

BC Renal Agency Balanced Scorecard

	Priority Strategies	Indicators ¹	Status ²	Trend ³	Target	Actual
Clients, Patients & Community	<ul style="list-style-type: none"> Define patient outcomes that rely on integrated services and work with HAs to ensure the best patient and health care system outcomes. Assess education and training needs of professionals, caregivers, and patients with kidney disease and ensure resources and plans are implemented to meet those needs. Expand and enhance province-wide independent care model for dialysis. 	1. One year patient survival rate on dialysis	●	→	≥ 80%	84%
		2. Patient experience	●	N/A	TBD	3.1-3.6
		3. Percentage of patients participating in independent dialysis* (PD and home-based HD)	●	↓	≥ 30%	29.7%
Service Coordination & Delivery	<ul style="list-style-type: none"> 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 established Health Authority Renal Programs. Planning for capacity to meet CKD care needs. Continue to facilitate medication best practices across BC renal care community for an estimated cost savings of 5-10% of current renal drug budget. 	4. Level of kidney function (median eGFR) at time of CKD registration	●	→	30-35 mL/min	30.7 mL/min
		5. Occupancy rate by dialysis unit setting	●	↑	80%±5%	80%
		6. Rate of catheter-related infections per patient month (HD and PD)	●	→	< 1 / PD mo; <0.33 / HD mo	0.06/PD mo ExS: 0.09/HDmo BaC: 0.06/HDmo
		7. Percentage of incident and prevalent fistulas	●	→	Incident >20%; Prevalent >60%	Incident: 17% Prevalent: 51%
		8. Percentage of patients with optimized drug dose per unit of hemoglobin achieved	TBD	TBD	TBD	Mdn: 26.5-104 units/g/L
Learning, Growth, & Innovation	<ul style="list-style-type: none"> Continue to modify and implement a consolidated renal/chronic disease data management system (PROMIS). 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. Assess education and training needs of professionals, caregivers, and patients with kidney disease and ensure resources and plans are implemented to meet those needs. Develop and implement recruitment, retention, and succession plans for health care professionals and allied health care professionals. 	9. Percentage of patients with comorbidity assessment available in PROMIS	●	→	≥ 80%	92%
		10. List of new knowledge translation initiatives	●	↑	> 0	10
		11. Total funding for research and health outcomes initiatives	●	↑	> \$100k per annum	Research = Q2 Actual \$59,793 Health Outcomes = Q2 Actual \$385,898
		12. Number of educational events in each HA	●	↑	> 0 per HA	14-65 per HA
		13. Staff sick leave as a percentage of regular paid hours*	●	↓	≤ 4.8%	3.05%
Finance	<ul style="list-style-type: none"> Leverage opportunities for costs savings and value add funding through provincial contracts. Continue to enhance and further develop the Renal Resource Management Model for adult and pediatric patients with kidney disease, which aligns incentives and patient outcomes in a fiscally responsible manner. 	14. Non-MoH revenue as a percentage of total revenues	●	→	≥ 6.6%	6.6%
		15. Net budget surplus (deficit)	●	↓	≥ \$0	Q2 Actual \$930,322
		16. Budget growth less than population growth	●	↑	≤ 11%	Q2 Actual -1.85%

* Mandatory indicator as defined by the Government Letter of Expectations/Health System Performance Framework.

¹ Indicators shaded grey do not have updated data available for this report.

² ● = achieving target and/or positive change; ● = close to achieving target and/or questionable change; ● = not achieving target and/or negative change

³ ↑ = improving trend; → = steady/stable trend; ↓ = deteriorating trend

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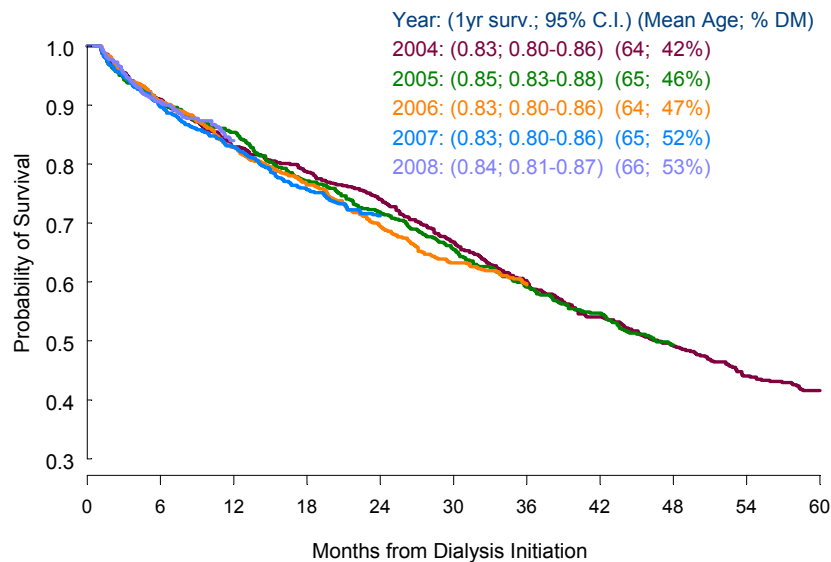
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CLIENTS, PATIENTS, AND COMMUNITY

Updated: October 2009

Status	Trend	Target	Actual
●	→	≥ 80%	84%

1. One-Year Patient Survival Rate on Dialysis



Test for adjusted HR* for Year of Dialysis Initiation: Chi-sq=1.40, p=0.8442

*Adjusted for age, gender, diabetes, initial modality, HA at dialysis initiation, CKD follow-up

Measure: One-year survival rate by year of dialysis initiation based on product-limit survival estimates (Kaplan-Maier method). Included cases: patients who started dialysis from January 01, 2003 – October 15, 2008. Follow-up duration to October 15, 2009.

Limitations: Unadjusted for comorbidities.

Significance: Survival on dialysis is a measure of the health of a unit. While high mortality rates are expected due to the nature of the disease, tracking of this parameter is important to determine if trends are within acceptable/expected rates.

Drivers: Patient acuity, urgency of dialysis initiation, delivery of adequate dialysis.

PHSA Target: > 80 % survive > 1 year on dialysis.

Benchmarks and Comparators: Annual Canadian mortality ~20% per year.

Trend: There has been no change in survival rate of BC patients starting dialysis over the past five years, despite a high prevalence of diabetics and an older age at dialysis initiation. Specifically, one-year survival is 84%, median survival of 48 months.

Comments: The median survival of 48 months is higher than the national average of 39 months.

Action Taken: None required.

Source: **BCPRA Health Informatics and Methodology & Analytics;** PROMIS (Patient Record/Registration and Outcomes Management Information System) - Provincial Registry of Chronic Kidney Patients, data extract October 2009 with SAS data transformations

[computer files and programs] Genevieve Brin [producer], Statistician, Gloria Freeborn [reviewer], Director, Communications, Ognjenka Djurdjev [reviewer, distributor], Senior Officer Methodology & Analytics, BC PRA Methodology & Analytics.

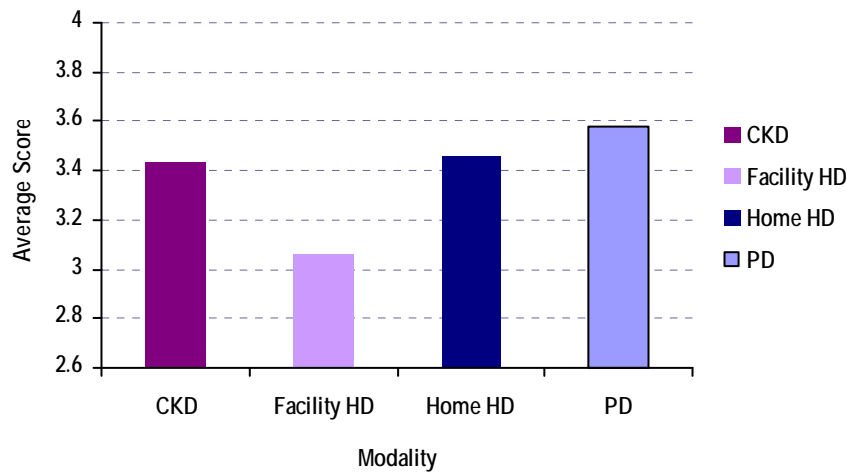
CLIENTS, PATIENTS, AND COMMUNITY

Updated: October 2009

Status	Trend	Target	Actual
●	N/A	TBD	3.1-3.6

2. Patient Experience

Patient Perception of Care



- Measure:** A validated patient self reporting survey, developed by the McColl Institute to measure the care experience of chronic patients was used to assess patients' perception of their care management and alignment with the chronic care model. 5,000 surveys mailed to the following patients: all hemodialysis, all peritoneal dialysis and chronic kidney disease with 2 visits to a structured, multidisciplinary predialysis clinic in the last 12 months. Numerator is the score on five-level Likert scale, with 5 being maximum score (best). Denominator is the number of respondents to the survey.
- Limitations:** All surveys are limited by methodology available to ask questions; and by response rate.
- Significance:** The results of this survey will help the renal community assess the extent that chronic kidney disease patients receive care that aligns with chronic care model. The tool is able to assess the patient centeredness of care, level of proactive care, degree of planned collaborative goal setting, problem solving and follow-up support. Comparisons will be possible across modalities of care (i.e. dependent and independent dialysis, CKD) between HAs, and within and between institutions and programs.
- Drivers:** Recognition that the patient is a key member of the renal care team. Alignment of care with expanded Chronic Disease Management Model.
- PHSA Target:** To be determined when survey collection and data analysis complete.
- Benchmarks and Comparators:** None.

