

# Promise

VOICE OF ST. PAUL'S HOSPITAL FOUNDATION

SPRING/SUMMER 2014



St Paul's Hospital  
FOUNDATION

HIV/AIDS HEALTH  
ECONOMIST

**DR. BOHDAN NOSYK**

AIMS TO IMPROVE THE  
WELL-BEING OF PATIENTS  
AND THE HEALTH CARE  
SYSTEM THAT TREATS THEM

## Strength in Numbers

**ST. PAUL'S GI CLINIC**  
Leading care for  
digestive system  
disorders

**CALLING CODE  
H(ELP)**  
Phone-based help for  
patients & families

**CRACKING THE  
COPD CODE**  
A simple blood test for  
deadly lung disease



# Levels of Impact



**As a world-leading** academic health science centre that treats patients throughout BC, St. Paul's Hospital serves communities on the local, provincial, national and international levels.

We see the importance of these communities during our annual Lights of Hope campaign, which reached new heights this year by raising a record \$2.24-million, thanks to the generosity of thousands of volunteers and donors (page 6).

We look forward to continuing that momentum in 2014 with other community-focused events like the third season of our Strike Out Heart Disease partnership this summer and our second annual Brilliant! fundraiser on September 27.

"Community spirit" is a term that also describes the compassion and care displayed by physicians and staff at St. Paul's Hospital. This issue of *Promise* features a number of examples of this unique "culture of care" at St. Paul's, including

a renowned surgeon whose interest in community has inspired him to share his knowledge with the next generation (page 18) and a unique phone-based service that is part of a movement to involve families more closely in the care of their loved ones (page 16).

These stories demonstrate that, of all the communities we serve, the most important is our community of patients and families who benefit from care, research and teaching at St. Paul's Hospital. Thank you for helping us support them.

David Poole  
Chair, St. Paul's Hospital Foundation  
Management Consultant, Scotiabank

## Game Changers

**Every day, I am privileged** to see how St. Paul's Hospital changes lives in British Columbia and around the world.

We see this impact in areas such as HIV/AIDS, where St. Paul's led the development of the "drug cocktail" HAART and the Treatment as Prevention strategy that is being implemented around the world (page 11). Another area is heart disease, where St. Paul's continues to be a leader in minimally invasive heart valve replacements that may help us realize a world without the need for open heart surgery (page 4).

These initiatives are game changers that are saving lives and changing how society treats and perceives people with these health issues.

This issue features more of these game changers, beginning with our cover story on Dr. Bohdan Nosyk (page 8). Dr. Nosyk is one of the only health economics researchers in Canada to specialize in HIV/AIDS and his research will lead to dramatic improvements for people with HIV and AIDS and the health care system that treats them.

On page 20, we feature our innovative research to create a blood test for "lung attacks" associated with the deadly lung disease COPD, which could have a dramatic effect on patients and the health care system by reducing hospitalization and emergency visits.

On page 7, we look at an innovative project that uses an interactive website to help patients in remote parts of BC self-manage the symptoms of chronic disease and reduce costly hospital visits.

Thank you to everyone who helps make these game-changing projects at St. Paul's Hospital possible. I can't wait to see what innovations lie ahead in the months and years to come.

Dick Vollet  
President and CEO  
St. Paul's Hospital Foundation



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## COVER

### 8 The Next Frontier in HIV/AIDS Care

St. Paul's Hospital CANFAR Chair in HIV/AIDS Research, Dr. Bohdan Nosyk, is turning to data to uncover the most effective ways to deliver care to patients with HIV and AIDS.

BY MELISSA EDWARDS



8

## FEATURES

### 14 Top to Bottom Care

Specialized medical teams and services have made St. Paul's GI Clinic a leading BC centre for digestive system care.

BY MICHELLE HOPKINS

### 16 Calling Code H(elp)

St. Paul's new phone-based health care program connects patients to fast help from a specially trained nurse.

BY GAIL JOHNSON



16

### 18 Vision of the Future

Renowned vitreo-retinal surgeon Dr. William Ross is training Fellows from around the world in sight-saving surgical techniques.

BY JESSICA WERB



20

### 20 Using Genomics to Uncover Deadly Lung Disease

A simple blood test has the potential to improve the diagnosis and care of patients living with COPD.

BY HELENA BRYAN

## DEPARTMENTS

### 2 FROM THE TOP

Level of Impact; Game Changers  
BY DAVID POOLE AND DICK VOLLET

### 4 FRONTLINES

Heart valve replacement milestone; Celebrating 2,000th kidney transplant; iPal App in palliative care; 2013 Lights of Hope update; Calendar of Events; Great Ways to Give

### 7 BREAKTHROUGHS

St. Paul's My Health Connect website helps patients with chronic conditions monitor their health from home.

### 12 PHOTO ESSAY

Revisiting the remarkable journeys of St. Paul's Hospital patients.

### 23 Q&A

Meet accomplished kidney care physician, researcher and mentor Dr. Adeera Levin.

## Historic Milestone in Heart Valve Replacement

In January 2014, a team led by Dr. Anson Cheung and Dr. John Webb of St. Paul's Hospital became the first in the world to implant a state-of-the-art mitral valve in a patient using minimally invasive techniques pioneered at St. Paul's.

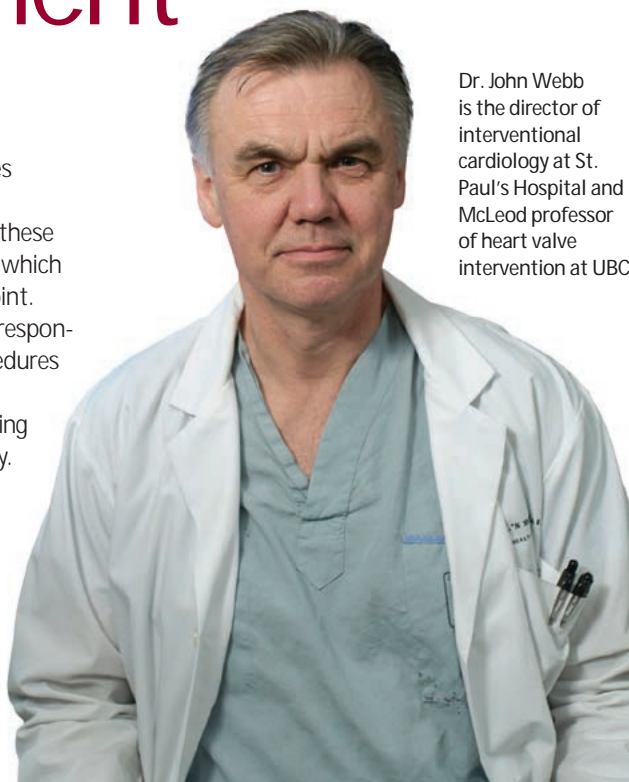
The implantation marks an important step in the development of these procedures, known as transcatheter heart valve (THV) replacements, which have primarily been used to treat diseases of the aortic valve to this point.

