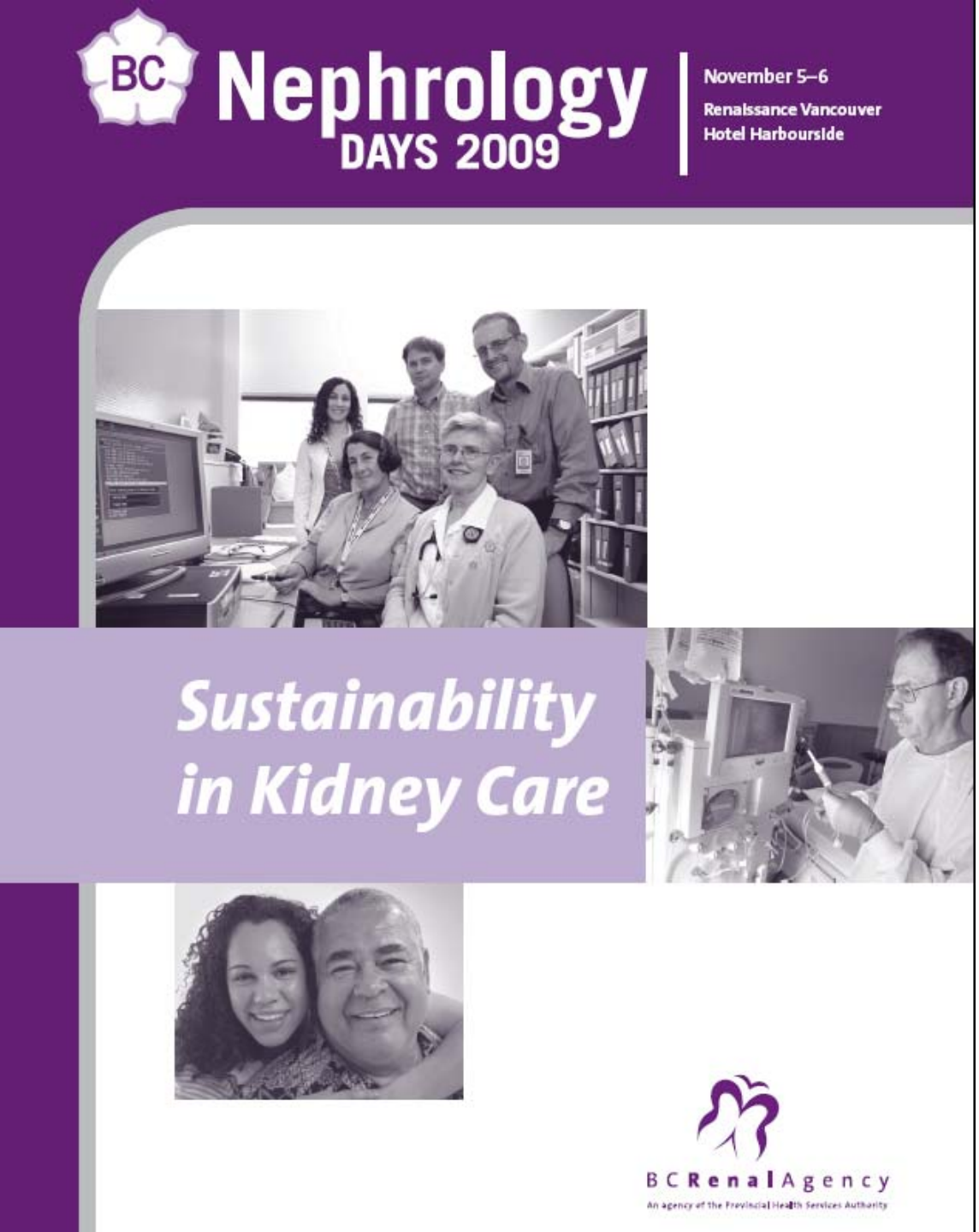


BC Provincial Renal Agency Update

Nov 5, 2009

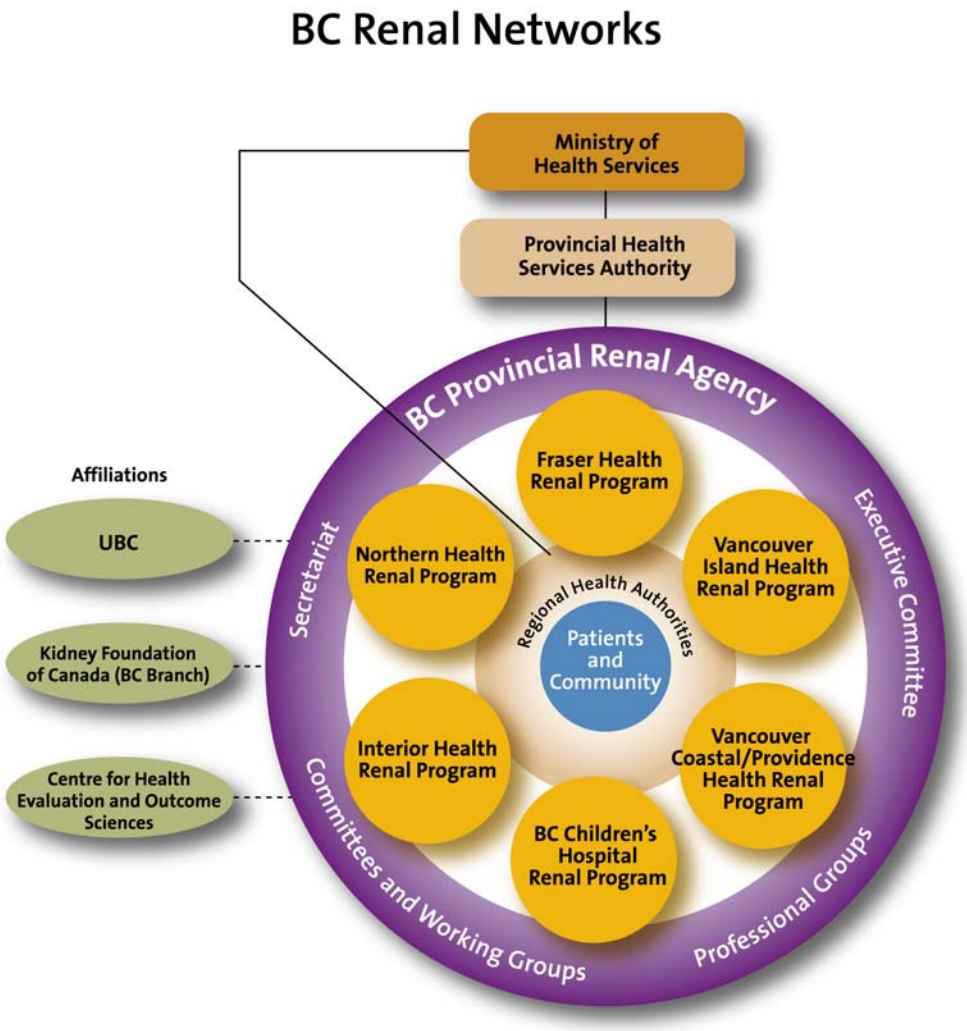
Dr. Adeera Levin, Executive Director

Overview

- BC Renal Care Structure
- A Track Record of Success
  - Supporting Improved Care and System Sustainability
- Highlights from Past Year
- New Faces