Trend: TBD. The survey will establish baseline results.

Comments: Over 5,000 surveys have been distributed. Early trending information appears to indicate that independent dialysis patients report a higher level of participation in their own care compared with patients receiving care in hospitals and community dialysis units.

Action Taken: To Be Determined

Source: **BCPRA External Networks;** *patient survey* [manual], Donna Murphy-Burke [producer], Coordinator, BCPRA External Networks, Gloria Freeborn [reviewer], Director, Communications, Ognjenka Djurdjev [reviewer, distributor], Senior Officer Methodology & Analytics, BCPRA External Networks.

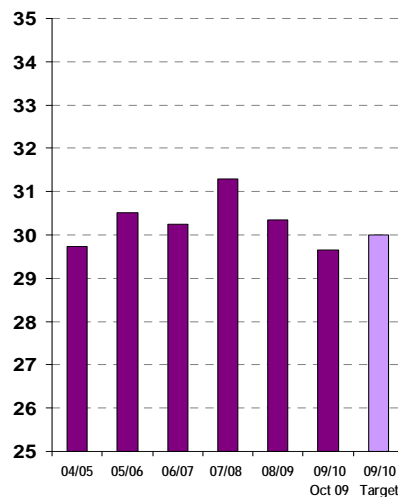
CLIENTS, PATIENTS, AND COMMUNITY

Updated: October 2009

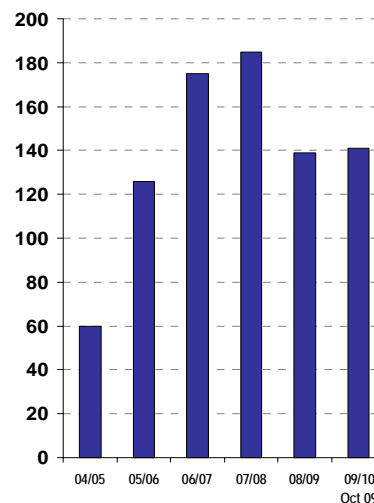
Status	Trend	Target	Actual
●	↓	≥ 30%	29.7%

3. Percentage of Patients Participating in Independent Dialysis

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



Number of patients participating in Home HD



- Measure:** Percentage of patients who are engaged in home-based therapies (peritoneal dialysis and home hemodialysis) in the fiscal year, expressed as percent of all dialysis patients.
- Limitations:** Despite the fact that some independent dialysis occurs within facilities, these are not included in current numbers, thus these are slight underestimates. There are significant fluctuations in numbers of these programs (see drivers below) that cannot be predicted.
- Significance:** Independent dialysis enhances patient quality of life, promotes better individual patient outcomes, and reduces resource utilization, leading to overall savings for the health care system. At the current time the percentage of pts capable of sustained independence is not known, and thus targets may need to be adjusted.
- Drivers:** Interest among patients based on communication/education by care providers; wait time for kidney transplant procedures; lack of nursing resources and inability to have facilities in each community; access to training, and instability of patients clinical health over prolonged time.
- PHSA Target:** 2008/09 HSPF target is 30% (long-term target is 35%). Internally, 27-30% of all dialysis patients on PD; combined independent Home HD and PD = 30-35% of total dialysis. The targets may appear modest, but are based on significant limitations and drivers.
- Benchmarks and Comparators:** Canadian average for home-based dialysis care < 20%; the PD rate in most provinces is 18-20%, and few have organized independent HD programs.

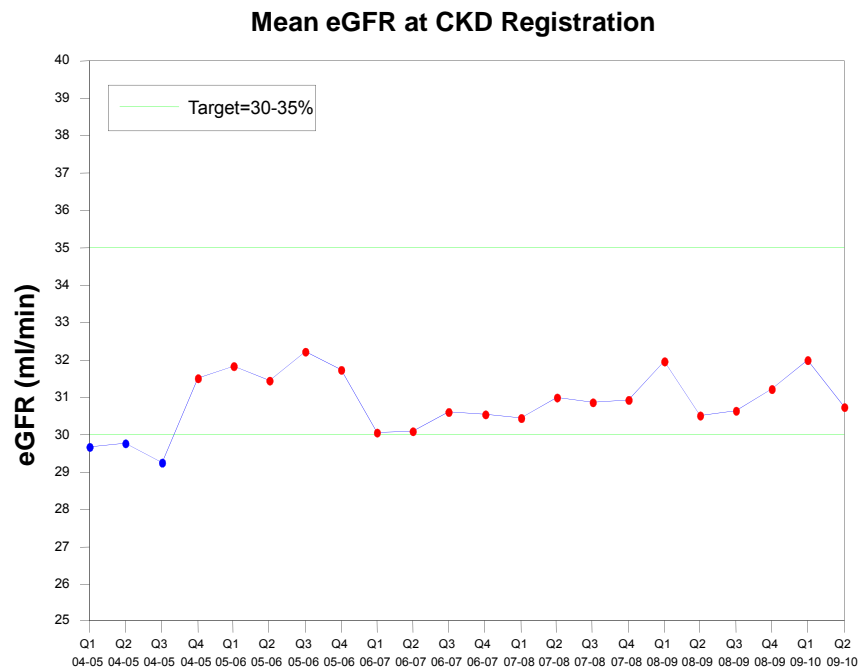
- Trend:** The proportion of patients who commence independent based therapies is steady; however, BC is above the national average and meeting our own targets.
- Comments:** The long-term sustainability of this trend requires adequate resources for respite and recognition of changing status of patients. The results of a patient survey demonstrate 10% of all patients are interested in home HD. Barriers include: lack of respite care, fear of isolation, perceived lack of wellness and lack of support from the health care community. As per above, under significance, there is a need to better capture the percentage of patients able to sustain independence.
- Action Taken:** Identified barriers are being addressed. A specific example is support for bedside PD catheter insertion by nephrologist through guideline development and peer mentoring resulting in two additional nephrologists developing this skill. As well, alternative locations for independent dialysis treatments (e.g. self care within facilities) are being explored and implemented (e.g. Vancouver General Hospital has a hospital-based independent nocturnal hemodialysis program, Prince George has established a tailored self care unit and Penticton plans on implementing similar structure within their existing in-center unit in early 2010). The patient numbers in the two current independent sites have not been included in the calculation of the 29.7%, which would improve the total to be >30%. Staff redesign - allowing for a much higher RN to patient ratio have been actualized in both these settings, thus allowing for some cost savings in those scenarios.
- Source:** **BCPRA Health Informatics and Methodology & Analytics;** PROMIS (Patient Record/Registration and Outcomes Management Information System) - Provincial Registry of Chronic Kidney Patients, data extract October 2009 with SAS data transformations [computer files and programs] Genevieve Brin [producer], Statistician [producer], Gloria Freeborn, Director, Communications [reviewer], Ognjenka Djurdjev [reviewer, distributor], Senior Officer Methodology & Analytics, BC PRA Methodology & Analytics.

SERVICE COORDINATION AND DELIVERY

Updated: October 2009

Status	Trend	Target	Actual
●	→	30-35 mL/min	30.7 mL/min

4. Level of Kidney Function at Time of CKD Registration



- Measure:** Mean eGFR (level of kidney function) at time of CKD registration.
- Limitations:** None.
- Significance:** The level of kidney function at the time of registration is directly related to outcomes. The ability to delay disease progression and adequately prepare people for replacement therapy (and to promote independent options) requires adequate time. An earlier referral = higher level of kidney function, and thus increased likelihood of successful interventions. Within the province, it's important to ensure the ability to deliver care to patients earlier in their history of kidney disease irrespective of health authority.
- Drivers:** Referral from GP and others, recognition of the condition (i.e. lab strategy), access to nephrologists.
- PHSA Target:** 30-35 mL/min.
- Benchmarks and Comparators:** No province or country has this information available.
- Trend:** There appears to be a plateau in the level of kidney function at the time of registration, after an initial improvement post eGFR reporting implementation. Because the plateau over recent periods might indicate problems with waiting times, an initiative to capture wait time information was initiated in the Fall 2008. Alternatively, as guidelines currently suggest referral at ~30 ml/min, this may well represent appropriate and steady state referral.