THV procedures are used to treat diseased heart valves, which are responsible for directing blood through the chambers of the heart. The procedures involve inserting a replacement valve through a small incision in the body and threading it up an artery to the heart, providing a life-saving alternative for patients for whom open-heart surgery would be too risky.

St. Paul's is internationally renowned as a pioneer of THV and Webb has taught these procedures to health care professionals in more than 25 countries. Webb and St. Paul's continue to develop new breakthroughs, like the use of these procedures to treat mitral valve disease, through the recently created Centre for Heart Valve Innovation.

In 2014, the Centre will perform its 1,000th THV procedure, becoming the first in Canada to reach this milestone.

*More information on these developments will be available at [www.helpstpauls.com](http://www.helpstpauls.com) and in future issues of Promise.*



Dr. John Webb is the director of interventional cardiology at St. Paul's Hospital and McLeod professor of heart valve intervention at UBC.

## St. Paul's Hospital Celebrates 2,000th Kidney Transplant



Dr. David Landsberg is the physician program director and head of the division of nephrology at St. Paul's Hospital.

In 2013, St. Paul's Hospital performed the 2,000th kidney transplant in its history, becoming the first to reach this milestone in British Columbia.

"I was very young when this program began and St. Paul's entrusted me with this and all the patients trusted me," says Dr. David Landsberg, head of the division of nephrology at St. Paul's and head of BC Transplant's provincial renal program. "I thought when we hit a thousand I'd be ready for retirement."

Dr. William Gourlay, surgical director of the Renal Program at St. Paul's, personally performed more than half of the transplants over the last 27 years.

"I'm both humbled and inspired by the people who have donated – in particular the living kidney donors who display such personal strength and courage," says Gourlay. "You can't do a transplant, let alone 2,000, without a lot of people all working towards the same goal, and our program is very fortunate to have such a dedicated team of nurses, physicians, social workers and many other health care staff."

*To learn how you can support kidney care, research and teaching at St. Paul's, please contact St. Paul's Hospital Foundation at 604-682-8206 or visit [www.helpstpauls.com](http://www.helpstpauls.com).*



# iPal App Dials in Palliative Care

**Doctors and sta** treating palliative care patients have a new tech tool – created by sta at St. Paul’s Hospital – called the iPal Mobile App, which is designed to help them provide better care to patients with incurable disease.

“It’s an educational tool for clinicians,” says Dr. Romyne Gallagher, head of the Division of Palliative Care with the Department of Community and Family Medicine at St. Paul’s, “but we’re hoping that patients and their families will get better communication, along with a better understanding of their condition and treatment options, thanks to the information available to clinicians through iPal.”

The web-based app ([www.ipalapp.com](http://www.ipalapp.com)) can be accessed online and downloaded onto a smart phone by caregivers anywhere in the world. It provides quick and easy-to-find tips on how to manage a patient’s condition, assess symptoms and discuss care

options. There is also a hotline number available through the app that caregivers can call for further assistance.

“One of the problems we encounter is that physicians often do not have enough experience to manage patient symptoms, such as pain and shortness of breath,” says Dr. Gil Kimel, a palliative medicine specialist at St. Paul’s and a member of the Palliative Care team at St. Paul’s, which provides palliative care services to patients with chronic illness. “Dr. Gallagher recognized this and created iPal to make it easier to find information about how to manage symptoms in patients that have serious disease.”

By improving the delivery of palliative care, you can also improve patient outcomes, Gallagher says.

“Palliative care can actually lengthen life because you can control symptoms,” says Gallagher. “You can help people cope with their



Dr. Romyne Gallagher (above) is the head of the Division of Palliative Care at St. Paul’s.

illness and improve their quality of life.”

Since the official launch of iPal in September 2013, the app has received thousands of visits from health care providers and caregivers in Canada and other countries, including the US, the Netherlands, India and the UK. Gallagher hopes to soon have an updated version of iPal

online that makes even more information available at the fingertips of caregivers at St. Paul’s and elsewhere.

*To learn how to support palliative care, research and teaching at St. Paul’s Hospital, please contact St. Paul’s Hospital Foundation at 604-682-8206 or visit [www.helpstpauls.com](http://www.helpstpauls.com).*



Gallagher (left centre) shows two residents how to access clinical information using the iPal Mobile App, which is accessible to care providers and caregivers online.

## 2013 Lights of Hope Campaign

**Donors to the 2013 Lights of Hope** campaign raised a record \$2.4-million for St. Paul's Hospital's greatest needs. Thank you to the many members of the public, the business community and the St. Paul's Hospital family who showed their support

for world-leading care, research and teaching at St. Paul's Hospital.

*Please visit [www.helpstpauls.com](http://www.helpstpauls.com) to learn more about how your support makes a difference.*



The 2013 Lights of Hope campaign launched with a Community Celebration that brought out thousands to see the display lit for the first time.

## CALENDAR OF EVENTS



### Vancouver Canadians Scotiabank Night

Thursday, August 14, 2014  
[www.helpstpauls.com/events/strike-out-heart-disease](http://www.helpstpauls.com/events/strike-out-heart-disease)

### Brilliant!

Saturday, September 27, 2014  
[www.helpstpauls.com/events/brilliant](http://www.helpstpauls.com/events/brilliant)

## Great Ways to Give

### If you would like to help

St. Paul's, please use the enclosed form or consider giving in the following ways:

**1 Monthly donations**  
 Automatic payments from your credit card or bank account are convenient and save the time and money required to mail in donations.

**Honour a loved one**  
 Make a gift in honour of a family member, friend or doctor to celebrate their accomplishments, their memory or a milestone occasion such as a birthday or wedding.

**Securities**  
 Donating publicly-traded securities, especially if they contain capital gains, may allow you to make a charitable gift and take advantage of special tax-saving provisions.

