

# Impact

Newsletter

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VGH+  
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foundation

## > Revolutionary new heart procedure pioneered in BC

Dr. David Wood performs Transcatheter Aortic Valve Replacement (TAVR) on a patient.

Affecting millions of people around the world, aortic stenosis is a form of valvular heart disease that occurs when the main valve leading from the heart to the body becomes narrowed. Patients experience a number of progressive symptoms including chest pain, shortness of breath and fainting — and over half will die within one year if the valve is not replaced.

Surgical aortic valve replacement has traditionally been the gold standard. However, it requires the surgeon to cut through the breastbone while the patient is under general anesthesia, stop the heart and replace the existing aortic valve. In elderly high-risk patients, operations usually last several hours and patients often spend over a week in hospital and two to three months recovering at home.

Building on a minimally invasive technique originally pioneered by his colleague Dr. John Webb, Dr. David Wood and his team developed the Vancouver Multidisciplinary, Multimodality but Minimalist (3M) Clinical Pathway for Transcatheter Aortic Valve Replacement (TAVR).

### Home the next day

The procedure involves making a small incision in the thigh, inserting a catheter (a thin, flexible tube) with a new aortic valve up the femoral artery to the heart and replacing the existing diseased valve in approximately 20 minutes while the patient is awake and talking. Patients are walking the same day and usually safely go home the next morning.

### Revolutionary study

In a study developed at the Centre for Heart Valve Innovation (CHVI) in Vancouver, and coordinated by the BC Centre for Improved Cardiovascular Health, the team demonstrated that the Vancouver 3M Clinical Pathway improved patient outcomes and dramatically simplified aortic valve replacement in 411 patients across 13 North American sites.

### Staggering benefits

“The benefits for health authorities around the globe are staggering,” says Dr. Wood. “Without adding additional infrastructure, patients can now be safely treated in existing facilities and go home the next day.”

### Global impact

The team at CHVI, in collaboration with Sandra Lauck — a clinical nurse specialist — are in the process of sharing their technique with other centres in North America and Europe as part of their global “Benchmark” program. They hope the Vancouver 3M Clinical Pathway will eventually become the standard of care for most patients with aortic valve disease.

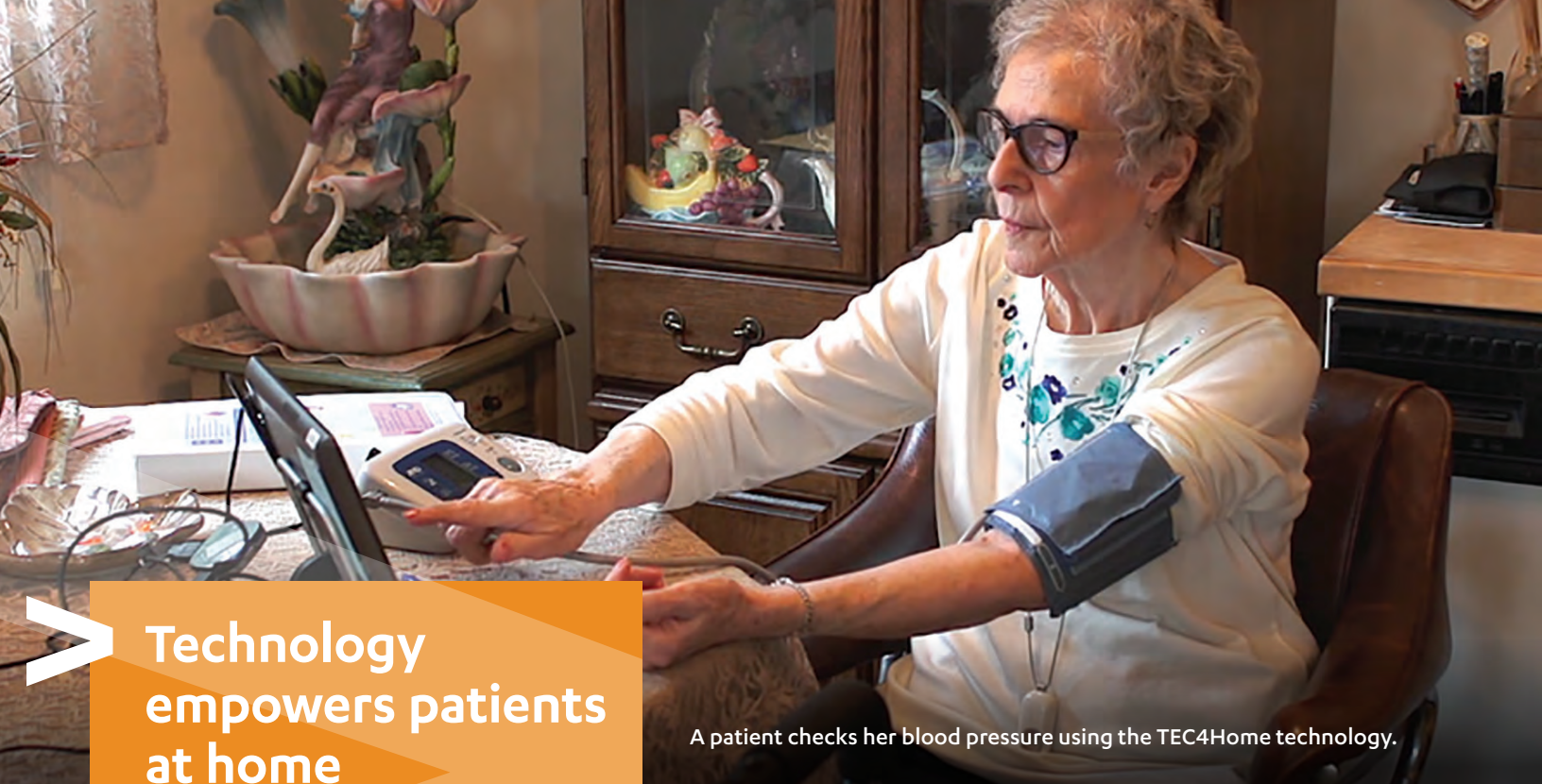
Help doctors like Dr. Wood pioneer innovative procedures like TAVR. Visit [vghfoundation.ca/heartlung](http://vghfoundation.ca/heartlung)

