

ANNUAL REPORT 2005-06



BEST CARE FOR LIFE



Centre universitaire de santé McGill  
McGill University Health Centre

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The McGill University Health Centre (MUHC) is one of the most comprehensive academic health centres in North America. The MUHC represents five teaching hospitals affiliated with the Faculty of Medicine of McGill University: The Montreal Children's, Montreal General, and Royal Victoria Hospitals as well as the Montreal Neurological Institute/Hospital, and the Montreal Chest Institute.

Each year, the MUHC receives close to 800,000 ambulatory visits, including over 138,000 emergency department visits. The Research Institute is a world-renowned biomedical and healthcare research centre that obtains over \$110 million in research funding annually from external sources. More than 11,500 healthcare and other personnel work at the MUHC.

Best  
Care  
for Life

## Message from the CEO and Director General



The theme of our 2005-2006 annual report is innovation. The McGill University Health Centre (MUHC) is an academic health centre—an environment where everyone challenges himself and herself, on a daily basis, to push the boundaries of medical knowledge and healthcare practice.

The stories in this report provide a small sampling of our innovative patient care, teaching and research achievements.

Innovation and excellence are also the values driving our plans to redevelop the MUHC on the Glen and Mountain campuses. The planning and other preparations for this project moved forward significantly in 2005-2006. We completed the environmental cleanup for our Glen campus and developed the master plan for the Mountain campus.

This new MUHC will allow us to consolidate on two campuses in either new or completely modernized facilities. In the years ahead, these state-of-the-art facilities will be a crucial tool for enhancing the quality of the health services we provide and our medical leadership in research and teaching.

But ultimately, the excellence of the MUHC depends on people.

Our staff includes healthcare professionals working in seven missions: medicine, surgery, women's health, pediatrics, cancer care, mental

health and neurosciences. They are supported by a remarkable staff providing the many ancillary services required to operate a large and complex health centre like ours.

Our volunteers are present throughout the organization, from providing special programs for our patients to serving on our board of directors. Our foundations and auxiliaries are among the most effective fundraisers in Canada.

The reputation of the MUHC among the patients we serve and among our peers across the globe is a result of the efforts of all these dedicated individuals inside the MUHC and in the larger community.

In particular, I would like to say a personal thank you to our most senior volunteer, David Culver, the chair of our Board of Directors. His wisdom, experience and clear vision of the future are an invaluable guide for this organization as we move forward.

This annual report for 2005-2006 is a snapshot of challenges and achievements at an outstanding healthcare centre. I hope you enjoy reading it.

Dr. Arthur Porter  
Director General and CEO



When I became chair of the Board of Directors of the MUHC in March of 2000, I suspected that university hospitals were notoriously complex organizations, but in fact I underestimated just how complex.

In addition to providing acute-care health services to a large patient population, university hospitals are the training ground for the next generation of healthcare professionals, and provide the research setting for the development of more effective diagnostic and treatment tools. In short, university hospitals not only provide the most advanced care available today, they are the engines driving better medical care for the future. We prepare the minds that chance will favour in the future of medical research.

I am proud to say that despite enormous challenges, the MUHC excels in its adult and pediatric patient care and its academic missions. It casts a creative shadow in medicine well beyond the borders of Quebec and Canada.

Under our public healthcare system, university hospitals are financed by a basic operating budget from the government for the health services they provide. Through McGill, government also funds our teaching function. Research is funded by a system of federal and provincial government grants and by the private sector. All of these activities are also supported by private philanthropy that supports excellence and innovation and oils its complex machinery.

I am pleased to say that in 2005-2006, we once again came in within the budget parameters set by the government. At the same time, our community continued to provide outstanding support through our foundations.

As a university hospital, we are also at the centre of a new way of organizing health care in Quebec. The McGill RUIS has been charged with developing corridors of highly specialized care for a population of 1.7 million in a region that

extends from Montreal to the furthest northern areas of the province. This is a new challenge that the MUHC and its partners in the McGill network have taken to heart. We are still in the early stages of developing an effective network, but I am convinced that with the right kind of support from the Ministry of Health and Social Services, we will achieve the goal of maximizing the delivery of seamless healthcare services to patients across 63 per cent of the surface of Quebec.