**q Will and estate gifts**  
 Plan for a future gift in your will or in some other way, such as life insurance, an RRSP, an RRIF or a trust.

### To learn more, contact us:

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 Web: [www.helpstpauls.com](http://www.helpstpauls.com)



# My Health Connect

A new interactive website ensures that help for patients is just a click away



**DR. SCOTT LEAR**, the Pfizer/Heart and Stroke Foundation Chair in Cardiovascular Prevention Research at St. Paul's Hospital

Chair in Cardiovascular Prevention Research at St. Paul's Hospital and an internationally renowned expert on internet-delivered care, developed the My Health Connect program to enable health care providers to treat isolated patients with two or more chronic conditions, such as diabetes, or heart, kidney or

lung disease. Patients can perform self-care in the comfort of their home while still under the watchful eye of a nurse.

Thanks to an innovative pilot project led by a St. Paul's Hospital researcher, patients in remote parts of BC may be able to cut down on costly hospital visits by using an interactive website to manage their symptoms from home.

Dr. Scott Lear, the Pfizer/Heart and Stroke Foundation Chair in Cardiovascular Prevention Research at St. Paul's Hospital and an internationally renowned expert on internet-delivered care, developed the My Health Connect program to enable health care providers to treat isolated patients with two or more chronic conditions, such as diabetes, or heart, kidney or

lung disease. Patients can perform self-care in the comfort of their home while still under the watchful eye of a nurse.

"My Health Connect is unique in that it is monitored by a nurse and involves family physicians as well," says Lear. "Knowing that there is someone there that they can talk to keeps patients accountable to the program and able to manage their conditions from home."

Patients involved in the pilot research program – one of the first of its kind in Canada – regularly fill out a questionnaire through the My Health Connect web portal. If the information entered triggers an alert, a nurse at St. Paul's calls the patient to address the potential issue or concern.

"The idea is to provide a nurse with an early warning symptom alert system, as well as support patient self-management in their homes," says Lear. "We anticipate that My Health Connect will help identify problems

early on to prevent a worsening of a patient's symptoms down the line."

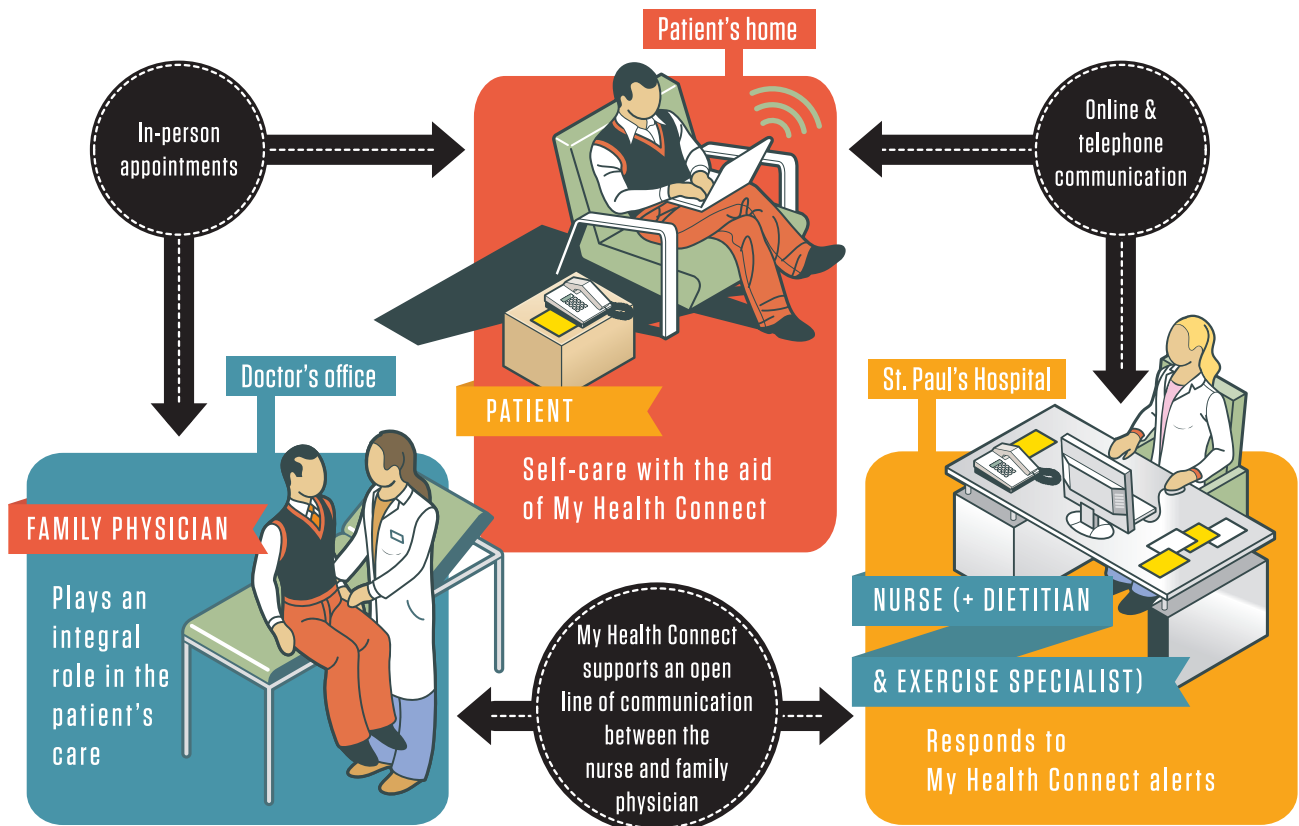
Since the study was launched in 2011, hundreds of patients have either completed or participated in the study, and more than 100 family physicians throughout BC are actively involved. If the pilot project is proven to be effective, Lear hopes to see My Health Connect and web-based programs like it launched on a larger scale, providing better access to care for more patients in remote parts of BC and around the world.

## THE COST OF CHRONIC DISEASE

More than 40% of Canadian adults have a chronic disease

75% of seniors have a chronic disease

Patients with chronic disease use 2x the health resources of the average adult






A portrait of a man with dark, wavy hair, wearing a grey suit jacket over a light blue and white checkered shirt. He is smiling slightly and looking towards the camera. The background is a blurred office environment with green cubicle walls and computer monitors.

# The Next Front in HIV/AIDS Care





Dr. Bohdan Nosyk, St. Paul's Hospital CANFAR Chair in HIV/AIDS Research, is engaged in research that will play a key role in ensuring that people living with HIV continue to receive the right treatment to meet their needs.