BC Renal Care Structure

- “Virtual” provincial agency
- Health Authority Renal Programs
- Formal Committees & Working Groups
- Professional Groups
- Formal collaboration with UBC, MoHS, Kidney Foundation and others



At a Glance: Financials

Combined Centralized/ Decentralized Funding Model

- BCPRA is **accountable** for entire provincial renal budget, in partnership with HA renal programs

TOTAL 09/10 Renal Funding
(BCPRA and HARPs)
$140.2 M

BCPRA
Supplies, Drugs, IM/IS
Special Projects
$58.8 M

HA Renal Programs
$81.4 M *

* Up from $75.7 M; significant increase due to funding model adjustment

Big Challenges/Big Expectations

- Stretched HC system with limited human and financial resources faces multiple pressures
  - aging population
  - increasing rates of chronic diseases
  - increasing costs of technologies & drug therapies
- These challenges are driving need for a greater emphasis on:
  - outcomes evidence/improved patient care
  - efficiencies/innovation in care delivery
  - pharmacoeconomic analysis

A Track Record of Success

- Renal care community has proven track record for:
  - improvements to patient outcomes/quality of life
  - emphasis on system sustainability/best use of health care resources
  - Responsiveness to change

A Track Record of Success: *Increasing access to care*

- Increased access to care; supporting early treatment, independent options
  - Since 2001:
    - number of CKD patients increased by 445%
    - number of PD patients increased by 38%
    - number of HHD patients increased by 53% per year, or 850% total (note: based on small base #s)

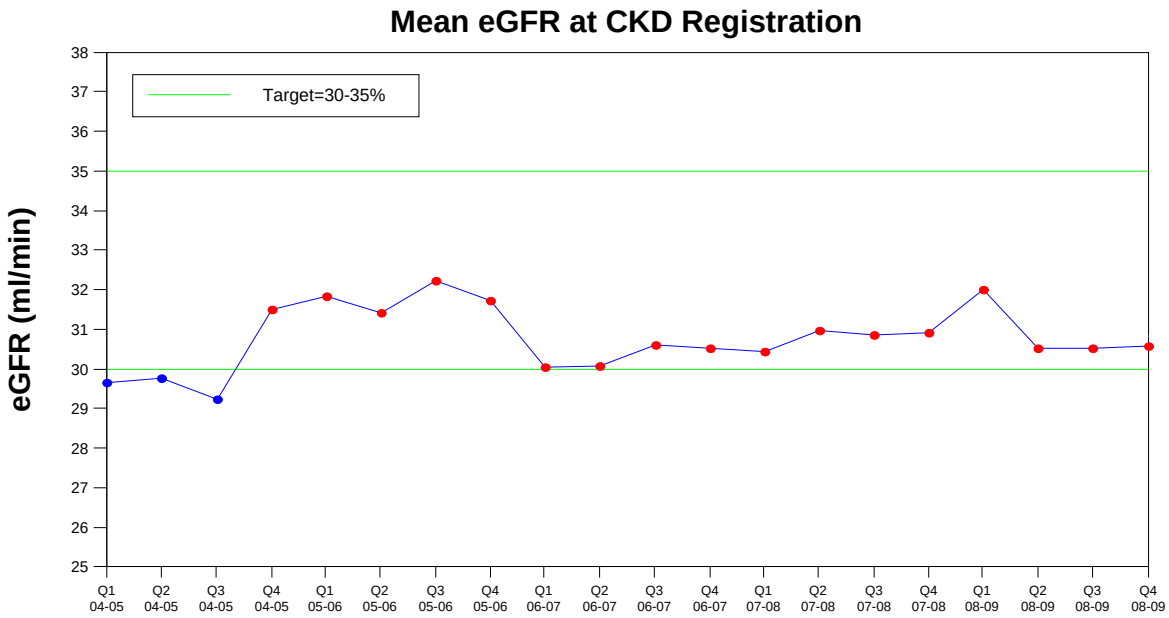
Understanding the entire spectrum of populations

