

Community Cardiovascular Hearts in Motion

Reducing risk and saving lives

Since its inception as a research project in 2006, Community Cardiovascular Hearts in Motion has helped more than 2,000 at-risk patients reduce their risk of illness, hospitalization, disability and death from cardiovascular disease. Now a permanent program, Hearts in Motion is developing new ways to involve even more people in its proven approach to prevention.

In 2006, Dr. Nicholas Giacomantonio came up with what was then a radical idea – to run cardiac rehabilitation programs in the community, and to open those programs up to include not only those with established cardiovascular disease, but also to those at high risk of developing of it.

“People used to be introduced to the system by an event, like a heart attack. After some sort of intervention, like a stent or a bypass, they’d be referred to a cardiac rehab program at the hospital, to hopefully prevent another event,” explains Dr. Giacomantonio, a Capital Health cardiologist and professor of medicine at Dalhousie. “The problem is, dropout rates from hospital programs are really high, because there are so many barriers. For many, it’s too far to drive, or the parking is too expensive. We knew we needed to remove those barriers.”

The QEII Foundation provided the initial \$1.5 million that enabled Dr. Giacomantonio and research and program manager Wanda Firth to launch Nova Scotia’s first community-based cardiac rehab program, at accessible locations in Sackville, Dartmouth and Spryfield. They called the program Community Cardiovascular Hearts

in Motion and began taking referrals from family physicians and other health professionals.

Enthusiastic response, impressive results

“Response in the communities was fantastic right from the beginning,” says Ms. Firth. “We ran 2,000 patients through the program from 2006 to 2013, receiving very positive feedback from participants and health professionals and achieving major improvements to participants’ risk-factor profiles.”

Hearts in Motion is a 12-week program that connects people with or at-risk of cardiovascular disease with a team of health professionals who provide them with education, monitoring and support to cut their risk. From supervised exercise sessions to dietary, medication and behaviour-management interventions, the Hearts in Motion team works with participants to set and achieve their risk-reduction goals, and follows up 6 and 12 months later to ensure they’re still on track.

Results have been impressive. At the one-year follow-up of participants with heart disease:

- more than 80 per cent stuck with the program, compared to typical adherence rates of less than 35 per cent for hospital-based cardiac rehab
- 81 per cent reached their blood-pressure targets
- 68 per cent reached their LDL cholesterol targets
- 60 per cent reached their blood-glucose targets
- 47 per cent reached their body-mass index targets

2006

QEII Foundation provides \$1.5 million to launch Community Cardiovascular Hearts in Motion in Sackville, Dartmouth and Spryfield, as a research project.

2006-2013

2,000 participants completed the 12-week program and 6- and 12-month follow-up.

2008

The GASHA (Guysborough Antigonish Strait Health Authority) launches a risk-reduction program modelled on Hearts in Motion (permanently funded in 2013).

2013

A fourth community site opens at the Mumford Professional Centre in west-end Halifax.



Hearts in Motion physiotherapist Sarah Clow, Dr. Nicholas Giacomantonio, and other members of the Hearts in Motion Team, not shown here, supervise participants in weekly exercise sessions designed to build confidence and energy, along with aerobic capacity. The participants all report feeling more energetic, positive and motivated to stay active. (Back, left to right): Peter Eggenjuizen, Dr. Nick Giacomantonio, Ron Mills, Celia Yazer, Sarah Clow; (front): Sharon Cook.

2013

Hearts in Motion presents results to Capital Health management, receives funding to make it a permanent program.

2014

Accreditation Canada awards the program its Innovative Leading Practice Award.

2014

Hearts in Motion joins forces with three other provinces and a N.S. tech firm to develop ACCELERATION, a virtual platform for health behaviour change that will be widely available.

Community Cardiovascular Hearts in Motion (continued)

Becoming a permanent program

The initial research phase of Hearts in Motion showed not only across-the-board reductions in participants' risk factors, it also showed a 33 per cent relative reduction in risk of death for people with established heart disease.

“With such positive results, we knew we had to try to make this a permanent program,” says Dr. Giacomantonio. “The cost of cardiovascular disease in Nova Scotia is so high, in terms of human suffering and loss of life, and in terms of health care resources.”

As Dr. Giacomantonio points out, it costs the system \$1,175 for a person with heart disease to complete the Hearts in Motion program. By comparison, a single-vessel angioplasty runs \$8,000; a double-bypass operation doubles that cost at least.

“When we presented our results to Capital Health management in 2013, they immediately recognized the powerful potential to save lives while saving a tremendous burden on taxpayers and the health care system,” he says. “Our approach was also in line with their vision to care for citizens in their communities... they decided to

make Hearts in Motion a permanently funded program and model of care. Our goal now is to see it rolled out in communities all across the province.”

Accelerating risk reduction

In an effort to help even more people reduce their risk of chronic disease – including cardiovascular disease and cancer – the Hearts in Motion team has joined forces with researchers in Ontario, Quebec and British Columbia. They're working with a Nova Scotia health-tech firm, Kinduct Technologies, to develop and test a digital platform to help people with four key risk behaviours: smoking, inactivity, poor-quality diet, and alcohol consumption. The Canadian Partnership Against Cancer, Heart and Stroke Foundation of Canada and Health Canada are funding the project, called ACCELERATION.

“The idea is to take motivational communication and behaviour-change methods we've proven through Hearts in Motion and put them in a virtual format so large numbers of people benefit,” says Dr. Giacomantonio. “We need to accelerate risk reduction now, to avoid a health catastrophe in the future.”

Capital Health employees take part in a new Hearts in Motion-based program that's helping them cut their risk of chronic disease by learning to prepare healthy, delicious meals. On the right, ACCELERATION dietitians, Maureen Tilley and Mark Rogers.





Registered nurse Peggy Hulan monitors participants' blood pressure while they exercise, to ensure and reassure that the activity level is safe. She is pleased with Sharon Cook's blood pressure reading.



Dr. Nick Giacomantonio and Wanda Firth

This research is:

- *dramatically reducing the full range of risk factors, and risk of death, for people with cardiovascular disease*
- *improving the risk-factor profile and physical fitness of people who were at risk of cardiovascular disease when they started the program (many are no longer at risk)*
- *preventing the need for hundreds of costly, invasive procedures in hospital*
- *helping set Nova Scotia on the right track for a healthier future*