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IMPROVING ACCESS TO LIFESAVING SURGERY

THE MUHC PREHABILITATION PROGRAM

February 2020

Fondation
du Centre universitaire
de santé McGill



McGill University
Health Centre
Foundation

GIVING BACK TO THE COMMUNITY

Thank you for your longstanding and generous support of the McGill University Health Centre (MUHC). Over the past 15 years, you have given a transformative \$3.1 million in support of the Division of Vascular Surgery, the Best Care for Life campaign that helped build the new MUHC Glen site hospital and other pressing needs. These gifts not only help our physicians and researchers make new breakthroughs, but benefit our entire community. The MUHC serves 1.6 million people from across the province, and your support ensures they receive the very best care.

In 2018, you supported the **Prehabilitation Program** at the MUHC's Division of Vascular Surgery. This report will detail the impact of your generosity and the success of this innovative program. You recently gave a second gift to the program, and we are grateful for your continued generosity.

MUHC DIVISION OF VASCULAR SURGERY

The McGill University Health Centre (MUHC) Division of Vascular Surgery is a leader in the delivery of vascular surgery in the Province of Quebec. The Division moved to the new MUHC Glen site in 2015, where it has an integrated outpatient clinic and vascular lab, and a hybrid endovascular operating suite. It is also proud to operate an active non-invasive vascular laboratory that provides over 5,000 non-invasive vascular diagnostic examinations annually. As part of the MUHC's teaching mandate, the Division takes on surgical residents and fellows to train the next generation of vascular surgeons.

THE PREHABILITATION PROGRAM

Prehabilitation is the process of optimizing the functional, physical, mental and nutritional capacity of patients prior to surgery. Undergoing surgery puts immense stress on the body, and patients who are in poor general health have a much more difficult time recovering. In some cases, patients are unable to receive surgery because their poor condition makes operating too risky. The standard paradigm in surgical recovery is to undertake a period of rehabilitation *after* surgical intervention as a way of regaining the lost function from the stress of the procedure. Prehabilitation takes a different approach, improving a patient's overall fitness and lean body mass *before* the surgery takes place.

PERSONNEL



Dr. Kent MacKenzie

Dr. MacKenzie completed his general surgery residency at McGill University and his Vascular Surgery Fellowship at the University of Chicago. He is an Associate Professor of Surgery at McGill University and recently completed his tenure of 10 years as Program Director for the McGill Vascular Surgery Residency. He is the Past-President of the Canadian Society for Vascular Surgery.



Dr. Heather Gill

Dr. Gill completed her general surgery training at McGill University in 2012. During her residency, she earned a Master's degree in Public Health from Harvard University. She completed her Vascular Surgery Fellowship at Columbia University Medical Center and the Weill Cornell Medical College. Dr. Gill is in charge of research for the Division of Vascular Surgery, including the prehabilitation program.

IMPACT OF YOUR GIFT

Your generous gift allowed Dr. MacKenzie, Dr. Gill and their team to carry out both active patient care and research activities related to prehabilitation. Without your support, this life changing care would not have been possible.

PATIENT CARE

Thanks to your support, 50 vascular surgery patients participated in the Prehabilitation Program with excellent results. Patient reviews were overwhelmingly positive and the only complaint was that patients did not want to leave the program after their surgery. Two patients in particular had fundamentally life-changing experiences:

- At the beginning of the program, one patient was **unable to walk** and relied on a wheelchair to get around. After 12 weeks of prehabilitation, the patient was able to walk without assistance and returned to independent activities.
- Another patient was **not a candidate for life-changing and lifesaving surgery** because she was too frail. After going through the prehabilitation program, she had added lean body weight and muscle, improved her ability to walk and function independently, and was able to undergo the surgery. She left the hospital after only seven days with no complications.

Without fail, every patient who enrolled in the Prehabilitation Program benefitted in one way or another. In fact, many patients improved their symptoms to such a degree that they no longer needed the surgery they were initially referred for.

“This gift has allowed us to **change the lives of elderly patients living with vascular disease. This is an often-overlooked patient population and through this generous gift we have been able to **improve the quality of life** and functionality of these people.”**

– Dr. Heather Gill, Vascular Surgeon, McGill University Health Centre

RESEARCH

The Vascular Surgery team is pursuing three research protocols related to the Prehabilitation Program. The studies are investigating the effects of prehabilitation on patients in need of (1) bypass or angioplasty/stent surgery, (2) endovascular stent grafting, and (3) frailty in patients requiring open aortic reconstruction. This work has helped numerous patients and has placed the MUHC's Department of Vascular Surgery at the forefront of this innovative area of research.

AWARDS

Dr. Miquel Coca-Martinez, who is pursuing a Masters of Experimental Surgery, was awarded the €60,000 Alfonso Martin Escudero Foundation Masters Award for his research on prehabilitation. The award supports excellence in medical study overseas.

FUTURE DIRECTIONS

In the words of Dr. MacKenzie, *the future directions of prehabilitation are limitless*. The Vascular Surgery team aspires to carry out research to assess the impact of prehabilitation on frailty, malnutrition and depression. There is increasing evidence that these factors are all linked to outcomes after surgery, and prehabilitation is a perfect initiative to target improvements in these areas.

To date, only about 1% of the MUHC's vascular surgery patient population has benefited from prehabilitation, and there are many more patients who could dramatically improve their quality of life and outcomes after surgery by going through the Prehabilitation Program. Dr. MacKenzie, Dr. Gill and their team hope to expand access to the Prehabilitation Program so even more patients can benefit.

The ultimate vision for the Prehabilitation Program is to create a prehabilitation unit at the MUHC Glen site that will be accessible to all patients requiring major vascular surgery and allow even more patients to benefit from the program.

THANK YOU

On behalf of the McGill University Health Centre, Dr. MacKenzie and Dr. Gill, and the many patients who have benefited, thank you for making the Vascular Surgery Prehabilitation Program possible. Your support allows our physicians and researchers to dream big to change the course of lives and medicine. We couldn't do it without you.