## Health economics researcher Dr. Bohdan Nosyk is uncovering the most effective ways to deliver care to patients with HIV/AIDS

By Melissa Edwards • Photography Brian Smith

**A**s the complexity of health and social needs in our province grows, so too does the need to find ways to improve the well-being of patients and the health care programs that treat them. Enter the emerging field of health economics research, which is the latest frontier being pursued by the BC Centre for Excellence in HIV/AIDS (BC-CfE) at St. Paul's Hospital in its battle to stop HIV and AIDS.

### MORE THAN NUMBER CRUNCHING

In February 2014, health economist Dr. Bohdan Nosyk was announced as the St. Paul's Hospital CANFAR Chair in HIV/AIDS Research. This \$3-million endowed research chair – a partnership between the Faculty of Health Sciences at Simon Fraser University (SFU), St. Paul's Hospital Foundation and the BC-CfE – will focus on maximizing the effectiveness of health care programs designed to treat patients with HIV and AIDS.

Nosyk first worked at St. Paul's Hospital as a researcher 10 years ago and found himself inspired by the hospital's dedication to treating and understanding the related diseases of HIV/AIDS and addiction.

"St. Paul's has been the epicentre of HIV/AIDS treatment since the beginning of the epidemic, starting with people like Julio Montaner, Michael O'Shaughnessy, Martin Schechter and James Hogg," says Nosyk.

Now, Nosyk comes to the BC-CfE with a unique expertise that will help in the pursuit to stop the HIV/AIDS epidemic. Nosyk, who

is also an associate professor at SFU, is one of the country's only health economists to specialize in HIV, AIDS and related conditions, such as illicit drug dependence and viral hepatitis.

While the term "health economics" may lead some to believe that research in this area will focus purely on cost and dollars, Nosyk points out that this field of study actually requires a holistic perspective that incorporates an analysis of health care spending and resources; patient disease progression and outcomes; and the knowledge and experience of physicians and support workers on the front lines.

"Really, it's about value for money," says Nosyk. "You want to allocate your money to something that buys you the greatest health gains for every dollar you spend."

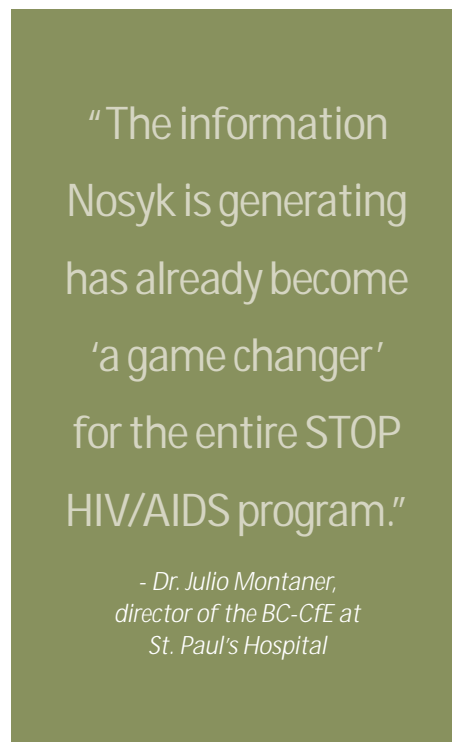
### THE CASCADE OF CARE

Nosyk's research will play an essential role in helping the BC-CfE ensure that people living with HIV continue to receive the treatment they need as their life expectancy improves.

Years ago, a diagnosis of HIV was considered a death sentence. Today, with proper treatment, people with HIV have a life expectancy equivalent to that of the general population, thanks to BC-CfE-led breakthroughs such as the internationally recognized Treatment as Prevention strategy, which involves widespread HIV testing and the immediate offer of highly active antiretroviral therapy (HAART) to people living with HIV. This treatment has been shown to virtually eliminate the progression of the disease to AIDS and premature death, and to simultaneously stop transmission of the virus.

However, with this increasing life expectancy comes additional considerations to which our health care system will need to adapt. The trajectory of an HIV patient can be longer and more complicated because the disease is usually contracted earlier in life than other chronic diseases – and with any lengthy course of treatment lies the threat that patients may drop out of their treatment program.

Nosyk is analyzing this health issue using a modelling tool called the Cascade of Care, which outlines seven stages of potential treatment and is used to visualize where treatment rates tend to decline, determine



causes for these declines and recommend solutions to address them.

"There are people who drop out of the health care system at each stage, and there is

a different intervention for people who leave the system at each stage," says Nosyk.

The end goal, he says, is to ensure that every person who is HIV-positive is diag-





nosed, and then receives effective and continual treatment to improve his or her health and lower the risk of passing on the disease.

“It’s the most important thing that we’re doing right now, and we think it’s going to make a huge difference,” says Nosyk. “We’re just scraping the surface of what can be done in this arena. There are some exciting times coming in the next 10 or 20 years.”

## EPICENTRE OF HIV/AIDS AND ADDICTION

Nosyk’s work will be integrated closely with key BC-CfE programs such as STOP HIV/AIDS (Seek and Treat for Optimal Prevention of HIV/AIDS). STOP HIV/AIDS is an initiative that aims to identify individuals who are vulnerable, underserved and at high-risk of HIV infection – such as sex workers and injection drug users residing in Vancouver’s Downtown Eastside – with the intention of testing and treating them for HIV and AIDS.

Dr. Julio Montaner, director of the BC-CfE, says the information Nosyk is generating has already become “a game changer” for the entire STOP HIV/AIDS program. By analyzing how people are accessing care and where they are dropping out of the system, Nosyk is allowing the BC-CfE and its partners to understand what programs and policies offer the most return on investment from a patient perspective. His research is also demonstrating that preventing the transmission of HIV/AIDS through Treatment as Prevention protocols is a sound financial investment for our health care system as a whole.

“At a time in which we are operating with constrained resources, it becomes incredibly important to fully understand not just the health impact, the individual impact and the societal impact, but also the cost effectiveness and the return on investment of a particular strategy or program,” says Montaner.

The St. Paul’s Hospital CANFAR Chair in HIV/AIDS Research was funded by SFU and donors to St. Paul’s Hospital Foundation, including the Canadian Foundation for AIDS Research (CANFAR) and attendees of St. Paul’s Hospital Foundation’s Brilliant! 2013 fundraiser.