Growing Populations

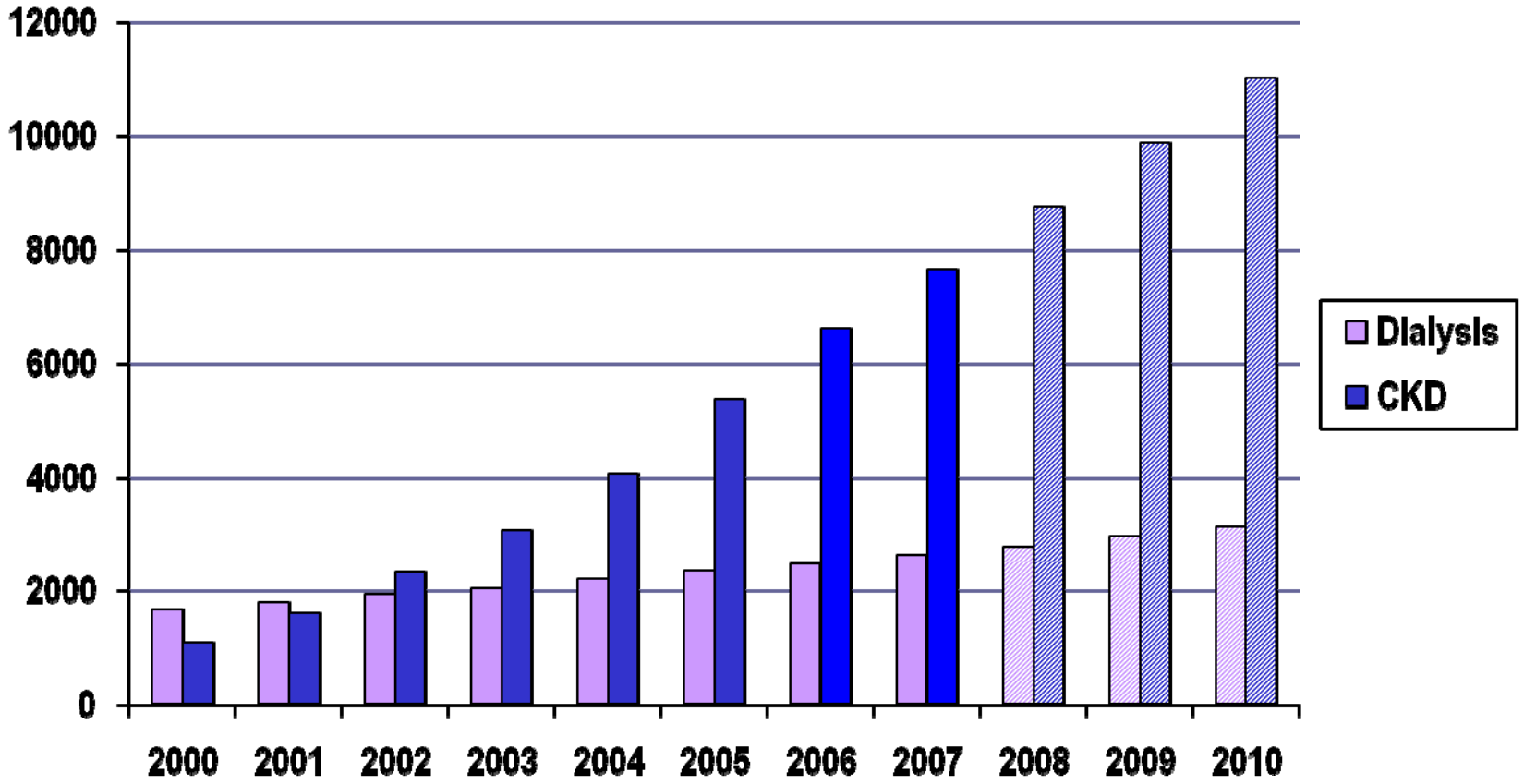
Increase in kidney patients	July 2001	July 2008	Average % increase per year	7 year %increase
CKD/predialysis	1,692	9,202	28%	444%
Hospital-based hemodialysis	896	1,068	3%	19%
Community-unit hemodialysis	412	687	8%	67%
Home-based hemodialysis	14	133	53%	850%
Peritoneal dialysis	482	665	5%	38%

A Track Record of Success: *Early ID and Treatment*

- Province-wide strategies have contributed to reduced growth of dialysis
  - 1% in 08/09
  - 5% avg 2003-2008
  - 8% avg 2001-2003
  - 16% avg 2001

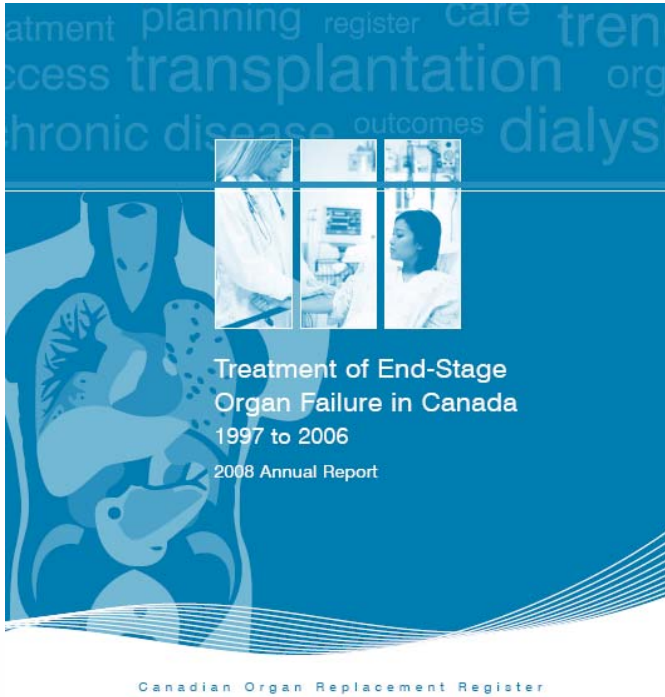


Despite exponential growth of CKD, dialysis growth remains constant and low



A Track Record of Success:
Early ID: External Validation

- CIHI/CORR 2008 report:
  - Found BC is below Canadian average for number of HD stations per million pop.
  - Reflects the success of:
    - Efforts to develop an integrated strategy for the early id and treatment of kidney disease
    - Uptake of independent dialysis options (BC rates are highest in Canada).



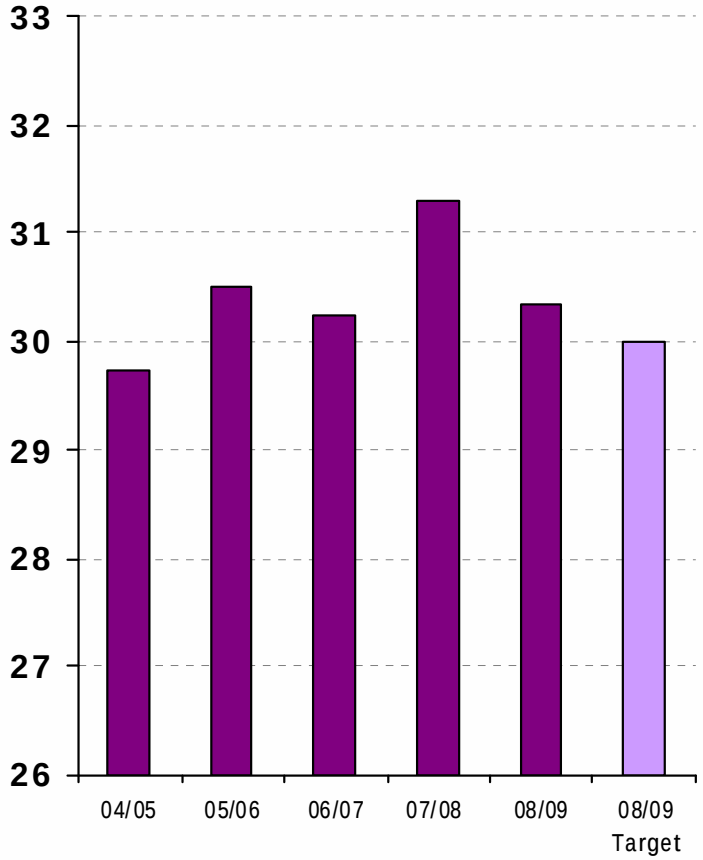
Early Identification and Treatment: *Next Steps*

- Development of accredited GP education program
  - CKD identification, evaluation and care
- Documentation of variability/causes of wait to time for nephrology referrals
- Formation of CKD Clinicians' Group
  - Phase 1 Objectives:
    - Assess variation across funded CKD clinics province-wide
    - Development of provincial standard of care for CKD:
      - evidence informed
      - patient centered
      - outcome focused
    - Identify research opportunities to inform best practice