Finally, the MUHC continues to push forward with its vision for a much-needed redevelopment of our facilities—a new campus at the Glen and a modernized and expanded Mountain campus at the site of the Montreal General Hospital. The goal is a state-of-the-art health centre that supports the very best patient care, research and teaching, and that allows the MUHC to attract and retain the very best talent from around the world. The community's support and advocacy for the redevelopment of the MUHC has been crucial in launching this project and it will remain essential through all the subsequent phases of development.

As I said at the beginning of this message, university hospitals are complex organizations. Because of the challenges it has set itself, the MUHC may be more complex than most. But working for and within the MUHC is most rewarding. When one observes the compassion, the talent, and the selflessness displayed by our 14,000 caregivers, any effort on our part seems trivial. As one volunteer among the many, I ask only for a continuance of the community support that we have enjoyed in the past.

David Culver  
Chair of the Board of Directors





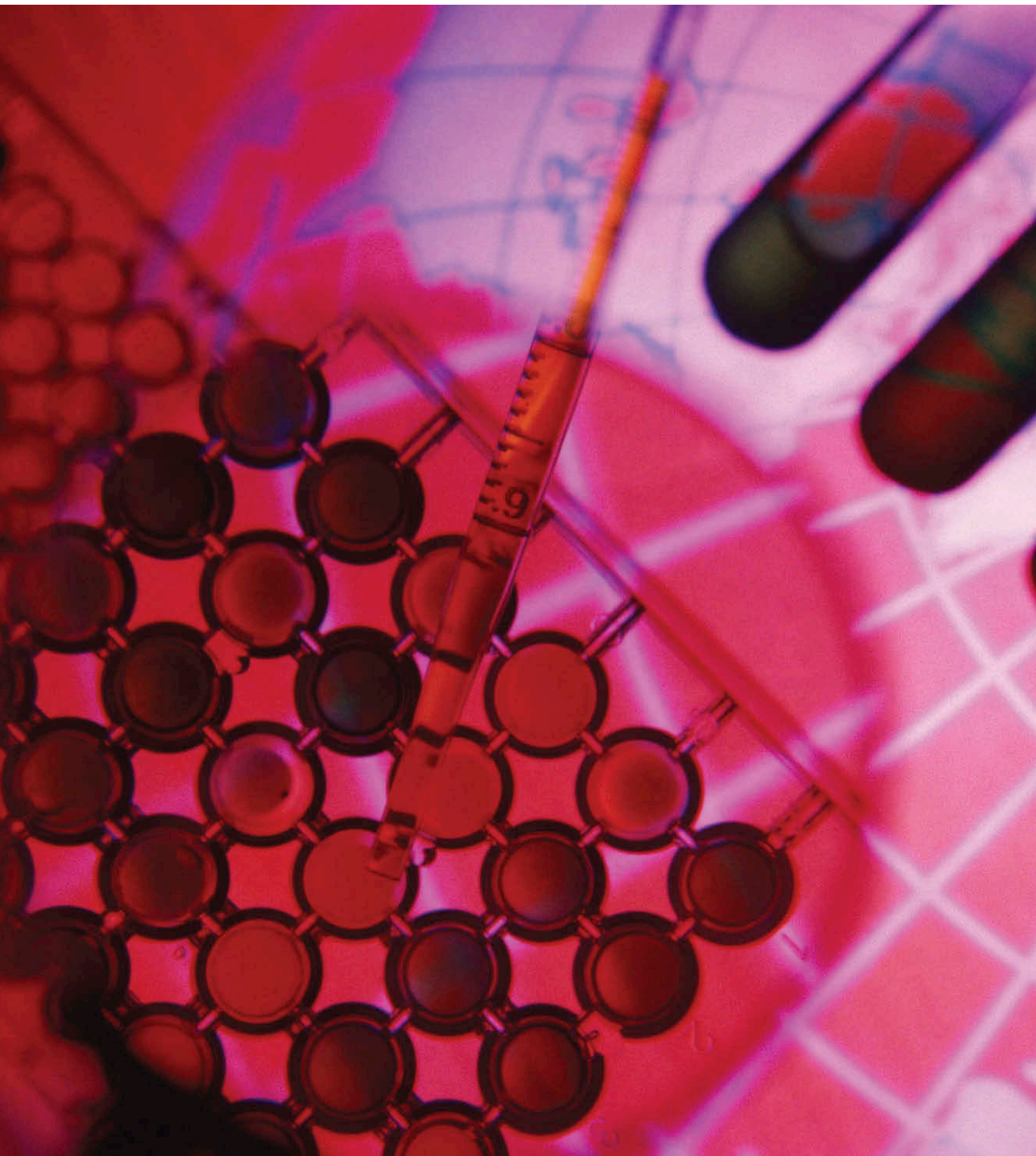
# OUR FOCUS

**CLINICAL CARE** Our multidisciplinary teams of healthcare professionals provide tertiary and quaternary care to patients from across Quebec and elsewhere. We also provide primary and secondary care and trauma emergency services to adults and children in Montreal and surrounding regions. The seven clinical missions of the MUHC are: Pediatric Medicine (The Montreal Children's Hospital), Medicine, Surgery, Neurosciences, Women's Health, Mental Health and Cancer Care.

**RESEARCH** The Research Institute of the MUHC is an internationally recognized biomedical and healthcare hospital research centre. The Institute supports over 500 researchers as well as 1,000 graduate and post-doctoral students. It operates more than 300 laboratories devoted to a broad spectrum of fundamental and clinical research.

**TEACHING** The MUHC prides itself on the quality and rigour of its clinical and scientific training. Each year, close to 3,000 people train at the MUHC, including over 800 medical and surgical residents, over 1,000 nurses, 450 medical students and over 500 allied-health students. Continuing education programs are also an integral part of providing best patient care. All physicians at the MUHC are cross-appointed to the McGill University Faculty of Medicine.







RESEARCH