Comments:

BC has made significant positive strides in early identification through the combined GP education and CKD laboratory strategy. With mean GFR at time of registration up to 30-32 ml/min (i.e., 30-32% of kidney function) compared with 22 ml/min prior to the provincial strategy, there is a possibility that more people will be able to delay progression of their disease, maintain health, or receive non-urgent dialysis starts or pre-emptive transplant. The initiative referenced above re: wait times will inform future strategies.

Action Taken:

New initiatives re: tracking of nephrology consultation wait times have been undertaken. In addition we have initiated an evaluation of shared care models to determine if the flattening of this curve is due to a saturation issue or a true stability / meeting of the needs of the referring population. A project lead has been identified and project plan, with initial data collections, commenced. A representative period of time and representative practices are being determined to ensure applicability of the data.

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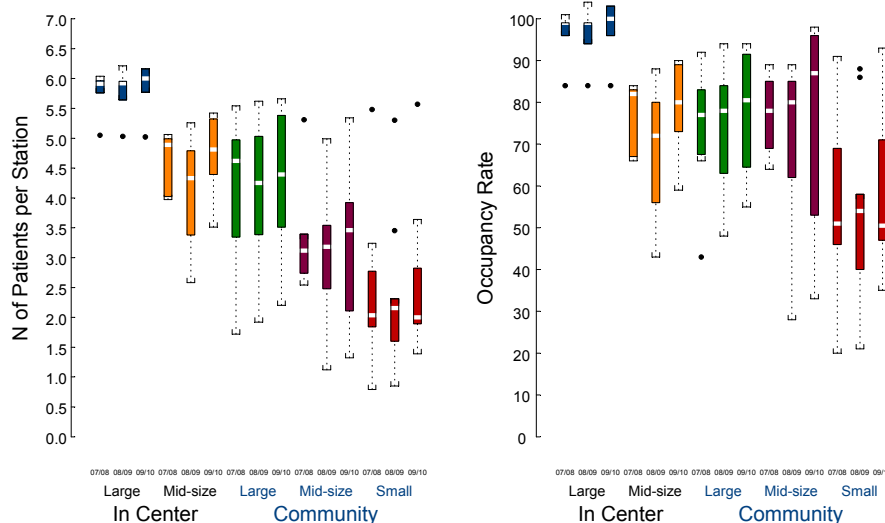
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SERVICE COORDINATION AND DELIVERY

Updated: October 2009

Status	Trend	Target	Actual
●	↑	80% ± 5%	80%

5. Occupancy Rate by Dialysis Unit Setting



Measure: Number of chronic HD patients per dialysis station and percent occupancy rate per unit. The maximum occupancy rate is defined as six patients/chairs for hospital units and four patients/chairs for community units. This is a measure of the ability of units to appropriately operationalize their chairs/capacity to dialyze patients. Due to operational realities that impact occupancy, such as nursing availability and patient variability, the 37 HD units in BC are stratified into five categories based on their setting (a combination of urban/rural and size of the respective communities).

Limitations: The efficiency of any measurement of occupancy (i.e., number of patients receiving dialysis in a unit) may not be reflective of true capacity (i.e., physical chairs available). Occupancy in small/rural units is drastically affected by the loss of 1-2 patients. Occupancy in larger/urban units can also be affected by patient factors, as well as availability of nursing resources to deliver care. As a result, physical capacity does not always translate to actual occupancy. Occupancy rates must be determined based on three key factors: patient population, physical chairs and human resources (nurses, etc.). This measure of occupancy is relative to dialysis units, and needs to be contextualized therein.

Significance: Occupancy rates are a measure of organizational effectiveness and the ability to appropriately plan and deliver services. Knowledge of gaps or problems in occupancy informs future planning and strategies.

Drivers: Physical space/chairs; nursing availability; patient demographics and numbers.

PHSA Target: 80% is typically defined as an operational management target for chronic HD units

across Canada. However, given the complexity of the patient population, BC geography, and human resource challenges (among others), we need to explore acceptable variations in occupancy rates. This is why BC PRA has stratified the units into five categories for the purposes of this indicator and analysis.

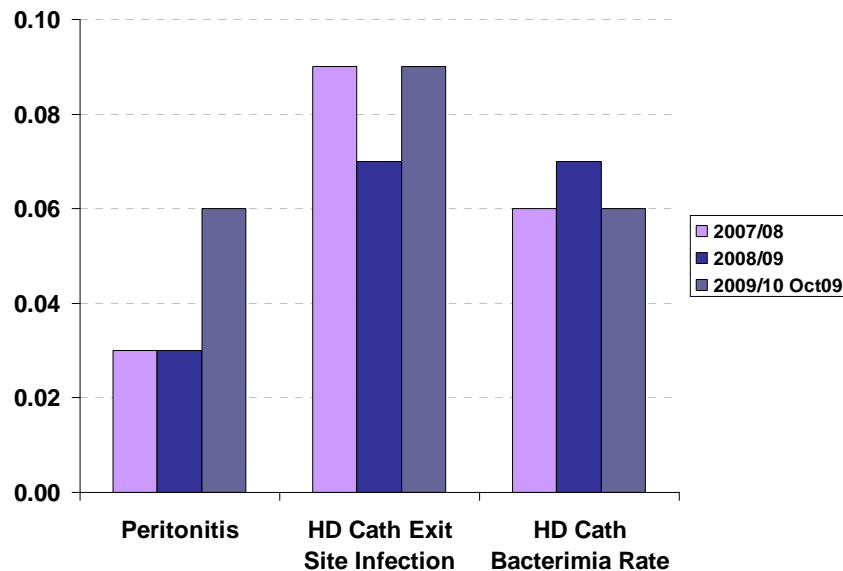
Benchmarks and Comparators:	National and international standards are not well articulated. An average of 4.5 pts/ chair = ~80% occupancy appears to be the national standard, but there is wide variability across provinces.
Trend:	Urban centres tend to be over capacity for most of the time periods, due to increasing demand at the 'initiating centres', and patients with multiple comorbidities who do not have the ability to move or receive care at different locations. Rural centres appear to be vulnerable to nursing shortages and changes in patient numbers. Over time, the occupancy rate has been very stable (around 78%). The overall occupancy rate increased slightly, though not statistically significantly, since the April BSC report (from 75.5 to 80%)
Comments:	We continue to report trends and support proactive planning. Under consideration (where feasible) are new strategies, including: nurse extenders (LPNs), independent, facility-based care, and commencement of stable patients in community units as well as other methods to maximize low occupancy facilities and reduce pressure on crowded units. A pilot project developed at St. Paul's Hospital for LPNs who can cannulate has been successfully implemented at the Richmond community unit. St Paul's is currently planning on expanding dialysis to a fourth overnight shift (from 23:00 to 6:00am).
Action Taken:	Review ongoing trends and innovations re: planning, nursing flexibilities, and patient demographics. Support of project managers to facilitate change in culture and facilitation of movement of patients to community units, in addition to potential commencement of dialysis in those units.
Source:	BCPRA Health Informatics and Methodology & Analytics; PROMIS (Patient Record/Registration and Outcomes Management Information System) - Provincial Registry of Chronic Kidney Patients, <i>data extract October 2009 with SAS data transformations</i> [computer files and programs] Genevieve Brin [producer], Statistician, Gloria Freeborn [reviewer], Director, Communications, Ognjenka Djurdjev [reviewer, distributor], Senior Officer Methodology & Analytics, BC PRA Methodology & Analytics.

