



## Transplant nurse

The head of the University of Toronto's Transplant Institute, Dr. Gary Levy, says "We couldn't run the transplantation program without nurses."

Here's why

By Lucianna Ciccocioppo  
Photography by William Ciccocioppo



Jane MacIver can't ever recall a time when she didn't want to be nurse. "I grew up in an emergency room," says MacIver. "I was very comfortable in hospitals." She knew the doctors, nurses and ambulance drivers by name. Not hard to understand when your mother is an emergency room nurse in Newmarket, Ont., at what is now Southlake Regional Health Centre. "I was the one who took all the homework to my friends who were in the hospital," she says with a smile. Nursing school then was a natural choice. Working in transplantation, however, was not.

The advanced practice nurse, who received her MScN, *summa cum laude*, from the Lawrence S. Bloomberg Faculty of Nursing in 1996, helped carve out a role for nurse practitioners such as herself in cardiac surgery at University Health Networks' Toronto General Hospital. And she was perfectly happy in this role for the next five years.

But one day, a colleague returned from what is now New York-Presbyterian University Hospital of Columbia and Cornell, armed with exciting new knowledge on mechanical hearts, and could Jane please set up a program to help introduce these pumps to advanced heart failure patients waiting for transplants here in Toronto, just for the next six months please?

The busy acute care nurse practitioner (ACNP 9T8) hemmed and hawed at the "coordinator" role, but finally agreed to work on it, for maximum one year. That was 7 years ago. Today, University Health Network, together with Sick Kids Hospital, boasts the largest mechanical heart program in Canada.

And MacIver is still very much part of the transplantation team. "I love it," she says. "I'm here because of the patients." There's the dad who wants to live to see his unborn grandchildren. And the mom who wants to help her teenaged daughter pick courses for university. As a mother and spouse, MacIver understands that determination.

She sifts through and disseminates all the information that patients require, pre-operative and post-operative, and ensures they understand what they're facing. With a 50 percent mortality rate within six months of receiving a mechanical heart, death is still very much lingering on the doorway for these patients.

She tells them there are no guarantees. She asks how they would like to die, if they don't survive their surgery. She sits with their families and helps draw up a care plan. Her clinical knowledge and nursing experience uniquely positions her to help these families prepare for the most difficult decision of their lives.

She's so passionate about her field, she's now pursuing a PhD at the University of Toronto's Institute of Medical Sciences investigating how heart failure patients make their decisions, and how factors such as depression and cognitive impairment affect their decision-making.

As one of three advanced practice nurse on the cardiac transplant team, she's glad she doesn't have to make the big decision—who gets a new heart.

If your life depends on a new organ, Toronto's a good place to be.

Unique in the world, the newly minted Transplant Institute at the University of Toronto brings together all solid organ transplantations under one program, allowing the multidisciplinary team members to gain top-notch expertise in transplants. Its internationally renowned lung program is the largest in the world, with more than 100 transplants per year. Its liver program is the largest living donor program in North America, among the top 4 in the world. Its innovative heart program, the largest in Canada at 25 transplants per year, specializes in left ventricular assist devices (mechanical heart pumps), and stem cell transplants, says its director and U of T professor, Dr. Gary Levy.

Clinical fellows make a beeline to the institute, as do its international counterparts for educational opportunities, research expertise and resources. The knowledge transfer doesn't stop there—patients, their families and care providers are all kept very much informed about the transplantation process they are about to experience. Most of the educational materials, such as manuals and videos

explaining the medications required, and the procedures to expect, are produced by nurses.

"I would argue we produce some of the best materials in the world," says Levy "not only for patients and their families but also for visiting faculty, doctors and nurses from other centres, who want to learn about transplantations."

U of T associate professor, Dr. Heather Ross, medical director of cardiac transplantation, and deputy director for the multi-organ transplant program says the APN is ideally suited for the transplant realm. "They have an incredible opportunity to display leadership and educate other nurses in the hospital, in transplant care, advanced organ failure, in the coronary care unit or medical units with advanced heart failure," says Ross. "These are a complex group of patients."

One APN has carved out a role as the manager of patients actively listed for transplant, providing education, support and monitoring via telephone. Nurse MacIver is investigating how to best manage patients with advanced heart failure in their home setting, working with community homecare groups who help keep patients where they want to be—at home.

You'll find advanced practice nurses working with RNs in the units as well to deliver and monitor care, and to recognize and follow-up on transplant complications, such as delirium and changes in mental health status. The follow-ups continue in the out-patient clinics, where APNs assess patients for their post-operative physical and mental health.

They're a critical member of the team, says Levy. "The APN makes rounds with us in the morning, prepares work sheets as background information for procedures, puts in [intravenous] lines, oversees other nurses and helps train doctors," says Levy. "They have a huge impact on the workload of the team."

Ross sees their impact reverberating even further, beyond urban centres where transplants are performed. "There's a huge opportunity for APNs to educate outside the tertiary academic centre of Ottawa, Toronto and London, the only sites where heart transplants are performed in Ontario. There's a large practice outside the transplant realm."

Ross would like to see an outreach program run by advanced practice nurses to service smaller communities and improve access to healthcare for post-transplant patients. "It would be amazing to put a satellite program in Sudbury or Sault Ste. Marie or Thunder Bay and have it run by advanced practice nurses with transplant experience," says Ross. "We could have the nurse up north engage in a tele-health session with a nurse here on site."

It would also be amazing to help post-transplant patients from making some long trips back to Toronto for follow-ups, alleviating personal and economic stress, and contributing to patient satisfaction and quality of life. "There's a huge correlation to patient satisfaction," says Ross. "The impact of APNs on patient outcomes has been very well documented in the literature, which is one of the reasons why we have been able to make a business case for having APNs within the heart function clinic," says Ross.

Still, Ross believes we haven't begun to maximize the potential that APNs can accomplish in a hospital setting. Levy would agree. "I've never believed in traditional roles so I think people of talent should move into whatever they are capable of doing. Certainly the role of nurses continues to evolve in its field." He sees a transplant program in future with less reliance on doctors and more reliance on nurses with specialized areas of expertise, nurses who will make up the bulk of multidisciplinary teams, and in some instances, will be in charge of these teams.

Nurses such as Jane MacIver. The girl once in charge of bringing homework to hospitalized classmates is now an advanced practice nurse who could one day take charge of a multidisciplinary team that follows-up patients in Timmins via tele-health, and teaches other nurses and doctors about transplant medicine issues.

"This is uncharted territory for nursing," says MacIver. The future excites her. ♣