## OUR RESEARCHERS ARE MAKING A DIFFERENCE WORLDWIDE

*MUHC Microbiologist Dr. Marcel Behr is using genetics in the fight against tuberculosis*

Modern medicine has done much to tame tuberculosis (TB), until recently one of the most feared and dangerous human diseases. Even so, TB remains a serious health threat in many parts of the world. Dr. Marcel Behr, MUHC microbiologist, and associate professor of Medicine and a William Dawson Scholar of McGill University, is studying the genetics of TB to learn more about this deadly disease—and how best to treat or prevent it.

“The genome of the TB bacillus has now been mapped,” says Dr. Behr. “Our research team is using this genetic knowledge to understand the organism better. We are trying to understand how genetic differences in TB bacteria make different strains behave differently. The natural, virulent form of the bacteria is responsible for most cases of the disease. Another strain, used in vaccines, rarely causes illness. What are the genetic differences between these strains—and do these differences explain why they behave

differently? The answer is, yes, but there's still a great deal of work to be done.”

Because TB bacteria are so virulent, doing advanced research on them required the installation of a level-three biohazard laboratory at the MUHC. “Using this new, world-class facility, we can safely manipulate live TB bacteria to learn more about how they cause disease in people,” says Dr. Behr. “We have now developed a potential vaccine for TB, and it is being tested in several locations.”

While TB is rare in Canada, the disease is widespread in countries with limited healthcare resources. Worldwide, over eight million new cases are reported each year. “Obviously, we can't make Canada TB free, when nowhere on the planet is more than 48 hours from home,” says Dr. Behr. “TB is a global problem and Canadian researchers are very involved in the global fight against it.”