SERVICE COORDINATION AND DELIVERY

Updated: October 2009

Status	Trend	Target	Actual
●	→	< 1/PD mo < 0.33/HD mo	0.06/PD mo ExS: 0.09/HDmo BaC: 0.06/HDmo

6. Rate of Catheter-Related Infections per Patient Month (HD & PD)



- Measure:** Rate of infections. Numerator is the number of episodes of culture-proven infection; denominator is number of Peritoneal Dialysis (PD) or Hemodialysis (HD) catheter months between April 01, 2007 and October 15, 2009. The rate is derived by calculating the total number of all episodes divided by the number of catheter months in which the episodes occurred.
- Limitations:** Complete data are not currently available from all renal units. Not always possible to rule out other causes of infection.
- Significance:** This measure indicates the success of the programs/province in preventing infections. Infections are associated with increased hospitalizations, morbidity and mortality. As such, they may serve as an indicator of population wellness, prior to morbidity and mortality data being available.
- Drivers:** Vascular access creation rate/ limitations in resources; host factors; delayed referral; break in sterile techniques, environmental factors.
- PHSA Target:** PD infections < 1/ PD patient year; HD catheter infections < 1/ 3 HD catheter month.
- Benchmarks and** Canadian averages for PD infection rates are not available; Ontario rates for tube

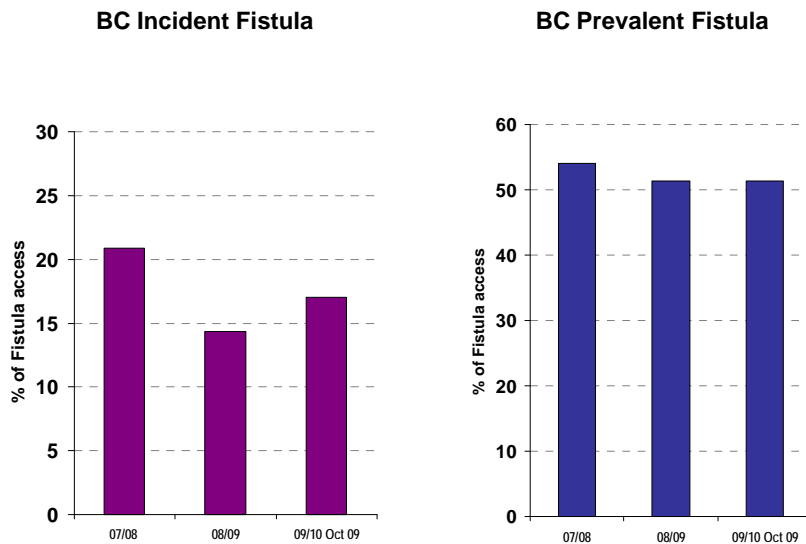
- Comparators:** site infection are 0.41/patient year; current guidelines for catheter infections are not available.
- Trend:** Rates are stable and within the target; they are lower than published data from USRDS.
- Comments:** Infections may be due to patient-related factors that are not controlled by program strategies, as well as factors (specifically cleanliness and catheter care) that are in the control of the program. Nonetheless, the tracking of infections is important for all programs as an indicator of overall wellness of the population, and for tracking of changes that may indicate breaches in technique. The current rates are very low, which likely reflects the excellent patient training and nurse education required to maintain this parameter. As infections have been linked to increase in mortality, the improved survival over other Canadian centres may in part be linked to this.
- Action Taken:** Provincial Vascular Access Services initiative to increase percentage of permanent access (fistulas and grafts) will decrease the rate of infections by decreasing the number of catheters.
- Source:** **BCPRA Health Informatics and Methodology & Analytics;** PROMIS (Patient Record/Registration and Outcomes Management Information System) - Provincial Registry of Chronic Kidney Patients, *data extract October 2009 with SAS data transformations* [computer files and programs] Genevieve Brin [producer], Statistician, Gloria Freeborn [reviewer], Director, Communications, Ognjenka Djurdjev [reviewer, distributor], Senior Officer Methodology & Analytics, BC PRA Methodology & Analytics.

SERVICE COORDINATION AND DELIVERY

Updated: October 2009

Status	Trend	Target	Actual
●	→	Incident: >20% of all incident Prevalent>60%	Incident: 17% Prevalent: 51%

7. Percentage of Incident and Prevalent Fistula



- Measure:** Incident Fistula: Percentage is determined by the number of fistulas used as initial vascular access for incident (new) chronic HD patients.
Prevalent Fistula: Percentage is determined by the number of fistulas used at a particular time point within prevalent (existing) chronic HD patient population.
- Limitations:** The proportion of acute HD patients and accuracy of differentiation between chronic and acute HD patients may impact the denominator. Thus clarification as to ‘chronic’ status and incident pts requires further discussion and validation.
- Significance:** This indicator represents a significant opportunity for practice improvement and impacts patient quality of life and outcomes. Vascular access (VA) is referred to as the patient’s lifeline because it allows access to the bloodstream for dialysis. Of the 3 kinds of VA – fistula, graft and catheter – fistulas are considered best practice as they last longer than either grafts or catheters, and tend to have fewer problems such as infections and clotting, which lead to hospitalizations, long term antibiotic use etc. While many European countries have fistula rates above 75%, the US and to a lesser extent Canada lag behind and are working to implement “fistula first” policies and processes.
- Drivers:** Organization/availability of surgical services; timely identification of CKD patients and planning for dialysis initiation (including fistula creation); proactive monitoring and repairs of fistulas

PHSA Target:	>60% prevalent AVF ; >20% all incident
Benchmarks and Comparators:	Reported AVF rates for prevalent patients are 90% in Italy, 84% in Germany, 82% in Spain, 77% in France, and 67% in the UK. Rates in the United States are 31% and a three-year National Vascular Access Improvement Initiative (“Fistula First”) is currently underway to address this issue. Rates in Canada (including BC) are higher than in the US, but significantly lower than in many of the European countries (26% incident fistulas, 53% prevalent fistulas); suggesting opportunities for improvement are possible.
Trend:	New measure, so trend is only available for last two years, as tracked by BCPRA Provincial Vascular Access Services Team. Appears to be improving though still lagging behind European groups.
Comments:	BC prevalent fistula rate is comparable with reported Canadian data, while incident fistula rate is lower than latest Canadian reported rate (DOPPSII 2005).
Action Taken:	For several years, BCPRA has provided leadership to an integrated, multidisciplinary provincial VA program with local implementation that supports timely identification of patients and appropriate planning for dialysis initiation, coordination of surgical services and proactive monitoring and repairs. Program components include: a provincial committee and working groups; extensive guideline development; PROMIS database support/development; regional VA clinics, nurses and regular rounds; and collaboration with surgeons and radiologists for protected OR and radiology time. Identification of route cause (including patient, and physician attitudes) and methods by which to influence these has been undertaken in the last quarter.
Source:	BCPRA Health Informatics and Methodology & Analytics ; PROMIS (Patient Record/Registration and Outcomes Management Information System) - Provincial Registry of Chronic Kidney Patients, <i>data extract October 2009 with SAS data transformations</i> [computer files and programs] Genevieve Brin [producer], Statistician, Gloria Freeborn [reviewer], Director, Communications, Ognjenka Djurdjev [reviewer, distributor], Senior Officer Methodology & Analytics, BC PRA Methodology & Analytics.

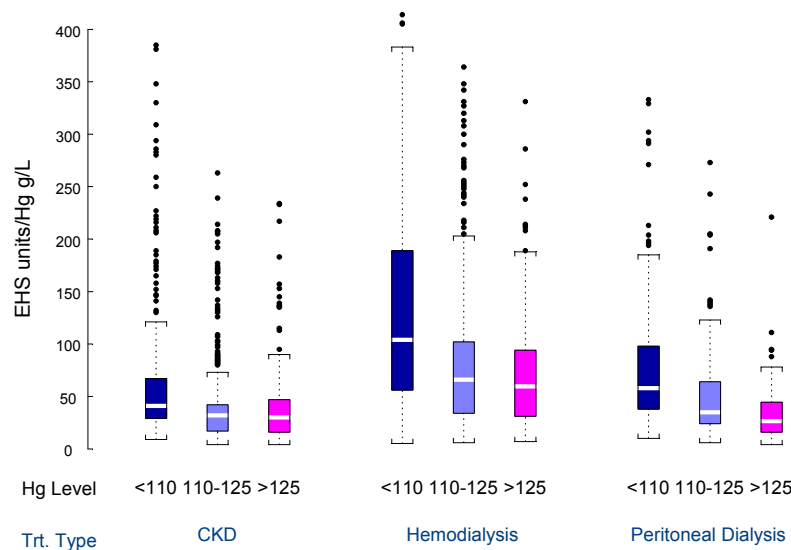
SERVICE COORDINATION AND DELIVERY

Updated: October 2009

Status	Trend	Target	Actual
TBD	stable	>70%	Mdn: 26.5-104 units/g/L

8. Percentage of Patients with Optimized Drug Dose per Unit of Hemoglobin Achieved

ESA Weekly Dose per Hemoglobin Achieved by Treatment Type and Hemoglobin Level



Measure: Percentage of patients receiving optimized drug dose per unit of hemoglobin. Note: an optimum dose has yet to be standardized for incident or prevalent patients; therefore we cannot yet complete the measure and are unable to report percentages. As an interim step, we are reporting median dose/Hgb achieved, as trends have emerged that allow us to evaluate on this basis. The lowest ratio of drug to Hb in target is recommended.