*To learn how to support HIV/AIDS care, research and teaching at St. Paul’s Hospital, please contact St. Paul’s Hospital Foundation at 604-682-8206 or visit [www.helpstpauls.com](http://www.helpstpauls.com).*



Dr. Julio Montaner (centre) meeting with Chinese scientists during an HIV knowledge exchange session in Beijing, China.

## FELLOWSHIPS PART OF GLOBAL EFFORT TO STOP HIV/AIDS

**TREATMENT AS PREVENTION** (TasP), the made-in-BC HIV strategy pioneered by the British Columbia Centre for Excellence in HIV/AIDS (BC-CfE) at St. Paul’s Hospital, continues to build global momentum with the creation of fellowships that will bring scientists from China and Panama to train at St. Paul’s Hospital.

“HIV/AIDS knows no borders,” says Dr. Julio Montaner, director of the BC-CfE. “At the end of the day, we have an obligation to share everything we’ve done for the benefit of programs elsewhere.”

TasP proposes that the transmission of HIV can be halted through widespread HIV testing and the immediate offer of highly active antiretroviral therapy (HAART), the gold standard of HIV medication used to treat people living with HIV.

TasP has been adopted by countries around the world, including China. To support China, the BC-CfE created the HIV Treatment as Prevention Fellowship, funded by St. Paul’s Hospital Foundation, Genome BC and Bob Rennie, to train six Fellows from China at St. Paul’s over the course of three years.

The latest country to embrace TasP is Panama, the first Central American country to do so. In February 2014, Panama’s Ministry of Health and the BC-CfE signed a memorandum of understanding that establishes a collaboration to develop new research and HIV programs, and establish an HIV fellowship program that will allow Panamanian HIV scientists to come to Vancouver to work with BC-CfE researchers and clinicians. The BC-CfE will also provide support in the development and evaluation of Panama’s TasP program.

“I’m very excited to further our work with other nations to ensure Treatment as Prevention is optimally implemented based on the best available scientific evidence,” says Montaner. “This strategy holds the promise of ending HIV and AIDS in our lifetime.” □

# Catching Up

Over the years, *Promise* magazine has shared the stories of many patients and their family members who received life-saving care at St. Paul's Hospital. We revisit some of them and find out how they are doing today:

NOW



Todd Brunel and Connie Pickett with Owen and Olivia

Promise  
Fall/Winter  
2008



THEN



## Twice The Joy

**Born early, at just 33 weeks,** and weighing just four pounds each, Olivia and Owen Brunel were brought to the Variety Neonatal Intensive Care Unit (NICU) at St. Paul's to receive specialized care for premature infants. Today, the five-year-olds are happy and healthy and enjoy playing with their big sister, Ella.

"We're really fortunate that everybody at St. Paul's was highly skilled and took really good care of our kids so that they can be happy and healthy today."

— Connie Pickett and Todd Brunel (Olivia and Owen's parents)



NOW



Lindsay Schneider  
with her son Brayden

# A Heartfelt Gift

**When we met** Lindsay Schneider, she was relying on the psychological services offered at St. Paul's provincial Heart Centre to help cope with anxiety and depression caused by her heart condition. She received her heart transplant in October 2012 and is now anxiety-free and enjoying newfound health and vitality with her son, Brayden.

*"Everyone at St. Paul's was so helpful and got me through it. They're like my second family there."*

– Lindsay Schneider

THEN



Promise  
Fall/Winter  
2012

# A Second Chance

**Jack Cheung** was part of one of the province's first in-centre nocturnal dialysis pilot programs – launched at St. Paul's Hospital – which provides life-saving dialysis treatments to patients overnight as they sleep. After receiving a new kidney in 2011, he is off dialysis and has a new chance at life.

*"Without St. Paul's, I would still be sitting at home and unable to work. I couldn't have asked for anything more."*

– Jack Cheung

NOW



Jack Cheung

Promise  
Fall/Winter  
2011



THEN







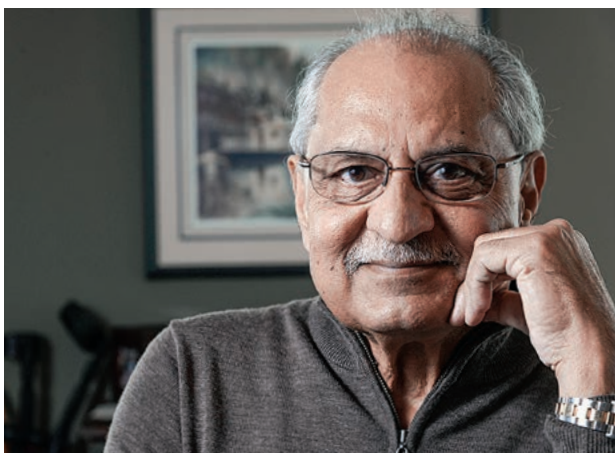
# Top TO Bottom CARE

Specialized medical teams, equipment and services have made St. Paul's Gastro-Intestinal Clinic the leading centre for gastroenterology in BC

Former GI Clinic at St. Paul's Hospital patients Marjorie Brown (above left) and Diamond Kassam (opposite top left) received life-changing care from St. Paul's gastroenterologist Dr. Eric Lam (above). Dr. Robert Enns (opposite right) heads the gastroenterology division at St. Paul's.

By Michelle Hopkins • Photography Brian Smith





**M**arjorie Brown was an avid runner with a thriving career as a labour lawyer. That was until she began to suffer increasingly frequent and severe bouts of hypoglycaemia, which lowered her blood sugar. A sudden loss of consciousness finally launched a battery of tests that revealed a rare tumour on her pancreas.

“As I got sicker, I had to keep juice boxes in my purse at all times to combat the hypoglycaemia,” says Brown, 39.

As her health worsened, Brown was forced to take a leave of absence from work and was eventually admitted to hospital for treatment. Thankfully, her life changed dramatically when she was referred to gastroenterologist Dr. Eric Lam at St. Paul’s Hospital’s Gastro-Intestinal (GI) Clinic, a leading provincial referral centre for patients with digestive system disorders, along with colorectal cancer detection and surgery.

“Marjorie was diagnosed with a very rare pancreatic tumour,” says Lam, who uses the high-resolution images produced by an endoscopic ultrasound to mark lesions. “In Marjorie’s case, when I found her tumour, I injected charcoal dye from a needle into the tumour so that her surgeon could locate and remove it.”