“The genome of the  
TB bacillus has now  
been mapped,”  
says Dr. Behr



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## OUR PATIENTS ARE BENEFITING FROM OUR LEADING ROLE IN AUTISM RESEARCH AND TREATMENT

*The MUHC's wide range of services and extensive research initiatives make our autism program the strongest in Quebec, if not in Canada*

—Dr. Eric Fombonne

**Autism is a major public health concern. Children with this puzzling and potentially disabling disorder don't develop normal communication skills or engage in normal social interactions. The MUHC is an acknowledged leader in autism research and treatment.**

"The MUHC's medical and psychopharmacological clinics' wide range of services and extensive research initiatives make our autism program the strongest in Quebec, if not in Canada," says Dr. Eric Fombonne, director of the Department of Psychiatry at the Montreal Children's Hospital of the MUHC and the head of the Division of Child Psychiatry at McGill. "We use the most up-to-date diagnostic methods, do follow-ups, and run a number of clinics for children with autism."

The MUHC's research program is equally far-reaching. Dr. Fombonne and his colleagues are investigating the epidemiology

and genetics of autism, studying different treatments, and researching the biology, immunology and toxicology of this disorder. They are also working to identify factors, which predict better or worse outcomes.

MUHC researchers recently published two landmark papers on autism. One clearly showed that autism is not due to the persistence of the measles virus following MMR (measles, mumps and rubella) immunization. This is important, because it underlines the safety of the widely used MMR vaccine. The other paper established the prevalence of autism in Montreal at 0.65 per cent of the population. The study showed that the rates of autism

had no relationship with the small amount of mercury contained in other childhood vaccines. "This research also demonstrates the need to provide more services to this large group of young people," says Dr. Fombonne.

The MUHC is currently involved in a major international collaboration working to identify the genes associated with autism. "I think we are entering a new era of molecular genetics whereby we'll probably start to understand the genetic mechanisms of this disorder," explains Dr. Fombonne. "Without wishing to be overoptimistic, in the next five years we may start to have some of the answers."



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**"This research also demonstrates the need to provide more services to this large group of young people,"**  
says Dr. Fombonne



## OUR RESEARCH INTO HEART DISEASE CONSIDERS GENDER AND SEX DETERMINANTS

*Understanding of sex differences in cardiovascular diseases may help us develop better, more targeted treatments*

Can the same disease cause different symptoms and require different treatments in different groups of patients? In cardiovascular disease at least, the answer is 'yes.' "We see quite considerable differences between the genders in the way cardiovascular disease presents, how it develops and how it should be treated," says Dr. Louise Pilote, director of the Division of General Internal Medicine at the MUHC.

To better understand these differences and their implications, Dr. Pilote created GENESIS (Gender and Sex Determinants of Cardiovascular Disease), a massive multi-pronged initiative to study sex and gender differences in cardiovascular diseases. The GENESIS research team has four goals; to research sex differences in cardiovascular diseases; to create a large network of investigators; to mentor and fund young investigators interested in careers in this area; and to share key research findings with the community.

"GENESIS started in 2004," says Dr. Pilote. "We now have about 40 investigators across the country. We're studying the effectiveness of cardiovascular drugs and whether their effects differ between men and women. We're also looking at precursors of cardiovascular diseases in teenagers. We found that high blood pressure develops more quickly and more often in boys. Now we're investigating why."

GENESIS investigators are also studying different ways of diagnosing coronary artery disease in men and women. In particular,

they are studying the possibility that, in women, endovascular ultrasound may be a more effective diagnostic tool than coronary angiography.

"Finally, we're looking at the presentation and the symptoms of acute coronary syndrome in men and women," says Dr. Pilote. "Heart attacks in women sometimes cause different symptoms than those in men. The data from GENESIS will give us a better understanding of sex differences in cardiovascular diseases, and may help us develop better, more targeted treatments for women."



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"Finally, we're looking at the presentation and the symptoms of acute coronary syndrome in men and women,"

says Dr. Pilote





## WE ARE RESEARCHING WAYS TO COMBAT PROSTATE CANCER

*The MUHC is studying prostate cancer from all angles and at all levels, from the molecular upwards* — Dr. Simone Chevalier

Despite recent advances in diagnosis and treatment, prostate cancer still kills over 4,000 Canadian men each year. “My research focuses on basic mechanisms of prostate cancer progression,” says Dr. Simone Chevalier, MUHC investigator at the Research Institute and associate professor of Urology and director of Urology Research in the Department of Surgery at McGill University. “Progression is the critical step—it makes the difference between life and death. We can deal with the disease quite well if someone is diagnosed and treated early. Otherwise, it can be very serious.”