Limitations: Although we know the current prescription patterns, an optimum dose has yet to be standardized, so we cannot yet complete the measure. While dosages continue to be dependent on individual unit prescribing patterns, there is a clear trend towards higher doses in those with lower Hgb; this may be due to starting doses or identifying sicker patients.

Significance: An optimum dose would facilitate medication best practices, namely efficiency of drug utilization and costs for optimum outcomes.

Drivers: Iron usage, patient factors (illness/ hospitalization), and physician practice factors.

PHSA Target: Before a decision can be made re: an appropriate target in terms of percentage of patients, the optimized drug dose associated with patient outcomes must be determined. Review of data and targets will be undertaken for BCPRA Pharmacy and Formulary Review committee, but we are suggesting ~70% of given

populations should have achieved lowest dose/ Hb range.

Benchmarks and Comparators:

Not available.

Trend:

Within the province, we have been stable and improving in minimizing doses over time in all patient groups.

Comments:

This is a complex issue requiring more extensive research into best methodology for ensuring that this measure is not susceptible to biases and issues that would make it invalid or unstable. Preliminary results were presented to the Pharmacy committee, who would like to see serial data on this issue to determine stability of the finding and thus develop action plans to address issue of highest dosing in lowest achieved hemoglobin. This is consistent with data in publications, and is likely due to the fact that the sickest patients require the highest doses to achieve, or even approach, targets.

Action Taken:

Ongoing project to determine best methodology to express this value.

Source:

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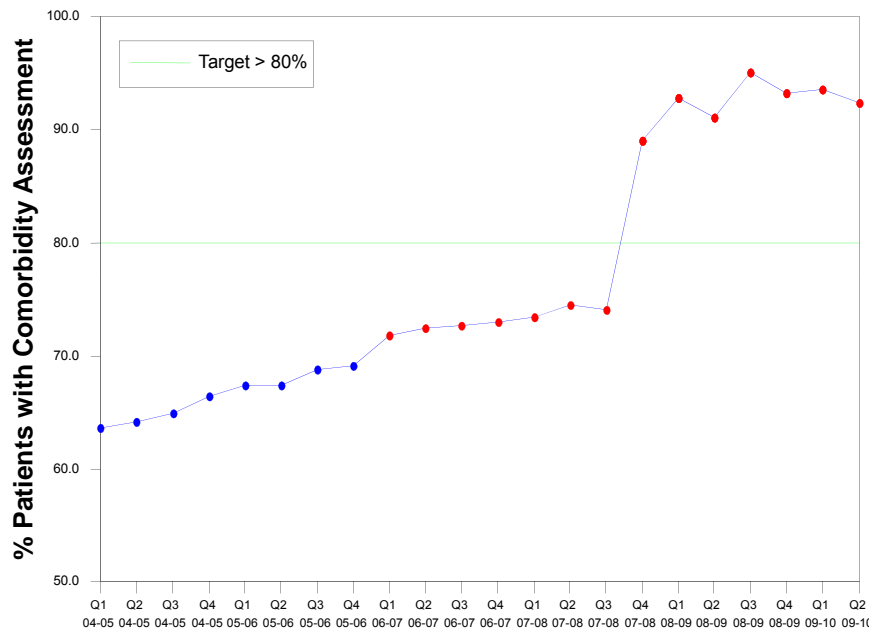
LEARNING, GROWTH, AND INNOVATION

Updated: October 2009

Status	Trend	Target	Actual
●	→	≥ 80%	92%

9. Percentage of Patients with Comorbidity Assessment Available in PROMIS

Percent of Dialysis Patients with Comorbidity Assessment



- Measure:** Number of dialysis patients who have comorbidity assessment record entered in the form using categories as a percentage of all prevalent dialysis patients.
- Limitations:** None.
- Significance:** Clinically, categorical assessment facilitates communication between health care providers and reduces probability of error and misinterpretation. This measure is essential in interpreting patient outcomes and for planning. It enables adjustments in comparison between HAs and over time. Its presence in the database indicates adherence to data collection directives.
- Drivers:** User training and re-design of documentation generating processes in renal units.
- PHSA Target:** ≥ 80%.
- Benchmarks and Comparators:** Not available.
- Trend:** There are now over 92% (12% over the target value) of dialysis patients with comorbidity assessments recorded in PROMIS.
- Comments:** Regular reviews with HAs of CQI/planning data have fostered a better understanding of the importance of accurate/complete data. Increased training and responsiveness to user requirements has supported a steady improvement in data quality. This is a large undertaking, but has resulted in excellent improvement not just in data completion, but more importantly in our ability to more clearly define

outcomes using precise comorbidity data. This data will also allow us to review survival data with appropriate adjustments for age, diabetes and gender which will improve the interpretability of the information.

Action Taken:

The application was revised (with input of the BCPRA Medical Advisory Committee and users) to increase the number of comorbidities captured, as well as the flexibility and user-friendliness of the application. Ongoing increase of PROMIS users training. The BCPRA Data Management Coordinator facilitates documentation process enhancements in renal units.

Source:

BCPRA Health Informatics and Methodology & Analytics; PROMIS (Patient Record/Registration and Outcomes Management Information System) - Provincial Registry of Chronic Kidney Patients, *data extract October 2009 with SAS data transformations* [computer files and programs] Genevieve Brin [producer], Statistician, Gloria Freeborn [reviewer], Director, Communications, Ognjenka Djurdjev [reviewer, distributor], Senior Officer Methodology & Analytics, BC PRA Methodology & Analytics.

LEARNING, GROWTH, AND INNOVATION

Updated: October 2009

Status	Trend	Target	Actual
●	↑	> 0	10

10. List of New Knowledge Translation Initiatives

1. **Independent Hemodialysis Program:** provincially coordinated independent hemodialysis program with local implementation that promotes optimal patient care and system sustainability. This program has been the springboard for the development of independent care within structured settings (please see #8 and #9)
2. **Provincial Vascular Access Services Initiative:** a multidisciplinary, cross-province initiative designed to improve timely access to services and to reduce complications and hospitalizations related to vascular access. Phase II objectives: improvements to the PROMIS renal database, guidelines development, VA clinic best practices and VA referrals from IHA and NHA to tertiary centers. Recent successful initiatives have included the development of provincial, multidisciplinary vascular access rounds and several provincial vascular access research initiatives. Extension of this successful initiative to **PD related** access will be undertaken.
3. **Integrated Clinics for Complex Patients in SPH and Penticton:** new model of care that recognizes the linkages between kidney disease, heart disease and diabetes.
4. **Anemia Management Protocol:** protocol that facilitates the implementation of anemia guidelines in HD patients by non-physician staff will support more efficient use of expensive medications (EHRT) and reduce time required by nephrologists for this aspect of clinical care. Through the implementation of guidelines, average medication dosages have been reduced with the same clinical and patient outcomes, resulting in cost avoidance in 08/09 of approx \$2.2 million (if comparing to 06/07 dosages).
5. **End of Life Initiative:** the goal is to create a BC model for EOL care that promotes effective, integrated, patient-centered care based on best practices found locally, nationally and internationally. A task group, including experts in this field from outside BC, is currently working on a provincial framework and guidelines for patient care (including guidelines on pain management, fluid management in the dying stage, etc.) This work is aligned with palliative care strategies across health authorities and the Ministry of Health Services.
6. **Pharmacoeconomic Review:** this new initiative involves a review of the major classes of medications that the BCPRA funds, with a focus on the major cost drivers (e.g. ESA, non-calcium phosphate binders, cinacalcet) and their efficacy in this complex patient group. An analysis of current processes and procedures, the cost and impact on outcomes, and evaluation of current processes will be undertaken so that a formal cost benefit evaluation can guide further policies.
7. **Peritoneal Dialysis Catheter Insertion Sustainability Project:** PD catheter insertion occurs either through the services of a general surgeon and involves an OR procedure (commonly a day procedure) or bedside catheter insertion by a skilled nephrologist. Working through a non-nephrologist specialist can slow implementation of the patient care plan as an assessment/ appointment is needed, OR time must be booked etc. Delays can lead to transient need for hemodialysis. Nephrologists currently learn the bedside procedure through mentorship with a skilled nephrologist. This project will include development of a long term, practical and sustainable process to increase and maintain the number of nephrologists able to perform PD catheter insertion.
8. **Nocturnal In-Hospital Self Managed Hemodialysis Pilot (IAMHD Stage 2):** Nocturnal hemodialysis (NHD) enables patients to receive more dialysis and improve their health outcomes in a cost effective manner. In January 2009 a pilot was launched at Vancouver General Hospital, with 4 patients participating Monday/Wednesday/Friday from 2200 to 0600

hours. These patients are fully trained in all aspects of their care, with staff available for emergency situations only. Given success of the pilot, the nocturnal program will continue as part of regular operations, with plans to expand participant numbers to 8. Further expansion to operate the unit 6 nights per week will be considered over time. Other renal programs have expressed an interest in developing a similar program.