Lam is a leading expert in an innovative, cutting-edge method that involves using an endoscopic ultrasound – used to obtain information about the digestive tract and surrounding tissue and organs – to pinpoint and “tattoo” tumours so surgeons can quickly find and remove them.

Thanks to Lam, Brown regained her health, returned to running and went back to work. Now battling breast cancer, she credits Lam and GI Clinic staff with giving her the strength to take on this new challenge.

## COMPREHENSIVE GI CENTRE

The GI Clinic at St. Paul’s Hospital is the top GI treatment and care centre in the province. Here, GI physicians and staff treat patients affected by a range of complex GI disorders, including esophageal or colon cancer, reflux disorders, liver disease, inflammatory bowel disease, Crohn’s disease and ulcerative colitis. In addition, the GI program offers specialized diagnostic procedures not available anywhere else in BC.

The GI Clinic performs more than 9,000 diagnostic tests and 11,000 procedures each year to treat the full spectrum of GI diseases. On top of their clinical work, all 10 gastroenterologists at St. Paul’s GI Clinic volunteer their time to research. As one of the largest academic sites for GI research in Canada, the GI Clinic conducts ongoing clinical trials and research studies, as well as provides invaluable training to 24 internal medicine residents and five GI fellows per year.

“Roughly 25 per cent of our time is spent researching new medications, educating patients regarding the management of their chronic disease and initiating new studies aimed at improving patient outcomes,” says Dr. Robert Enns, division head of gastroenterology at St. Paul’s. “In our Clinic, we see in-patients, outpatients and emergency cases, many of whom come from other BC hospitals.”

One recent patient is 67-year-old Diamond Kassam, who was referred to St. Paul’s after the majority of his stomach was removed to treat his stomach cancer.

Before surgery, Kassam was sent to Lam, who examined and placed a tattoo on the tumour to make it more visible during surgery.

Kassam experienced some post-surgery complications and was again sent to see Lam, who used stents and clipping to stop internal

leaking in his intestines. The procedures performed by Lam spared Kassam from having to undergo another surgery and his stomach cancer is now 100 per cent gone without him ever having to undergo chemotherapy.

“Dr. Lam and all the staff at the GI Clinic were absolutely fantastic,” says Kassam. “I have been to hospitals many times in my life and these are the best and the most professional people I have ever met.”

## MEETING A DEMAND THROUGH EXCEPTIONAL CARE

In order for the GI Clinic at St. Paul’s to continue to deliver a high standard of exceptional patient care, it needs help to finance upgrades to the Clinic, new specialized equipment and additional nursing support. The high volume of patients that receive care at St. Paul’s GI Clinic each year puts demands on both the facilities and equipment, making upgrades an important and ongoing concern for doctors and staff at the Clinic.

“Without the expertise and specialized equipment we have here at the St. Paul’s GI Clinic, more patients would die,” says Lam, “or at the very least be subjected to more invasive and painful treatments.”

“Every year, technology improves and standards of care increase,” adds Enns, who emphasizes the importance of keeping the Clinic ahead of the technological curve in order to meet the needs of a growing case load of patients. “We can only keep up with demand if we have the vital equipment we need.”

*To learn about how you can support care, research and teaching at St. Paul’s Hospital’s GI Clinic, please call St. Paul’s Hospital Foundation at 604-682-8206 or visit [www.helpstpauls.com](http://www.helpstpauls.com).*

# Calling Code H(elp)

Patients and their families are getting fast help from a nurse mentor thanks to St. Paul's leading-edge telephone hotline

by Gail Johnson

**S**t. Paul's Hospital has always provided multiple access points to care for patients and their families, and a free 24/7 phone-based service called Code H(elp) is expanding that circle of care even further. The new program links patients and family members, like Lindsay Wells and his partner, Bill Crozier, directly to a nurse who responds to their questions or concerns.

## DIRECT LINE TO HELP

Wells and Crozier have been together for almost 30 years. During that time, Crozier has endured frequent hospitalizations for a chronic condition called polycystic kidney disease, in which clusters of cysts form on his kidneys and elsewhere in his body.

The condition has weakened Crozier's immune system making him susceptible to serious and even life-threatening infections. Last fall, it was just such an episode that landed him in St. Paul's Hospital.

Wells has been at Crozier's side during many of his partner's hospitalizations and wanted to be more involved in his care at St. Paul's.

"I'm not a doctor, but I'm an expert in Bill's life," says Wells. "When he comes into the hospital, his file is so thick that, for doctors, finding a certain piece of information is like finding a needle in a haystack. I can help them find that needle. I want to be treated as part of the team."

When Wells noticed a placard at Crozier's bedside for the new Code H program, he called the number and was connected to a critical resource nurse (CRN), also called a nurse mentor. CRNs have experience in critical, emergency and clinical care, act as mentors to other nurses and have exceptional communication skills.







St. Paul's Hospital nurse mentor Cheryl McDonald.

Cindy Elliott (left) and Shannon Chutsko (right) see first-hand how Code H makes it possible for patients and their families to quickly connect with a nurse at St. Paul's Hospital.



The CRN that responded to Wells' call set up an in-person meeting to discuss his concerns in greater detail and also arranged a meeting with Crozier's doctors. Wells says he was deeply impressed by how quickly and compassionately the Code H nurse was able to address his concerns.

"She [the CRN] heard me and listened to me," says Wells. "I needed someone to recognize I have knowledge. I needed to be put on the team, and I was."

### CODE H CARE CONTINUUM

Launched in March 2013, Code H is an additional safety net established to ensure that patients receive the best-possible treatment. It's designed to give patients and their families another information resource beyond their immediate team of nurses and doctors. Patients and family members can call Code H if they feel confused about the treatment plan, have noticed a medical change that's not being addressed or sense that a matter isn't getting the attention it needs.

"If patients are concerned about the care they're getting or their questions aren't being answered, they can pick up the phone and call," explains Shannon Chutskoff, operations leader for medicine at St. Paul's. "It gives patients greater opportunity to ask questions and have their concerns addressed in a timely fashion."

The program is part of a broad shift within St. Paul's that more actively promotes and supports family presence in the care of loved ones.

"One of our initiatives is to be more family- and patient-centred," says Cindy Elliott, practice consultant for professional practice and nursing at St. Paul's. "It's about really bringing them in to be part of team – to guide care."

