

## **INFORMED CONSENT ARTICLE FOR DEPT OF SURGERY**

### **Informed consent: Cardiac surgery researchers help patients choose the right path**

Depending on their overall health, the decision to undergo valve replacement or coronary artery bypass surgery may not be an obvious one for people over the age of 70.

“Some patients in their late 80s fare extremely well after cardiac surgery. Others—who may be younger but more frail—end up with a prolonged stay in hospital and may need to be discharged to a nursing home rather than their own home,” says Dr. Greg Hirsch, head of the Division of Cardiac Surgery in Dalhousie Medical School’s Department of Surgery. “For many, this would not be an acceptable outcome. Patients really need to understand the potential risks and benefits of surgery.”

In a focus group study in 2012, Dr. Hirsch and his research team found that many prospective cardiac surgery patients do not have a solid understanding of the procedure to which they’re about to consent.

“We found that many people were agreeing to these procedures, without fully understanding the possible consequences,” says research manager, Ryan Gainer. “Most—more than 80 per cent—were satisfied with the information they received but, even so, our research found poor recall and comprehension of that material.”

The researchers secured \$300,000 from the Canadian Institutes of Health Research to develop and test decision aids and a shared decision-making process that engages and empowers patients to make well-informed decisions. In October 2016, they completed a randomized controlled trial involving 200 patients over the age of 65.

“Patients in the intervention group received a personalized risk assessment that showed them, through the use of 10-by-10 dot plots, what their risk out of 100 would be for various adverse events,” says Gainer. “A decision coach spent an hour or more with each patient, discussing the procedure and what they could expect, based on their health and degree of frailty, to ensure they would go into the procedure with their eyes open.”

The vast majority (96 per cent) of patients chose the surgery, but those who received the visual risk profile and decision coaching were less anxious, less depressed, more comfortable and more prepared to deal with a potentially long recovery.

Now the researchers are working with IT experts in the Nova Scotia Health Authority to develop an online version of the decision aids and informed consent process, with funding from a QEII Foundation Translating Research into Care (TRIC) grant.

“We’re going to roll this platform out across Nova Scotia, to start,” says Dr. Hirsch. “Our goal is to involve family doctors and cardiologists—and connect patients who need more decision support with a patient navigator—so that patients can make informed decisions before they even come to Halifax for a dye test or to meet with a surgeon.”

Dr. Hirsch and his team are also working with their colleagues at the New Brunswick Heart Centre, including Dr. Jean-François Légaré and Dr. Ansar Hassan, on a large clinical study to better understand frailty in the context of cardiac surgery and its outcomes. They've received funding from Dalhousie Medical Research Foundation's Molly Appeal to collect and analyze blood, tissues and data from patients over 65 in the Maritimes. One of their aims is to identify potential biomarkers of frailty.

“We need to get better at quantifying our patients' degree of frailty, so we can more accurately predict the outcomes of a given procedure and help them make the best choice for themselves, based on their goals and values,” notes Dr. Hirsch. “We've been working with our colleagues in the Division of Geriatric Medicine to test a frailty scale developed here at Dalhousie, which we've found to be much more accurate than frailty scales commonly used elsewhere.”

Truly understanding patients' degree of frailty and its potential impact on cardiac surgery outcomes is becoming increasingly important. As Dr. Hirsch, Dr. Légaré, Ryan Gainer and biostatistician Karen Buth reported in the *Canadian Journal of Cardiology* in 2014, the numbers of patients over the age of 80 is increasing, and the proportion of cardiac surgery patients who are both elderly and frail increased from 4 to 10 per cent between 2001 and 2010. Frailty predicted a much greater risk of mortality or a prolonged stay in an institution.

“We're creating tools to ensure patients receive the best, most appropriate care for their own individual circumstances,” notes Dr. Hirsch. “We're sharing our approach widely so that clinicians and researchers can adapt them to other kinds of surgery... the age and frailty trends we are seeing are not confined to cardiac surgery.”

### **Decision support helps Nova Scotia senior feel comfortable with surgery choice**

Joy Manning of New Minas, Nova Scotia, was booked for gallbladder surgery when she noticed shortness of breath walking uphill. Her family doctor suggested an echocardiogram, just to be safe—it's lucky for Joy that he did, because the test revealed a faulty valve. “The gallbladder surgery was postponed because the valve problem posed an anesthesia risk,” explains Joy. “I ended up in Halifax, talking to cardiac surgeon Dr. Greg Hirsch, instead.”

After talking to Dr. Hirsch, Joy decided to enroll in the Informed Consent, Shared Decision Making study. “It seemed like a good opportunity to learn as much as possible about what was going on in my heart, what the surgery would entail, and what the potential risks might be,” says Joy.

Decision coach Margaret Pitts-Lesnick, RN, sat with Joy for more than an hour, discussing her condition and the risks of different decisions—to have the surgery or go with just medication instead—as calculated by the research team based on her particular situation.

“It was a shock to learn that, if I didn't do the surgery, I would have only about two years to live,” says Joy, who was a spry 77 at the time. “Margaret and several other people on the team

explained everything very clearly, in great detail, and answered all my questions. I felt very well-informed and very comfortable with my decision to go ahead.”

After her valve replacement operation in June 2015, Joy recovered with flying colours and was able to go ahead with the gallbladder surgery a year later.