

New Initiative for Effective Care of Chronic Kidney Disease

With the leadership of the BC Renal Agency, the province's health care community has worked together over the past year on a major initiative designed to reduce the risks of end-stage renal disease and unrecognized impaired kidney function.

"The statistics are disturbing," explains Dr. Adeera Levin, Director of the BC Renal Agency. "We're seeing the emergence of an end-stage renal disease (ESRD) epidemic worldwide, and BC is no exception. Unless we do something now, a huge wave of new ESRD cases will be hitting our health care system in the next few years. Improved early identification and appropriate treatment of chronic kidney disease (CKD) is key to reducing this significant pressure on an already over-burdened system."

BC's new evidence-based initiative focuses on improving identification, evaluation and management of patients with chronic kidney disease.

Many people with chronic kidney disease remain undiagnosed or do not receive appropriate treatment simply due to problems inherent in serum creatinine measurement, the standard blood test for assessing kidney function.

"This test is not sensitive to early kidney damage unless a complex table of age and gender specific reference ranges is used," explains Dr. Michael McNeely, Chairman of the Chemistry Science Section of the BC Association of Laboratory Physicians. "In addition, it is difficult to identify the patient's stage of kidney disease based on their serum creatinine results."

The glomerular filtration rate (GFR) is widely accepted as the best overall measure of kidney function. Equations have been developed that use the patient's serum creatinine, age and gender to provide a mathematical estimate of the true glomerular filtration rate. The estimated GFR (eGFR) provides a standardized measure that is easy to interpret and allows for the staging of kidney disease.

The Chemistry Science Section of the BC Association of Laboratory Physicians has coordinated a project that will see all provincial laboratories providing an eGFR whenever a serum creatinine is ordered for an adult outpatient. In addition, all laboratories will soon be standardizing their serum creatinine measures and their eGFRs.

"BC is the first geographic area in North America to report the eGFR, and the first time anywhere to standardize its serum creatinine measurements," notes Dr. McNeely.

Progression of chronic kidney disease to end-stage renal disease usually takes several years. Through lab reporting of eGFR, BC physicians will be better able to evaluate kidney function and provide appropriate, often simple treatment, at the stage when it will be most effective. "It is important to appreciate that patients with impaired kidney function are at higher risk of cardiovascular disease and the potential consequences of improper drug dosing," notes Dr. Levin. "Using eGFR to detect reduced kidney function will also help physicians and patients ensure that appropriate drug dosing and testing are undertaken."

To help support family physicians and specialists in assessing and treating patients, evidence-based standards of care will soon be available. A new BC clinical practice guideline – *Identification, Evaluation and Management of Patients with Chronic Kidney Disease* – has been developed through the MSP/BCMA Guidelines and Protocols Advisory Committee. This guideline dispels the common belief that very little can be done to slow or prevent the onset of end-stage renal disease by assisting health professionals to better understand the stages of chronic kidney disease. It also highlights opportunities to improve health outcomes for patients through, for example, the use of ACE inhibitors, optimal control of glucose levels, and timely involvement of specialized nephrology teams.

"Treatment of chronic disease is rapidly becoming the cornerstone of family practice," comments Dr. Bill Cavers, General Practitioner, Chronic Kidney Disease Guideline Working Group. "This guideline provides a valuable tool to better coordinate patient care, and to slow or arrest the progression of kidney disease. It has the potential to improve the quality of life for thousands of our patients in this province."

In support of BC's family doctors and patients with chronic kidney disease, renal programs throughout the province have pioneered the development of clinics to assist in patient education, self-management and medical care.

"Early experience strongly suggests that these clinics are performing as expected to slow progression, prevent complications, and delay the need for dialysis in patients with chronic kidney disease," says Dr. Gerry Karr, Nephrologist on the Chronic Kidney Disease Guideline Working Group, and key initiator of the Penticton clinic.

"The demand for dialysis services in BC is expected to increase by eight to ten per cent annually if early kidney disease detection and treatment do not improve," comments Dr. Levin. "In addition to supporting practitioners, we also need to raise awareness about kidney disease among patients."

To help raise awareness, a patient information website on kidney disease has been developed by the Ministry of Health Services. This website describes risk factors, the importance of early detection and treatment, medical intervention, and lifestyle changes aimed at slowing or stopping the progress of kidney disease. A companion patient information guide is also available to practitioners and patients as part of BC's clinical guideline for kidney disease.

Early detection and treatment of kidney disease will also be assisted by a new patient register, jointly developed by the BC Renal Agency and the BC Ministry of Health Services. It will help identify and track patients at all stages of chronic kidney disease, including at-risk populations, through analysis of existing Ministry administrative data.

"The BC Chronic Kidney Disease Initiative is a very comprehensive strategy," comments Dr. Levin. "We'll learn more about what is working well and where improvements are needed as practitioners begin incorporating the components into their clinical process."

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