A Track Record of Success: *Independent Dialysis*

- leading nationally re: PD uptake rate; FHA 31%
- the only province-wide independent HD program in Canada
- Development of independent, facility-based options
  - VGH Nocturnal Program
  - Prince George Independent Dialysis Unit
  - Penticton Independent Unit (opening fall 2009)
- Financial benefits
  - cost avoidances ~ $1M over 5 years

Percentage of patients on independent dialysis (Home HD or PD)



A Track Record of Success: *Fiscal Responsibility and Patient Care*

- **Leverage cost savings/benefits through prov contracts (negotiated with PHSA and Medbuy or SSO)**
  - Value add rebates (contracts with Ortho Biotech, Amgen, Baxter)
    - $5.9 million in 2008/09
    - Rebates offset cost of overall renal budget
    - Portion of funds distributed to HA renal programs to fund CQI, educational opportunities (***See insert in delegate package***)
  - New 4-yr contract for CDU & Home HD supplies/services (Fresenius)
    - Savings of $2.1 million over 4-year term
    - New contract changes
      - fixed pricing (avoid fluctuations with US dollar)
      - line-by-line billing (only charged for items used, vs. cost-per-treatment billing)
      - annual review of products
      - more robust process for adding or deleting products/services

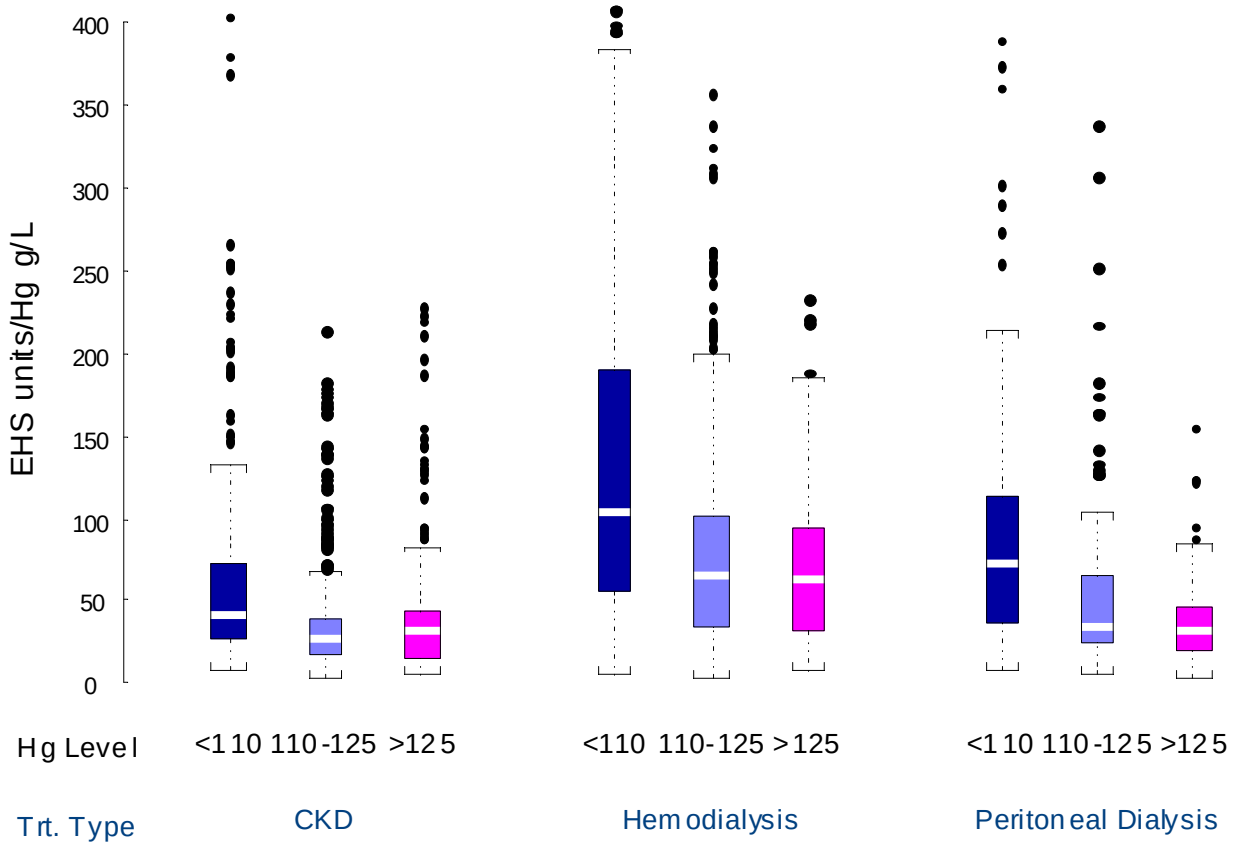
A Track Record of Success: *Fiscal Responsibility and Patient Care*

- *Provincial contracts cont…*
  - New 4-yr in-centre renal supplies contract dialyzers, acid & bicarbonate concentrates
    - Primary vendor: Fresenius; Secondary vendor: Chief Medical; Gambro and Baxter for specific products
    - Savings of $5.7 million over 4 years
    - Involved clinical input from reps across HA renal programs
  - Ongoing Community Pharmacy Partnership Program:
    - Contracts with 31 community pharmacies
      - close-to-home service
      - consistent approach to patient care
      - opportunity for pharmacists to get involved in specialist care