"We know that the care being delivered [at St. Paul's] is good and that patients and families are communicating with their direct team, but this [Code H] provides another way to communicate if they need to. It's a way to help patients navigate the system when they feel they can't. It's like a safety net."

### SUCCESSFUL INITIATIVE

Code H is a project developed with assistance from the RBC Leadership Program for Nursing Innovation, which was established by a \$1-million gift from the RBC Foundation to St. Paul's Hospital Foundation in 2009. The program provides support for the Mentor Team made up of CRNs who respond to Code H calls.

In the short time it has existed, Code H has garnered significant attention. In 2014, it will be showcased in forums locally and as far away as the British Medical Journal International Forum on Quality and Safety in Healthcare, taking place in Paris.

Since the program's inception, call volume to Code H has been low – a testament to the high quality of care provided by physicians and staff at St. Paul's. However, if they need it, patients and their families can feel confident that help is always just a phone call away.

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Renowned vitreo-retinal surgeon Dr. William Ross is training Fellows from around the world in sight-saving surgical techniques

by Jessica Werb



# Vision for the Future

When Dr. Chandra Balaratnasingam was looking for an opportunity to advance his skills, the young Perth, Australia-based vitreo-retinal surgeon had no doubts as to his ideal placement: the William H. Ross Fellowship in Vitreo-Retinal Excellence, administered by St. Paul's Hospital's celebrated vitreo-retinal surgeon Dr. William Ross.

"This fellowship is world-renowned," says the 35-year-old Balaratnasingam, whose year-long Fellowship at St. Paul's in Vancouver began last July. "It is very well known because it gives you broad exposure to just about all the different surgical techniques related to the retina of the eye."

So far, he says, "everyone I work with is a very good teacher and they're very skilled surgeons. I'm very happy."

Balaratnasingam is the fifth physician to be awarded the Ross Fellowship since its creation

in 2009 through a \$1.375-million commitment from The Gwyn Morgan and Patricia Trotter Foundation to support 25 Fellows over 25 years.

Morgan, former president and CEO of EnCana Corporation, decided to fund the Fellowship after Ross saved the sight in Morgan's one good eye; Morgan had previously lost the sight in his right eye in a 1995 surfing accident.

"Once I got to know what Dr. Ross had been doing over much of his career – in other words, training other ophthalmologists, especially retinal specialists – I realized his dedication to leaving a legacy of training," says Morgan. "He is at the very leading edge of expertise in the field, and that was something really important to support."

## PAYING IT FORWARD

Ross was so moved by Gwyn Morgan's generosity that he felt compelled to make a sim-

ilar gesture of his own. This past year, he established the Morris and Sarah Ross International Fellowship in Vitreo-Retinal Surgery, named after his parents. This Fellowship funds one to two years of post-residency vitreo-retinal training in Canada, the US or Australia for ophthalmologists from developing countries.

"This is based on Gwyn Morgan's leadership," says Ross. "I wanted to bring our expertise, not just to North America and Australia, but to developing countries."

An important part of the criteria for this Fellowship, Ross stresses, is that the selected candidates commit to return to work in their native country for a minimum of five years, and be involved in teaching ophthalmology to medical students and residents, as well as be involved in research. That way, the expert knowledge they gain through the Fellowship will be practised and shared in





(left) Dr. William Ross with William H. Ross Fellow in Vitreo-Retinal Excellence Dr. Chandra Balaratnasingam.



(left) Morris and Sarah Ross Fellow in Vitreo-Retinal Surgery Dr. Tareq Jaouni with Dr. William Ross in Jerusalem, Israel.

their native countries, Ross adds.

Ross has already selected two Fellows from Israel. This year's Fellow, Dr. Tareq Jaouni, is training at the University of Ottawa and will be the first Arab Israeli vitreo-retinal surgeon working in Israel once his Fellowship is complete. Ross has also visited Bhutan and India to research potential future Fellows.

## SURGICAL PIONEER

On top of the valuable training he is receiving through the William H. Ross Fellowship in

Vitreo-Retinal Excellence, Balaratnasingam was keen to work with Ross to learn from a pioneer in leading vitreo-retinal procedures, including one to repair detached retinas.

Ultimately, he says, "I feel that I'll be very well trained after this Fellowship and proficient in retinal surgical procedures. This gives you everything."

*To learn how to support vitreo-retinal surgical excellence at St. Paul's Hospital, please contact St. Paul's Hospital Foundation at 604-682-8206 or visit [www.helpstpauls.com](http://www.helpstpauls.com).*

## WORLDWIDE BENEFIT

The global alumni of the William H. Ross Fellowship in Vitreo-Retinal Excellence have all gone on to make important contributions to health care and training. The graphic below shows the year the Fellows received their training and where they are practising now.



**Dr. Andrew Kirker** (2009) the inaugural Ross Fellow came from the University of British Columbia (UBC) and is now a clinical assistant professor with UBC's Ophthalmology Department in Vancouver.



**Dr. Adrian Fung** (2010) came from Sydney Eye Hospital and is now practising in Sydney, Australia, where he lectures at the University of Sydney and Macquarie University.



**Dr. Ketan Laud** (2011) came from Columbia University and is now teaching at his alma mater, conducting important research and practising in New York City.



**Dr. Serge Bourgault** (2012) came from Quebec City and is now teaching at his alma mater, the Université Laval, and practising at Hôpital du Saint-Sacrement.



**Dr. Chandra Balaratnasingam** (2013) intends to continue training before returning to Perth, Australia, as a retinal specialist and lecturer. □



# Using Genomics to Uncover Deadly Lung Disease

New research is aimed at improving treatments  
and outcomes for people with COPD

By Helena Bryan • Photography Brian Smith



**J**erry Sandbrand was 58 when he learned he had only 20 per cent lung function due to COPD (chronic obstructive pulmonary disease), an incurable and deadly disorder that infames the lungs and cuts off breathing.

The former Vancouver dentist credits exercise therapy for keeping his lung deterioration at bay.

“Exercise has changed my life,” he says. “I take my medicine, go to the gym three to four times a week and walk the stairs two to three times a week. I’m 73 years old and I feel good.”

Still, Sandbrand acknowledges that if he’d known earlier about COPD, he might never have taken up smoking in his 20s, and he would have started exercise therapy a lot sooner – before he lost most of his lung function.