9. **Enhanced Patient Self Management in Structure Settings (IAMHD Stage 2).** A number of hemodialysis patients are able to manage some, but not all aspects of their care, due to, for example, a difficult vascular access or anxiety about being on their own at home. Two sites in BC are providing options for enhanced self-management within structured settings (i.e. owned/leased by the HA, with renal staff). The Northern Health renal program, through the community dialysis unit located in Prince George, has an independent focus where nurses provide care on an “as needed basis” and some flexibility in scheduling is possible. The unit’s eight patients are trained on the machine used in the Home Hemodialysis Program, so they can transition to complete independence at home if they choose at any time. Interior Health’s Penticton unit is developing an “independent setting” within their in-centre unit, based on the Prince George model, which will begin operations in early 2010.
10. **Medication reconciliation:** A process designed to prevent medication errors at patient transition points and improve patient safety; medication reconciliation is now a requirement for hospital accreditation and is expected to become standard practice for acute care patients across Canada. To our knowledge, it has not been extended to chronic care outpatients anywhere else in the country – despite the fact that chronic renal patients, with their needs for multiple medications (an average of 19), and frequent prescription changes and hospitalizations, are at a higher risk than most patients for medication errors. The BC Provincial Renal Agency is providing provincial leadership for a standardized medication reconciliation process for dialysis patients across the province (to be fully implemented by end of 2009). The program will further expand to pre-dialysis and transplant patients in later phases. Accomplishments to date include: formation of a provincial, multidisciplinary medication reconciliation leadership group; allocation of additional funding to health authority renal programs to support med rec uptake; development of a series of reports and forms in the renal clinical information database (PROMIS), ensuring that the process flows from the outpatient setting through to any hospital in the province; cross-province education sessions and an online tutorial for use of med rec reports and tools in PROMIS; and development of additional med rec support tools, including a patient interview guide. To date, 80% of all chronic dialysis patients in the province have had one full medication reconciliation completed.

Measure:	Itemization of all initiatives that involve change from existing practice or implementation of new practices to improve care quality, efficiency, effectiveness and outcomes. The list includes both 2008/09 initiatives that are continuing and 2009/10 initiatives.
Limitations:	Reporting of all activities by HA renal programs is currently not a requirement. Definition of change initiatives may vary by HA or renal program. Current list captures initiatives with significant BCPRA involvement/leadership.
Significance:	By interfacing new knowledge with change in practice, programs can improve care delivery, patient outcomes and system sustainability.
Drivers:	Support structures within institutions or HA to facilitate change; cross-program, cross-HA knowledge sharing and learning.
PHSA Target:	> 0.
Benchmarks and Comparators:	None available.
Trend:	Increasing
Comments:	

Action Taken: Continued support at a provincial level for such initiatives.

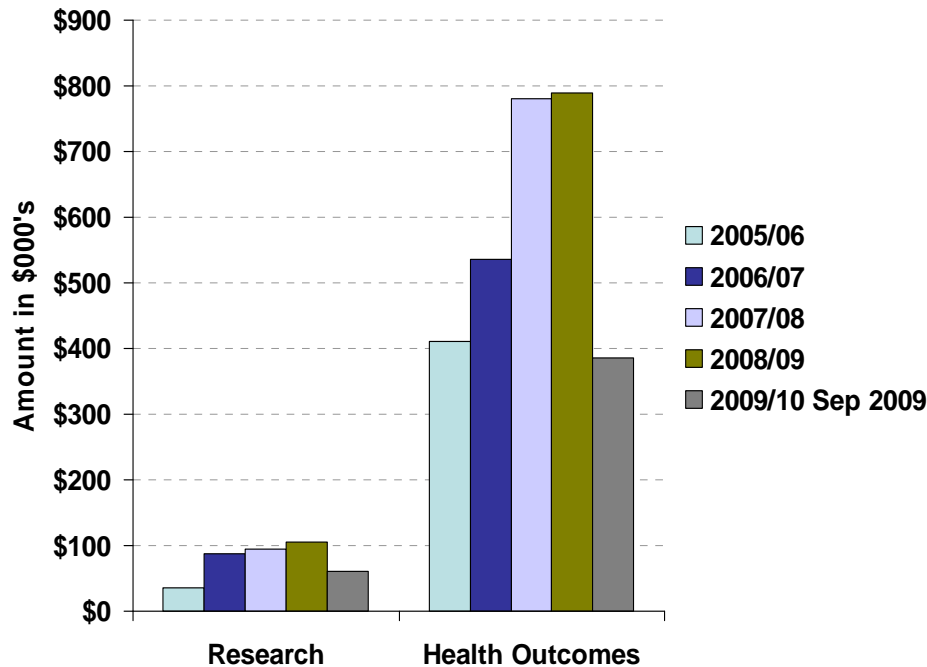
Source: **BCPRA Administrative Support;** project tracking process [manual], Babita Basra [producer], Coordinator, Internal Networks, Gloria Freeborn [reviewer], Director, Communications, Ognjenka Djurdjev [reviewer, distributor], Senior Officer Methodology & Analytics, BCPRA Administrative Support.

LEARNING, GROWTH, AND INNOVATION

Updated: October 2009

Status	Trend	Target	Actual
●	↑	>\$100,000 per annum	Research = Q2 Actual \$59,793 Projected \$140,370 Health Outcomes = Q2 Actual \$385,898 Projected \$840,537

11. Total Funding for Research and Health Outcomes Initiatives



- Measure:** Describes dollar value of current, direct funding that the BCPRA uses to support research activities of the community. Dollar values attributable to these functions are reported.
- Limitations:** Note that funding for projects within the renal community that support change or specific research projects are not necessarily related to BCPRA, but to general groups at the UBC Division of Nephrology and individual researchers at specific institutions and health authorities; as such, the numbers stated in this indicator do not capture total grant dollars.
- Significance:** The direct support of research activities by the BCPRA from the administrative budget describes the true integration of research into the fabric and function of the agency. Grants awarded to members of the renal community (BCPRA constituents) may reflect the importance that funding agencies confer on the BCPRA associated researchers, but would not be a fair reflection of efforts.
- Drivers:** Availability of researchers, availability of research dollars/ industry or other to support initiatives.
- PHSA Target:** > \$100,000 per annum.

**Benchmarks and
Comparators:** Not applicable.

Trend: Increasing.

Comments: In order to increase applied research within the renal community, BCPRA is funding a part-time methodologist and advisor, as well as statistical support personnel. With respect to health outcomes initiatives, the BCPRA component of this funding is related to organizational support, coordination, and evaluation.

Action Taken: Increasing awareness of the potential for research collaboratively throughout the province; increasing integration of policy and health research by supporting Fellowships in Health Administration directly for nephrology trainees.

Source: **BCPRA Business Planning;** *PeopleSoft extract with excel transformations* [computer files and programs], Eryln Amano [producer], Senior Business Planning Analyst, BCPRA Business Planning; Gloria Freeborn [reviewer], Director, Communications, Ognjenka Djurdjev [reviewer, distributor], Senior Officer Methodology & Analytics, BC PRA Methodology & Analytics.