A Track Record of Success:
Best practices and fiscal responsibility

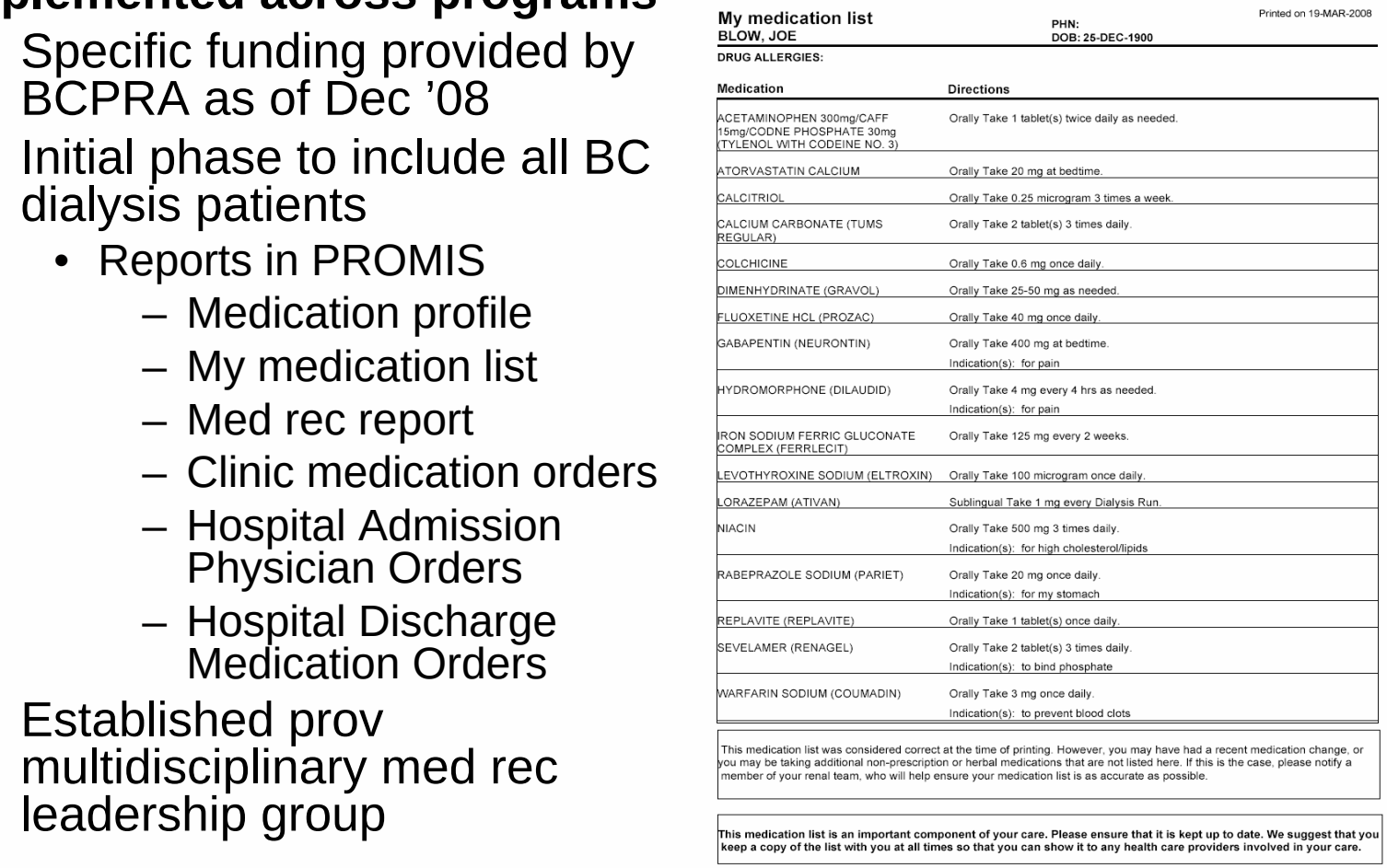
- Managing increasing costs of drugs
  - **$29 million spent on renal drugs in 08/09**
  - **$23 million spent on ESAs**
  - **Ongoing implementation of anemia management protocol across programs resulted in:**
    - **Reduced medication dosages with same clinical and patient outcomes**
    - **Cost avoidance of approx $2.2 million (if comparing to 06/07 dosages)**

A Track Record of Success:
ESA dose to Hb achieved: understanding variation



A Track Record of Success:
Patient Safety – Medication Reconciliation

- **Implemented across programs**
  - Specific funding provided by BCPRA as of Dec ’08
  - Initial phase to include all BC dialysis patients
    - Reports in PROMIS
      - Medication profile
      - My medication list
      - Med rec report
      - Clinic medication orders
      - Hospital Admission Physician Orders
      - Hospital Discharge Medication Orders
  - Established prov multidisciplinary med rec leadership group



My medication list Printed on 19-MAR-2008

BLOW, JOE **PHN:** **DOB: 25-DEC-1900**

DRUG ALLERGIES:

Medication	Directions
ACETAMINOPHEN 300mg/CAFF 15mg/CODNE PHOSPHATE 30mg (TYLENOL WITH CODEINE NO. 3)	Orally Take 1 tablet(s) twice daily as needed.
ATORVASTATIN CALCIUM	Orally Take 20 mg at bedtime.
CALCITRIOL	Orally Take 0.25 microgram 3 times a week.
CALCIUM CARBONATE (TUMS REGULAR)	Orally Take 2 tablet(s) 3 times daily.
COLCHICINE	Orally Take 0.6 mg once daily.
DIMENHYDRINATE (GRAVOL)	Orally Take 25-50 mg as needed.
FLUOXETINE HCL (PROZAC)	Orally Take 40 mg once daily.
GABAPENTIN (NEURONTIN)	Orally Take 400 mg at bedtime. Indication(s): for pain
HYDROMORPHONE (DILAUDID)	Orally Take 4 mg every 4 hrs as needed. Indication(s): for pain
IRON SODIUM FERRIC GLUCONATE COMPLEX (FERRLECIT)	Orally Take 125 mg every 2 weeks.
LEVOTHYROXINE SODIUM (ELTROXIN)	Orally Take 100 microgram once daily.
LORAZEPAM (ATIVAN)	Sublingual Take 1 mg every Dialysis Run.
NIACIN	Orally Take 500 mg 3 times daily. Indication(s): for high cholesterol/lipids
RABEPRAZOLE SODIUM (PARIET)	Orally Take 20 mg once daily. Indication(s): for my stomach
REPLAVITE (REPLAVITE)	Orally Take 1 tablet(s) once daily.
SEVELAMER (RENAGEL)	Orally Take 2 tablet(s) 3 times daily. Indication(s): to bind phosphate
WARFARIN SODIUM (COUMADIN)	Orally Take 3 mg once daily. Indication(s): to prevent blood clots

This medication list was considered correct at the time of printing. However, you may have had a recent medication change, or you may be taking additional non-prescription or herbal medications that are not listed here. If this is the case, please notify a member of your renal team, who will help ensure your medication list is as accurate as possible.

This medication list is an important component of your care. Please ensure that it is kept up to date. We suggest that you keep a copy of the list with you at all times so that you can show it to any health care providers involved in your care.