That’s where the work of Dr. Don Sin and Dr. Raymond Ng of St. Paul’s Hospital, UBC and the PROOF Centre of Excellence enter the picture. Sin and Ng are currently working on developing simple blood tests that will

diagnose COPD earlier, as well as detect when patients are at high-risk for the lung attacks that lead to emergency visits and hospital stays. These much-needed tests will vastly improve COPD treatment for future patients, as well as save significant health care dollars.

### **THE IMPACT OF A WIDELY UNDIAGNOSED CONDITION**

Statistics Canada reports that COPD is the fourth-leading cause of death in the country and the number-one cause of hospital admissions. On average, patients remain in hospital for 10 days at a cost of \$10,000 per patient, with the total annual cost of such hospitalizations estimated to be more than \$2 billion.

Part of the problem, says Sin, is that while COPD is characterized by shortness of breath, coughing and phlegm production, the underlying changes to the lungs begin many years before patients begin to experience symptoms: “And right now there’s no effective

The research team is using genomics to find early indicators of COPD in patients using a simple blood test.

Jerry Sandbrand (opposite) is one of many patients who would have benefited from an early COPD diagnostic blood test being developed by Dr. Don Sin (below) and his team.





Andrew Wozney's gift of lung tissue to the HLI at St. Paul's could lead to new approaches to diagnose and treat deadly lung disease.

## A GIFT TO ADVANCE CARE THROUGH RESEARCH

**Research is as much** about solving mysteries as it is about science. That's certainly true of the COPD studies underway at the Centre for Heart Lung Innovation (HLI) at St. Paul's Hospital. Here, scientists are trying to better understand the mystery of a genetic disorder known as COPD (chronic obstructive pulmonary disease). And Andrew Wozney is helping them unravel it.

The Kitimat resident, who has never smoked, had experienced years of declining lung function, losing more than 50 per cent by the time he graduated from high school. When he was diagnosed with COPD at age 40, his lung function was down to 10 per cent, forcing him to use a portable oxygen concentrator, nicknamed R2D2, for most activities.

"I had to plan for every outing and meter out my activities during the day," he says. "It took 40 minutes to have a shower, and even tying my shoes was difficult."

After a battery of tests at St. Paul's Respiratory Division and ongoing drug therapy that maximized his lung function to 15 per cent, Wozney was encouraged to think about a lung transplant by St. Paul's respirologist Dr. Don Sin.

Wozney had his transplant on August 24, 2013, and the transformation has been amazing. Less than a year later, his lung function has rocketed to around 80 per cent. He can tie his shoes with little effort and get dressed in mere minutes. Best of all, he's been able to retire R2D2.

As a thank-you for the excellent care he's received at St. Paul's, Wozney donated his lung tissue to the HLI at St. Paul's – a world-leading research facility working to solve the unknowns of heart, lung and blood vessel diseases. He hopes the gift will lead to better understanding of accelerated COPD.

"It's a crucial first step," says Sin. "We'll be looking for the molecules or genes that triggered Andrew's disease and we'll use that information to investigate new and better ways of diagnosis and treatment." □



(Left to right) Dr. Brad Popovich of Genome BC; COPD patient Dr. Jerry Sandbrand; Dr. Don Sin of St. Paul's Hospital; and Dick Vollet of St. Paul's Hospital Foundation.

way to identify COPD in the early stages, nor to test disease intensity or activity."

As a result, says Sin, there are many people with COPD who go undiagnosed, and those who are diagnosed all receive the same treatment no matter what stage in the progression of their disease they might be in.

## MOVING TO EARLY DIAGNOSIS AND PERSONALIZED CARE

The research team is using genomics, an innovative field of study in which St. Paul's is a world leader, to find indicators of COPD in patients using a simple blood test. These blood tests will identify patients in the early stages of COPD, so they can receive appropriate therapies sooner and avoid the complications of the later stages of the disease. Further, in already diagnosed COPD patients, the blood tests will signal when patients are at high risk for lung attacks and in need of preventative drugs. At the same time, patients at low risk can avoid unnecessary medicine and their potential side-effects.

Now in its second year, the \$7.2-million research project is being made possible by funding from Genome BC, Genome Canada, the Canadian Institutes of Health Research, the PROOF Centre of Excellence, donors to St. Paul's Hospital Foundation and Genome Quebec.

"This project is all about turning innovative lab observations on COPD into something meaningful to Canadians," says Sin, "and I'm confident we'll have these blood tests available for clinical practice within five years."

That's good news for patients and potential patients alike.

*To learn how to support lung care, research and teaching at St. Paul's Hospital, please contact St. Paul's Hospital Foundation at 604-682-8206 or visit [www.helpstpauls.com](http://www.helpstpauls.com).*



# Dr. Adeera Levin

**Dr. Adeera Levin** is a practising nephrologist and researcher at St. Paul's Hospital and head of the Division of Nephrology (kidney care) at the University of British Columbia. Her accomplishments at the hospital include research with the Centre for Health Evaluation and Outcome Sciences (CHEOS) and founding the Kidney Function Clinic for patients with chronic kidney disease. In addition, she is executive director of the BC Renal Agency, which plans and coordinates health care services for patients with kidney disease in BC. Levin is also president elect for 2015 to 2017 of the International Society of Nephrology – the first Canadian ever elected to this post and only the second woman.

## **What motivated you to study kidney disease?**

It was the combination of the intellectual challenge of the subject and the hope for the patient that really interested me. Training in nephrology seemed to give me a chance to offer a lot to help people get better. There's dialysis for when your kidneys fail, there's transplantation for those who are eligible. It's a complicated condition with lots of causes and the potential for many different treatments.

## **Why did you decide to work at St. Paul's?**

There was an opportunity at St. Paul's to be part of a new clinical and research focus in the Nephrology Department, and I had training in clinical research. So it was a matter of the right place and time, an opportunity and a really supportive community.

## **What are your main areas of research?**

I'm most interested in early kidney disease and the interaction between the kidney and heart disease. I am particularly interested in being able to predict outcomes and delay the progression of kidney and cardiovascular disease.

I'm hoping this research will result in earlier and better identification of high-risk patients. We're also working on tailoring therapies to meet specific patient needs, such as prescribing drug and diet regimens based on a patient's genetic history and other characteristics that are unique to them.

## **Of your many career accomplishments, which are you most proud of?**

Probably that I have developed and contributed to a culture of Canadian research and that I have mentored and had an impact on so many students and current nephrologists locally and across the country. Together we have built excellent clinical care and research activities throughout BC, Canada and internationally.



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