Learning, Growth, and Innovation

Updated: May 2009

Status	Trend	Target	Actual
●	↑	> 0 per HA	14 - 65 per HA

12. Number of Educational Events Held in Each Health Authority

HA	Training/ In-services	Conferences/Workshops/Activities
PHSA (C&W)	3	11 (ASN, Horizons 2015, Gene Therapy, ISN, Dialysis, C-Kids Research, Critical Care, CKD Meetings, Medication Reconciliation Workshop, Province Wide-Vascular Access Rounds, World Kidney Day Activities: kidney care quiz, kidney diet presentation, kidney care walk)
FHA	13	8 (Chronic Disease: Prevention & Mgmt, CANNT, Western Canada PD Day, Advance Care Planning, Creating a Culture of Connections, Medication Reconciliation Workshop, Province Wide-Vascular Access Rounds, World Kidney Day Activities: kidney care walk and poster display)
IHA	38 (approx)	13 (ANNA, CANNT, IHA-wide conf, IHCC (EOL), ASN, Western Canada PD Day, Dialysis, Preceptor, PD Education Day, Flu School, Medication Reconciliation Workshop, Province Wide-Vascular Access Rounds; World Kidney Day Activities: kidney care walk, blood pressure clinics)
NHA	16	6 (CANNT, Northern Health Leadership Forum for Managers, Medication Reconciliation Workshop, Western Canada PD Day, Province Wide-Vascular Access Rounds, World Kidney Day Activities: kidney care walk, blood pressure clinics)
PHC	48	17 (The Canadian Apheresis Group Annual General Meeting, Workshop for Peritoneal Dialysis in Residential Care, 2008 Medbuy Nurses Symposium - Education Strategies to Enhance Patient Outcomes, Peritoneal Dialysis Education Day, Transplant Day, International Society of Peritoneal Dialysis, International Transplant Nurses Society (ITNS) Symposium, MRP Western PD Conference, Expanding our Horizons: Taking Care Home, CANNT, BC Nephrology Days, Canadian Association of Nephrology Social Workers (CANSW), Annual Dialysis Conference, Medication Reconciliation Workshop, Province Wide-Vascular Access Rounds, Western Canada PD Day, World Kidney Day Activities: kidney care walk, blood pressure clinics)
VCH	28	13

		(CANNT, Practice Makes Perfect, Addictions and Mental Health, VCH Ethics, National Forum, 28TH Annual Dialysis Conference, Advanced Skills for Administrative Assistants Level 2, BC Nephrology Days, Personality Disorders in Social Work and Health Care, Pharmacology Update, Medication Reconciliation Workshop, Province Wide-Vascular Access Rounds, Western Canada PD Day, World Kidney Day Activities: kidney care walk, blood pressure clinics)
VIHA	26	8 (End of Life Conference, "Clinical" Nanaimo Days, CANNT, Western Canada PD Day, BC Nephrology Days, Conference of the Canadian Assoc. of Nephrology Social Workers, Medication Reconciliation Workshop, Province Wide-Vascular Access Rounds; World Kidney Day Activities: kidney care walk, blood pressure clinics, information booth)

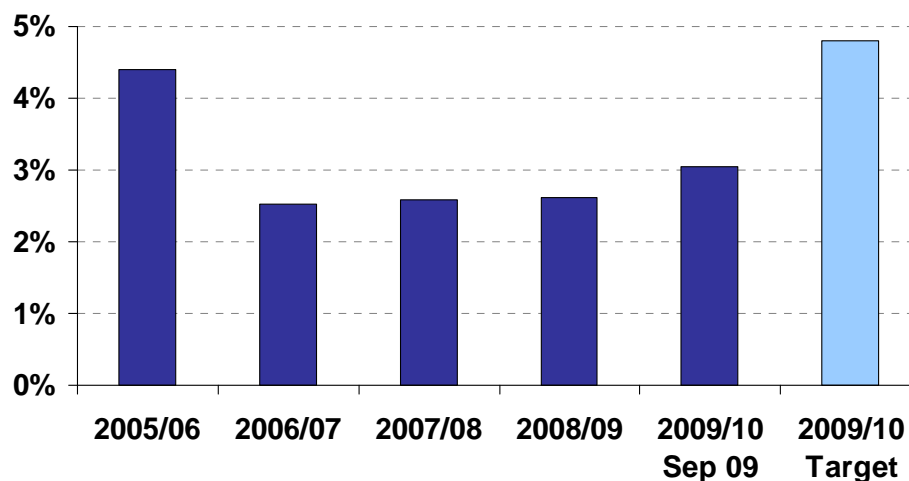
Measure:	List of formal events for health care professionals at the provincial, regional, and institutional levels (as available) reported for the fiscal year (Periods 1-13, 2008/09). Will be updated for the end of the fiscal year 2009/2010.
Limitations:	This measure is obtained through renal programs surveys and depends on their capabilities to track and report educational events.
Significance:	This measure is an indicator of commitment to staff education and growth, and may be correlated to improvements in staff morale, care delivery improvements, etc.
Drivers:	Availability of resources to fund educational activities; commitment of senior administration to ensure education is a priority. Critical mass required to be able to ensure attendance does not interfere with clinical work. Smaller communities may be disadvantaged.
PHSA Target:	> 0.
Benchmarks and Comparators:	Not applicable.
Trend:	In the past year, BCPRA has increased support for educational events.
Comments:	The significant number of events speaks to the value placed on education and knowledge sharing, as well as the vibrancy of the renal care community.
Action Taken:	Continue support and organization of educational events.
Source:	BCPRA Administrative Support; <i>survey of regional educational activities</i> [manual], Babita Basra [producer], Coordinator, Internal Networks, BCPRA; , Gloria Freeborn [reviewer], Director, Communications, Ognjenka Djurdjev [reviewer, distributor], Senior Officer Methodology & Analytics, BC PRA Methodology & Analytics.

LEARNING, GROWTH, AND INNOVATION

Updated: October 2009

Status	Trend	Target	Actual
●	↓	≤4.8%	3.05%

13. Staff Sick Leave as a Percentage of Regular Paid Hours



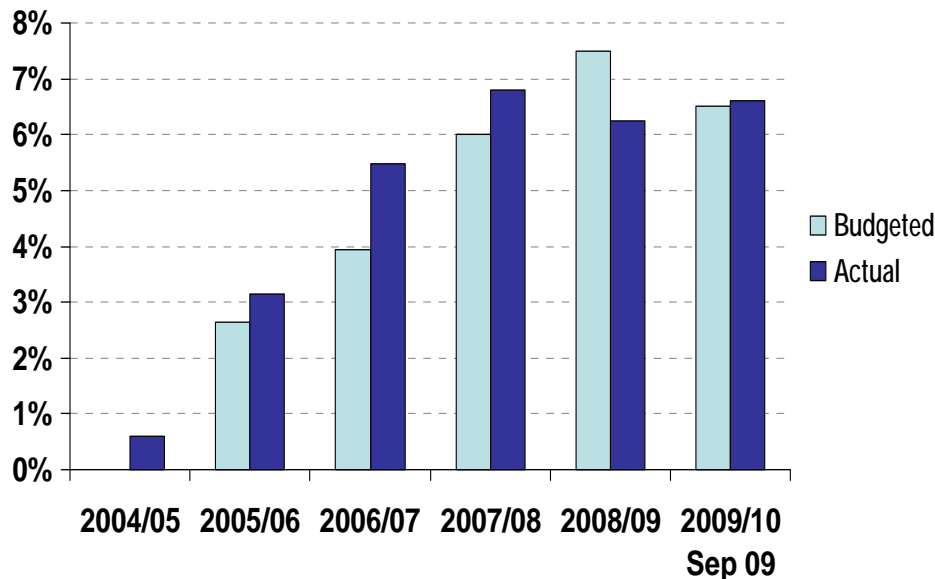
Measure:	Paid staff sick hours as a percentage of regular paid hours (regular hours, stats, vacation, sick & other paid leave).
Limitations:	Due to small staff complement at BCPRA (n=26), a high rate of sick leave by one staff member can skew the overall rate.
Significance:	A measure of staff productivity, morale, and commitment to the organization.
Drivers:	Adequate and appropriate staff resources to support the BC Renal Networks, including BCPRA administrative functions, key business areas (finance, IM/IS) and various committees and working groups; staff morale and recognition.
PHSA Target:	To reduce all sick hours by 10%.
Benchmarks and Comparators:	PHSA rates over time: 2005/06 = 5.40%; 2006/07 = 5.42%; 2007/08 = 4.96%; 2008/09 = 5.16%; 2009/10: PHSA Corporate = 4.80%; BCCDC=3.98%; C&W = 5.50%; BCCA = 3.88%; BCTS = 3.05%; RVH = 8.57%; FPSC = 7.65%.
Trend:	Slight increased since last report, from 2.62 to 3.05%.
Comments:	The current 2009/10 sick leave rate (3.05%) is below the targeted PHSA rate.
Action Taken:	BCPRA continues to provide a supportive and positive environment that fosters commitment and a sense of meaningful contribution.
Source:	Combined payroll reports from Providence Health Care and PHSA HR. PHSA HRTS (Human Resource Technology Solutions) , Peoplesoft-BI Data Warehouse (Extracted October 17, 2009) [computer file and program, manual], Wong, Jeff [producer, reviewer, distributor], Specialist – Workforce Metrics, PHSA Human Resources Technology Solutions.