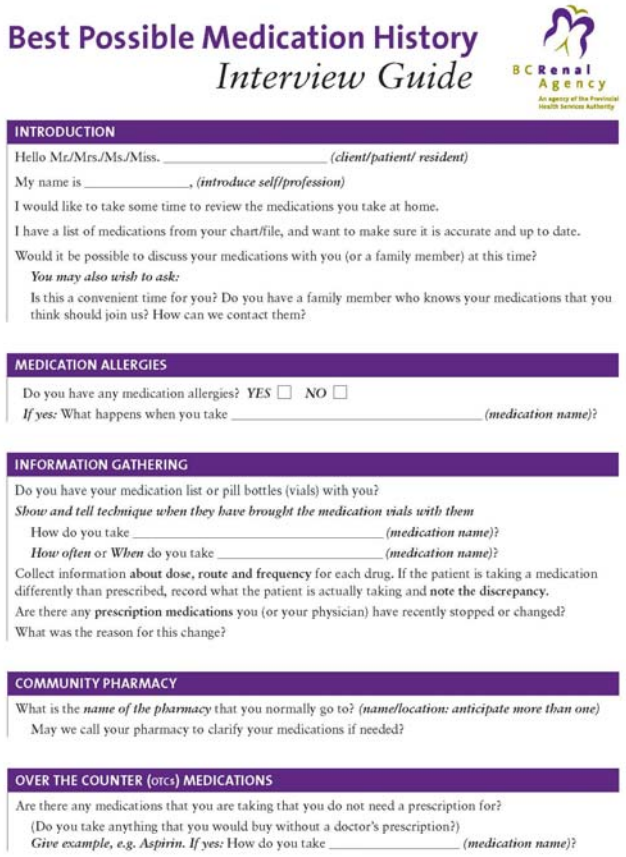
page 1 of 1

A Track Record of Success:
Patient safety – Medication reconciliation

- Additional med rec support tools developed (e.g. interview guide): www.bcrenalangency.ca

- Phase 1 progress: Variable across HAs, but significant progress made
- Program will expand to predialysis and transplant patients in later phases

- ***To our knowledge, this is the first med reconciliation initiative designed specifically for chronic outpatient care in BC, if not the country***



Best Possible Medication History
Interview Guide

BC Renal Agency

INTRODUCTION

Hello Mr./Mrs./Ms./Miss. _____ *(client/patient/ resident)*

My name is _____, *(introduce self/profession)*

I would like to take some time to review the medications you take at home.

I have a list of medications from your chart/file, and want to make sure it is accurate and up to date.

Would it be possible to discuss your medications with you (or a family member) at this time?

You may also wish to ask:

Is this a convenient time for you? Do you have a family member who knows your medications that you think should join us? How can we contact them?

MEDICATION ALLERGIES

Do you have any medication allergies? *YES* ☐ *NO* ☐

If yes: What happens when you take _____ *(medication name)*?

INFORMATION GATHERING

Do you have your medication list or pill bottles (vials) with you?

Show and tell technique when they have brought the medication vials with them

How do you take _____ *(medication name)*?

How often or *When* do you take _____ *(medication name)*?

Collect information **about dose, route and frequency** for each drug. If the patient is taking a medication differently than prescribed, record what the patient is actually taking and **note the discrepancy.**

Are there any **prescription medications** you (or your physician) have recently stopped or changed?

What was the reason for this change?

COMMUNITY PHARMACY

What is the *name of the pharmacy* that you normally go to? *(name/location: anticipate more than one)*

May we call your pharmacy to clarify your medications if needed?

OVER THE COUNTER (OTCs) MEDICATIONS

Are there any medications that you are taking that you do not need a prescription for?

(Do you take anything that you would buy without a doctor's prescription?)

Give example, e.g. Aspirin. If yes: How do you take _____ *(medication name)*?

Highlights:
Funding Model Review/Increases

- Renal administrators & clinicians conducted review in summer/fall 2008
- Business cases submitted for funding increases based on workload-driven aspects of care delivery
- Additional funding approved by BCPRA and PHSA
  - **Increase of $1.9 million in 08/09 (effective Dec 1/08); increase of $3.8 million budgeted in 09/10**
    - independent HD patient training and maintenance
    - PD patient social support/follow up
    - pharmacy services
    - vascular access services
    - 25% base funding increase for all dialysis units

Highlights: *10-year Financial Plan*

- Key BCPRA role is to advocate to PHSA and MoHS for adequate funding – operating and capital
- 10-year plan developed: complete financial overview of renal care provision in BC at prov and HA levels
  - operating costs
  - facility operating leases
  - equipment/projects
- Endorsed by PHSA, MOH and Provincial Health Operations Committee
- Plan to be updated on an annual basis by BCPRA Facilities and Equipment Planning Group

To our knowledge, first time MoHS has been given a consolidated 10-year financial plan (incl. capital and operating costs), for a provincial health program.

Highlights: Information Systems

PROMIS-TADIS Integration

- **Phase one goes live:** November 30th
- Benefits:
  - Single point of entry
  - Single patient record
  - Improved clinical workflow for post-transplant renal patients
  - Enhanced patient navigation
  - Automatic data loads = higher reliability/patient safety (Nov 30: renal transplant users; early 2010 other transplant users)
- Training throughout November
  - Face to face training sessions
  - Webinars and pre-recorded training

* Most current PROMIS users will require minimal training
  - Some specific groups (e.g. patient registration), will receive specific training

Highlights: *Information Systems*

- **Complete list of IMIS Projects on PROMIS portal: https://promis.phc.bc.ca**
- *Of note:*
  - Patient Infectious Status/Immunization Tracking
  - Kidney Transplant Care Model (separate from database integration)
    - Develop a system within PROMIS that tracks the transplant patient care trajectory; Tx referral
  - Pharmacy Guidelines
    - Design and develop tools to support guidelines and tools (e.g. phosphate binders, ESAs, ACE inhibitors)
  - Electronic charting of CKD

Highlights: *PROMIS Go-Forward Strategy*

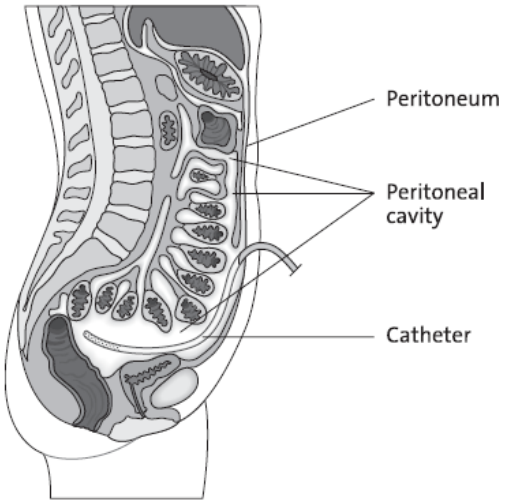
- Ensure PROMIS aligned with prov and nat'l e-health strategies/e-health legislation
- Invest in hardware and software server support to keep PROMIS reliable and robust
- Play an active role on the PHSA Information Management Council
- Continue Renal Information Management Council
  - forum to jointly identify IM/IS issues and prioritize needs
  - addition of Transplant representatives

Highlights: *PD Bedside Catheter Insertion Initiative*

- Benefits of increasing PD bedside cath insertion
  - Shorter wait times (not subject to OR availability)
  - Local anaesthetic; usually day procedure
    - Less discomfort for pts; shorter hospital stay than surgical insertion