### Aortic valve disease

- The aortic valve is the most important of the four heart valves — it supplies blood to the head, lungs and muscles
- The symptoms of valvular heart disease are angina, palpitations, shortness of breath and swelling
- Mortality rate exceeds 50% at one year if the valve is not replaced once patients develop symptoms

### Benefits of TAVR

- 80% of patients go home the same day
- 90% of patients go home within two days



## Technology empowers patients at home

A patient checks her blood pressure using the TEC4Home technology.

Joanne Grunerud was always painfully out of breath. A persistent tightness had taken over her chest, making it hard to breathe. She had Chronic Obstructive Pulmonary Disease (COPD), a chronic inflammatory lung disease that causes blocked airflow from the lungs.

People with COPD require regular checkups at the hospital to monitor their health. For anyone, these visits to the doctor can be tiring. For a woman in her eighties who has difficulty breathing, those trips are exhausting.

However, thanks to an innovative program called TEC4Home, Joanne does not have to travel to the hospital every week. TEC4Home allows her to perform checkups from the comfort of her own home, sending information via a touchscreen tablet to her doctors and nurses at Vancouver General Hospital.

“It was really beneficial, because it got me into a pattern of checking my health — every day I checked my blood pressure, weighed myself and measured my blood oxygen levels,” she says. “And I didn’t have to go into the hospital for that.”

### The comfort of home

TEC4Home is an empowering, patient-centred, home-health monitoring program designed to help patients transition from hospital to home. With the help of TELUS Health, TEC4Home installs novel technology in a patient’s home that can monitor details of their health such as blood pressure and blood oxygen levels.

“I was always interested in how we can help patients to safely transition from the hospital to the home and how we can monitor them once they are home,” explains Dr. Kendall Ho, who started the program two years ago.

“We have results saying TEC4Home decreases the number of hospital visits and increases the quality of life at home for patients,” he states.

### Lessening the burden

Sadly, the burden of chronic disease is increasing in our community as many patients seek help in emergency rooms (ERs) — this leads to overcrowding in ERs and rising health care costs. TEC4Home lessens this burden, significantly reducing the number of trips to the hospital.

### Looking to grow

More people across the province could benefit from the TEC4Home program. It was recently approved to expand to 22 communities across three health authorities.

“We want to expand this program to help more people like Joanne across the province,” says Dr. Ho. “But we need fundraising dollars to do that.”

Help programs like TEC4Home empower more patients like Joanne. Visit [vghfoundation.ca/innovation](http://vghfoundation.ca/innovation)

### The burden of COPD in Canada

- COPD is the fourth most common cause of hospitalization among men and the sixth most common cause of hospitalization among women
- Approximately 500,000 people over the age of 35 have been diagnosed with COPD
- The annual direct cost of COPD (e.g. diagnosis, hospitalization, emergency room visits) is almost \$2,000 per patient
- Among Canadians aged 35 to 79 years, 4% report having been diagnosed with COPD, chronic bronchitis or emphysema

Sources: Lung.ca and Statistics Canada



A young Jane during her university days at UBC.

## Continuing a family's legacy

In October of 1894, a young family arrived in Vancouver from St. Catharines, Ontario, looking to put down roots and embrace the many opportunities the growing city gave them. With an interest in innovation, businessman John Joseph Banfield, his wife, Harriet, and their children helped build and shape many aspects of the city that are still with us today, including Vancouver General Hospital (VGH).

Known for his dedication to public service, John Joseph served as the Chairman and Director of the Board of VGH for 23 years. As a member of the Women's Auxiliary, Harriet was responsible for raising money for the hospital's first ambulance (she also caused quite a stir by riding the city's first ladies' bicycle). Their son, Orson, followed in his parents' footsteps by serving on the Board of VGH for nearly 30 years. VGH's Banfield Pavilion was named after the family in honour of their contributions.