FINANCE

Updated: October 2009

Status	Trend	Target	Actual
●	→	≥ 6.6%	Q2 Actual 6.6%; Projected 6.5%

14. Non-MoH Revenue as a Percentage of Total Revenues



Measure:	Total Medbuy rebates as a percentage of total revenues (Grant & Rebates).
Limitations:	None.
Significance:	Additional non-MOH revenue reduces overall costs and hence life support funding needs.
Drivers:	Rebates based on actual purchases of medical/surgical supplies and renal medications.
PHSA Target:	2009/10: 6.60%, 5.6% increase from 6.25% for 2008/09.
Benchmarks and Comparators:	2006/07: BCCDC = 1.22%; BCMHS/Riverview = 1.73%; FPSC = 0.33%; BCTS = 0.18%; C&W = 6.67%. <i>[NB: The calculation used by other PHSA agencies is different than that used for BCPRA due to funding differences, so data may not be exactly comparable.]</i>
Trend:	Non-MOH revenues increased slightly from 6.25% to 6.60% due to higher volume
Comments:	Non-MOH revenue includes the Medbuy rebates from provincial contracts for medical/surgical supplies and renal medications. The percentages are based on the MOH grant received at PHSA. The rebates are credited based on expenses incurred by each department (i.e., to each renal unit).
Action Taken:	Ongoing contract monitoring and strategies to increase potential from large contracts currently in place.
Source:	BCPRA Business Planning; PeopleSoft extract with excel transformations [computer files

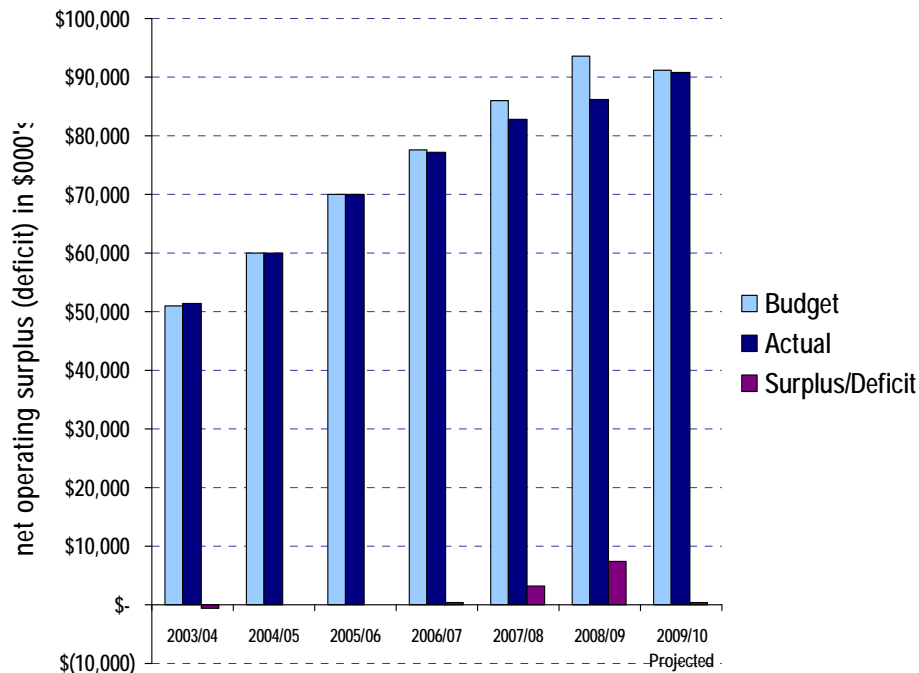
and programs], Eryln Amano [producer], Senior Business Planning Analyst, BCPRA Business Planning; Gloria Freeborn [reviewer], Director, Communications, Ognjenka Djurdjev [reviewer, distributor], Senior Officer Methodology & Analytics, BC PRA Methodology & Analytics.

FINANCE

Updated: October 2009

Status	Trend	Target	Actual
●	↑	≥ \$0	Q2 actual \$930,322 Projected \$335,673

15. Net Budget Surplus (Deficit)



Comments: BCPRA ended the second quarter of 2009/10 with a surplus of 930K despite actual volume being slightly higher than projected. The surplus is due to saving from settlement of some unbilled supplies in prior years as well as favorable variances in administrative expenses.

Action Taken: Continued analysis of funding model and opportunities for fiscal efficiencies and improvements; Of note the funding model was revised in late 2008 to take into account key initiatives (patient safety) and changing patient complexity such that a portion of the projected surplus (due to reduction in numbers of patients) was appropriately used in the funding of patient care related activities. The reduction in growth of dialysis to much below that of the national average (6-8% vs our 3-4%) remains a focus of ongoing review given the consistent trend downward over the last few years, and the potential of renewed increases due to delay but not cessation of progression.

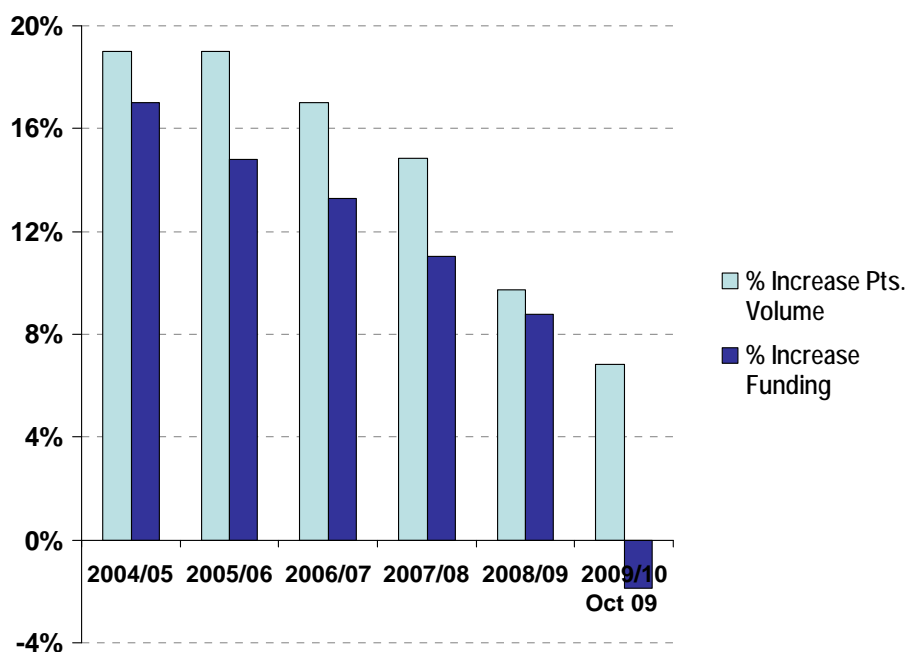
Source: **BCPRA Business Planning;** *PeopleSoft extract with excel transformations* [computer files and programs], Eryln Amano [producer], Senior Business Planning Analyst, BCPRA Business Planning; Gloria Freeborn [reviewer], Director, Communications, Ognjenka Djurdjev [reviewer, distributor], Senior Officer Methodology & Analytics, BC PRA Methodology & Analytics.

FINANCE

Updated: October 2009

Status	Trend	Target	Actual
●	↑	≤11%	Q2 Actual -1.86%; Projected -2.63%

16. Budget Growth Less than Population Growth



- Measure:** Growth in renal patient years compared to growth in renal life support funding per year.
- Limitations:** Variations in patient volumes and case mix from the funded levels.
- Significance:** The ability of BCPRA to offset volume growth by ensuring efficiencies in care delivery is demonstrated by this statistic. Clearly, as each patient incurs substantial costs for the system, the ability to dissociate funding from volume is an indicator of prudent system management as well as capitalizing on non MOH revenue sources like vendor rebates, to offset costs and reduce the need for MOH funding.
- Drivers:** Patient volumes and case mix; fiscal efficiencies.
- PHSA Target:** ≤ 11%. Cost containment while maintaining high quality care.
- Benchmarks and Comparators:** No other healthcare program in BC or Canada has a comparable funding per patient model.
- Trend:** Patient years have continued to increase at a percentage rate higher than the percentage increase in funding – as of Q2 of 09/10, actual growth in patient volume (CKD and dialysis) was 6.83%, while the funding was decreased by 1.86%. Note also that the percent growth in the total population per year is declining. The renal community has worked together to maximize innovation and cost effective patient

care.

- Comments:** The fact that the growth in renal patient years is outpacing the growth in funding illustrates the efficiencies and fiscal responsibility of BCPRA and health authority renal programs. The reduction in total growth may be a reflection of the province wide prevention and early detection activities that have been in place for the last 5-7 years. Given the chronic nature of the condition, approximately 5 years would be required to see the impact of these strategies commenced in full in 2003.
- Action Taken:** Continued analysis of funding model and opportunities for fiscal efficiencies and improvements.
- Source:** **BCPRA Business Planning;** *PeopleSoft extract with excel transformations* [computer files and programs], Eryln Amano [producer], Senior Business Planning Analyst, BCPRA Business Planning; Gloria Freeborn [reviewer], Director, Communications, Ognjenka Djurdjev [reviewer, distributor], Senior Officer Methodology & Analytics, BC PRA Methodology & Analytics.