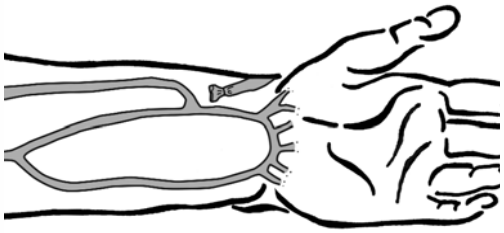
- Task group established (part of prov PD Clinicians' Group)
  - Clinical guidelines established & patient materials produced www.bcrenalagency.ca
    - Pt materials translated into Punjabi, Chinese and Tagalog

- Mentorship/training for interested physicians (physicians trained in Kamloops, Victoria to date)



Where the catheter will be placed

Highlights: *Vascular access*



- Continued development of provincial guidelines & tools (see www.bcrenalagency.ca)
- Tracking indicators (incidence & prevalence rate reports)
- Initiation of province-wide VA rounds
- Workshop on nursing assessment, cannulation and management of AV fistulas and grafts
- Development of program that matches difficulty of AV fistula/graft cannulation with nursing skill and experience

Highlights: *Patient Surveys*

- Survey re: interest in independent dialysis modalities
  - Approx 3000 patients surveyed; 44% response rate
  - 25% of respondents expressed interest in an independent therapy

- Survey of HHD patients re: technical support, training materials, and training experience.
  - Results show high levels of satisfaction with the HHD program
    - 87% of patients very satisfied with their technical support
    - 80% indicating high satisfaction with their training experience.
    - 97% of current HHD patients would recommend the therapy to other dialysis patients.

- Survey of 5000 patients re: perceptions of care
  - Nationally validated survey, designed for chronic disease patients
  - Survey results being tabulated
  - Results will help assess the strengths/weaknesses of current care delivery models, and identify areas for improvement using a PDSA cycle.

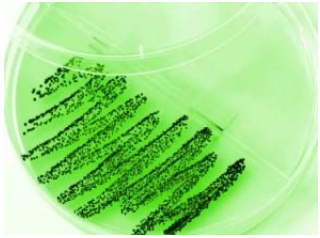
Highlights: *Emergency Mgmt/ Business Continuity Plan*

- Developed by BCPRA and HA renal programs
- Posted on PROMIS portal: https://promis.phc.bc.ca
- Designed to:
  - Help BC's renal community respond to risks to renal services delivery
  - Support operational activities in the event of any natural, man-made or health emergency hazard in the province.
- Will be updated on quarterly basis
- High-level renal pandemic plan also developed in anticipation of flu season

Highlights: *End of Life Care Framework*

- Multidisciplinary group working to establish provincial framework for EOL care within renal settings
  - Core team includes palliative care experts, renal experts (cross-discipline), international palliative care nephrology expert, project manager, and research assistant
  - Interviews of key stakeholders completed re: current and desired state
  - Established a resource directory on BCPRA website: www.bcrenalagency.ca

Highlights: Infection Control
Growing Concern re: AROs



- Infections are second leading cause of death among HD patients
  - HD patients at increased risk of infection with AROs
- Provincial Infection Control network (PICnet) developed ARO guidelines with section dedicated to HD infection control (based on VCH renal program work)
  - See www.bcrenalagency for PICnet guideline & BCPRA paper re: ARO mgmt
- Need for consistent provincial approach
  - BCPRA recommends each renal program develop ARO infection control policies based on PICnet guidelines
  - Tracking/review of practices and infection rates will be key to quality, patient safety and research initiatives
    - Will also inform precautions and screening practices that offer greatest benefit with least risk to pts and that are most cost effective
- *Note*: PICNET guidelines emphasize infection control policies should **not** prevent patients from dialyzing in HD centre most convenient for them

Highlights: Accountability & Transparency

- **Use of balanced scorecard: provincial version and HA-specific versions**
  - **comprehensive approach to track clinical, financial and HR indicators at provincial and HA levels**

BC Renal Agency Balanced Scorecard

	Priority Strategies	Indicators	Status[1]	Trend[2]	Target	Actual
Clients, Patients & Community	*EFFECTIVENESS:*					
	• Define patient outcomes that rely on integrated services and work with HAs to ensure the best patient and health care system outcomes.	1. One year patient survival rate on dialysis	●	→	≥ 80%	85%
	ACCEPTABILITY:					
		2. Patient satisfaction	●	N/A	≥ 75%	78%
	WELLNESS:					
	• Assess education and training needs of professionals, caregivers, and patients with kidney disease and ensure resources and plans are implemented to meet those needs.	3. Percentage of patients participating in independent dialysis* (PD and home-based HD)	●	↑	≥ 30%	31%
	QUALITY OF LIFE:					
	• Expand and enhance province-wide independent care model for dialysis.					
Service Coordination & Delivery	*CONTINUITY:*					
	• Improve integration of services for kidney patients within each HA through an increased understanding of the linkages and inter-relationships between acute care services, community services, and primary health care. • Build on strength of now established Health Authority Renal Programs.	4. Level of kidney function (median eGFR) at time of CKD registration	●	→	30-35 mL/min	31 mL/min
	AVAILABILITY & ACCESS:					
	Planning for capacity to meet CKD care needs.	5. Occupancy rate by dialysis unit setting	●	N/A	80% ± 5%	78%
	SAFETY:					
		6. Number of catheter-related infections per patient month (HD and PD)	●	N/A	< 0.08 / PD mo; <0.25 / HD mo	0.05 / PD mo; 0.13 / HD mo
	APPROPRIATENESS:					
		7. Percentage of patients within Anemia Management Protocol target	●	→	≥ 70%	75%
	EFFICIENCY:					
	• Continue to facilitate medication best practices across BC renal care community for an estimated cost savings of 5-10% of current renal drug budget.	8. Percentage of patients with optimized drug dose per unit of hemoglobin achieved	TBD	TBD	TBD	Mdn: 35-150 units/g/L
Learning, Growth, & Innovation	*ACCURATE & VALUABLE INFORMATION:*					
	• Continue to modify and implement a consolidated renal/chronic disease data management system (PROMIS).	9. Percentage of patients with comorbidity assessment available in PROMIS	●	↑	≥ 80%	73%
	NEW TECHNOLOGIES & WAYS OF DOING THINGS:					
	• Ensure that education and research endeavors align to enhance care delivery and demonstrate accountability and fiscal responsibility, while ensuring state-of-the-art care for patients with kidney disease.	10. List of new knowledge translation initiatives	●	↑	> 0	6
		11. Total funding for research and health outcomes initiatives	●	↑	> 0	$87,000 $500,000