### A brilliant woman

Growing up in this civic-minded family clearly shaped Orson's daughter, Charlotte Jane Banfield's, incredible path. A brilliant lawyer and political scientist, Jane graduated from UBC, taught at York University in Toronto for 30 years and founded the university's Law and Society program, serving as the school's first advisor on the Status of Women. For many years, she and her brother, John, made donations to support programs, training and equipment at Banfield Pavilion at VGH.

When she passed away in 2016, Jane continued her family's legacy by leaving a generous bequest to the Leslie Diamond Women's Heart Health Clinic at VGH and the Adopt-A-Young-Scientist program for up-and-coming researchers.

### Supporting women's health and research

The Adopt-A-Young Scientist program helps clinician-scientists at the Vancouver Coastal Health Research Institute (VCHRI) build their research and secure additional grants. This unique program allows young clinician-scientists to pursue their research passions to improve patient outcomes in the province.

The Leslie Diamond Women's Heart Health Clinic is the first of its kind to focus not only on prevention and treatment of women at risk of or with heart disease, but also to develop new strategies for diagnosis.

"Heart disease remains the number one killer of women," says Dr. Tara Sedlak, Director of the Leslie Diamond Women's Heart Health Clinic. "With the help of Jane Banfield's generous gift, we are one step further towards helping women in British Columbia live healthier, longer lives."

With her remarkable gift, Jane wrote a new chapter in the history of her family's relationship with VGH. "My family believed in giving back to the community. Contributing time and money to the hospital and many civic organizations was, and is, an important priority," says Carla Banfield, Jane's niece. There is little doubt that Jane's ancestors who helped to build Vancouver would have been delighted to see the family legacy of support continue.

Learn more about [Legacy Giving](https://vghfoundation.ca/legacy) at [vghfoundation.ca/legacy](https://vghfoundation.ca/legacy)

### Help purchase new equipment

Donations to our *Most Urgent Needs* fund helps our health care teams purchase much-needed equipment such as:

**Bronchoscope**  
\$20,460

**Lung separation monitor**  
\$11,420

**Automatic CPR device**  
\$18,520

**Bladder scanner**  
\$16,850

**Long-term ventilator**  
\$19,350

To make a donation, contact:  
**604 875 4676**  
[info@vghfoundation.ca](mailto:info@vghfoundation.ca)

Give online at:  
[vghfoundation.ca/donate](https://vghfoundation.ca/donate)



Dr. John Fleetham is back to riding his bike thanks to two successful surgeries at VGH and UBC Hospital.

Dr. David Wood was inspired by his grandfather's heart disease to become a cardiologist.

## Role reversal for local doctor

For more than 30 years, Dr. John Fleetham has taken care of patients as a dedicated physician at Vancouver General Hospital (VGH) and UBC Hospital. But in the spring of 2016, the roles were reversed when he found himself waiting for surgery to remove a large cyst from his spinal cord.

"I noticed that when I jogged or when I was at the end of a golf game, I was hurting," he recalls. "About three or four months later, I started to develop pain in my back and pain going down my leg."

The cyst was pressing on a nerve and affecting blood flow. VGH surgeon Dr. Marcel Dvorak performed a three-hour operation on Dr. Fleetham with impressive results.

"I was in the hospital for three or four days and off work for a few months while recovering," Dr. Fleetham says. "However, the morning after my surgery, I was able to walk — it was incredible."

Unfortunately, months after the successful spinal surgery, he was diagnosed with arthritis in his left hip and it would need to be replaced at UBC Hospital.

"My recovery was remarkably fast [after hip surgery] and I was back in the office the following week," he says with a smile. "I'm delighted to say I'm back on my bike now too."

He says the positive experiences as a patient were eye-opening. He is reflective of his time in the hospital.

"My recovery from both surgeries has been tremendously successful because I was treated by the right teams and in the right place," he says. "I saw a different side to health care."

To help people like Dr. Fleetham get the surgeries and care they need, visit [vghfoundation.ca/surgery](http://vghfoundation.ca/surgery)

## Behind the scenes with Dr. David Wood

As a passionate interventional and structural cardiologist at Vancouver General Hospital, Dr. David Wood is transforming the way we treat heart disease with the revolutionary Transcatheter Aortic Valve Replacement (TAVR) — see front cover for the full story.

### Where did you grow up?

Vancouver.

### Why are you so passionate about cardiology?

I have always been fascinated by the cardiovascular system. My grandfather suffered from heart disease and thus it was natural for it to become a passion when I began studying medicine.

### What do you find most challenging about your job?

Balancing clinical, research and personal commitments.

### Who or what inspires you?

My patients on a daily basis.

### If you had to pick one last meal before you die, what would that be?

Dinner with family and friends.

To see how you can help passionate physicians like Dr. Wood, visit [vghfoundation.ca/surgery](http://vghfoundation.ca/surgery)