Participating in the Community of Patients

- **World Kidney Day (March): Platform to increase public awareness**
  - **Events held across BC**
  - **BCPRA provides give-aways, online kidney quiz, special newsletters, proactive media**
  - **Coverage by over 20 media outlets**

- **World Kidney Day 2009: March 12th**

Participating in the Community: Outreach and External Validation

Ontario Renal Network

Created June 2009, modelled after BCPRA

Manitoba Renal Program

Engaged to uptake PROMIS

Australia Kidney Health Forum

Invited to describe BC model

American Society of Nephrology

Invited to present BC Model in context of Canadian Health Care

Visit us Online: www.bcrenalagency.ca

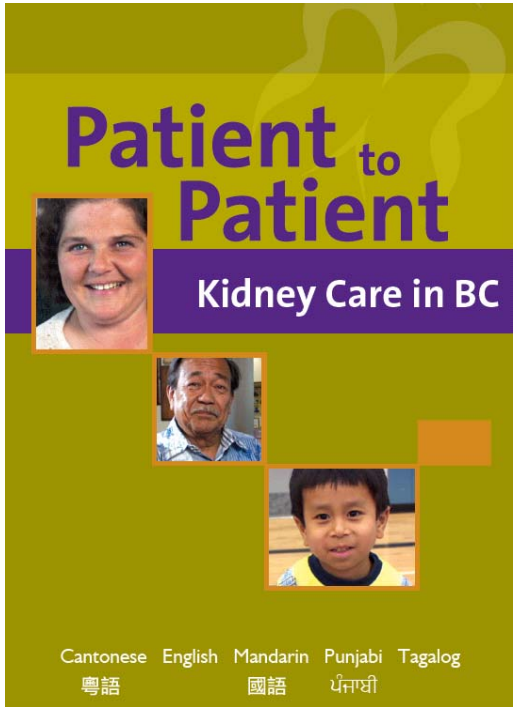
- **Wealth of information for pts and families**
  - New research section
    - Publication references 2006 to present
    - QI initiatives across HA renal programs
  - Standards and guidelines
  - Kidney services listings by HA
  - Pharmacy formularies and medication info
  - Information sheets, brochures, fact sheets
  - End of life resources section, with hundreds of articles
  - Statistics
  - and more…

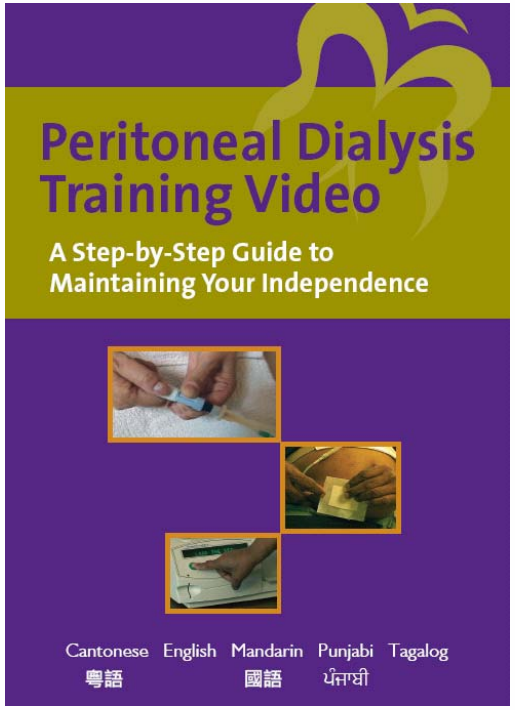
Highlights: *e-newsletter*

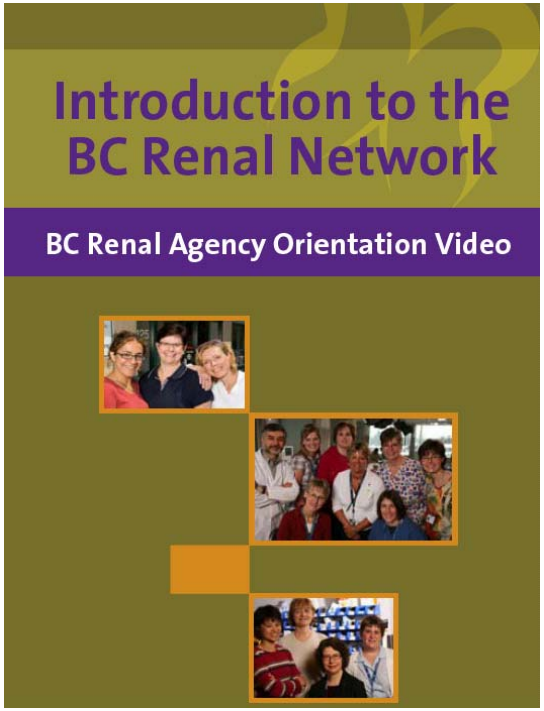
Bi-monthly; for and about the BC renal care community
Subscribe: www.bcrenalagency.ca

Highlights: *Educational Videos*

- Can be streamed online or order DVD copies using online order form
  - **www.bcrenalagency.ca/ For Patients**







Your Contribution Makes a Difference

- **BC is only place in North America that offers a fully coordinated system of care for kidney patients**
- **No matter where a patient lives in the province, he/she has access to same level of care and a variety of treatment options**
- **Patients with kidney disease in BC have better health outcomes than patients with the same disease elsewhere in Canada**

Welcome Nephrology Fellows/ Clinical Scholars

Research Fellows

- Mhairi Sigrist (RDN)
- Jennifer Hanko
- Manish Jain

Administrative Fellow

Michael Schachter

Clinical Fellows (2nd yr)

- Sean Barbour
- Myriam Farah
- Bradford Strijack

New Clinical Fellows (1st yr)

- Ayman Almadani
- Melanie Brown
- Edward Lee
- Marla McKnight

Pediatric Fellows (3rd yr)

- Rob Humphreys (finished Oct 30/09)

Pediatric Fellows (2nd yr)

- Chanel Prestidge
- Abullah Al-Abbas
- Salma Al-Ajarmeh

Pediatric Fellows (1st yr)

- Kathy Lee-Son

Thank you for your energy and commitment!

- **Approximately 200 people are actively involved in the renal network**
- **They participate on one or more BCPRA committees and professional groups**
- **The BCPRA is all of us!**

Breakout Sessions

- **Breakout Sessions**
  - **1:50-4:50 p.m.**

- **Wine and Cheese Reception (Vista Room, 19th Floor)**
  - **5:00-6:30 p.m.**

BC Nephrology DAYS 2009

November 5–6
Renaissance Vancouver
Hotel Harbourside

Sustainability in Kidney Care

BC Renal Agency
An agency of the Provincial Health Services Authority

Enjoy the conference!