“In particular, I’m focusing on the diversity of cells within prostate tumours. If prostate cancer spreads beyond the prostate gland, patients are usually treated with hormone therapies. These block the body’s production and action of androgens [the male hormones], which help most prostate cancer cells grow. Usually, patients respond well initially. Then, after some time, response drops off.

“Why is this?” asks Dr. Chevalier. “It seems initial hormone treatments kill off most prostate cancer cells, leaving only those capable of surviving without male hormones. Cells adapt and eventually, only hormone-inde-

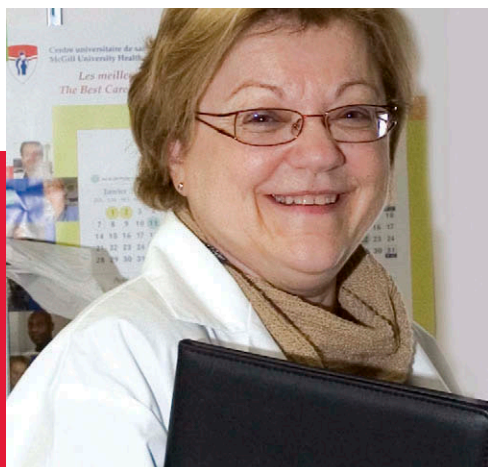
pendent cells are left—and the patient no longer responds to hormone treatment.”

Similarly, when we give radiotherapy or chemotherapy, a lot of cancer cells die, which is great—but again we don’t necessarily kill them all.” In effect, if therapy is not totally successful, the most dangerous and aggressive cells are left alive to grow and multiply.

To better understand how prostate cancer progresses, and therefore be able to potentially better deal with the very aggressive cancer cells that seem to survive regardless of treatment, Dr. Chevalier has been studying signaling

pathways—mechanisms which control cell survival and growth at the molecular level in response to various forms of therapy. “This is very fundamental as a research project. It’s important, it’s novel,” she explains. “However, there is still a long way to go.”

At the same time, Dr. Chevalier and her MUHC colleagues in urology and radiation oncology have been studying new prostate cancer treatments, including electrolytic and photodynamic therapies. “We’re studying prostate cancer from all angles and at all levels, from the molecular upwards,” she says.



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“My research focuses on basic mechanisms of prostate cancer progression,” says Dr. Simone Chevalier



## WE ARE IMPROVING QUALITY OF LIFE FOR OUR PATIENTS WITH DIABETES

*The MUHC is the only healthcare facility nationwide offering a three-pronged approach to restoring insulin production in people with diabetes*

Diabetes can be treated with insulin and medication. Even so, quality of life is often diminished and long-term complications can arise. Dr. Lawrence Rosenberg, A.G. Thompson chair of Surgical Research at the MUHC and director of the McGill Division of Surgical Research, has been studying ways to help people with diabetes produce more insulin themselves, reducing complications and possibly eliminating the need for insulin treatment.

“The MUHC is the only hospital in the country with a three-pronged approach to restoring insulin production in people with diabetes,” says Dr. Rosenberg. “We offer pancreas transplants, and will soon deliver pancreatic islet cell and islet progenitor cell transplants and neogenesis therapy—treatment aimed at promoting the re-growth of insulin-producing cells. Our goal is to let the diabetic community access a whole range of emerging technologies.”

Dr. Rosenberg started the MUHC pancreas transplant program in 1988. His first patient is still disease-free. However, transplants require major surgery, and organ donors are

scarce. An attractive alternative is transplantation of pancreatic islet cells, the cells responsible for insulin production. Studying ways to grow adult pancreatic islet cells from their more primitive progenitors in the lab is an important part of Dr. Rosenberg’s research program.

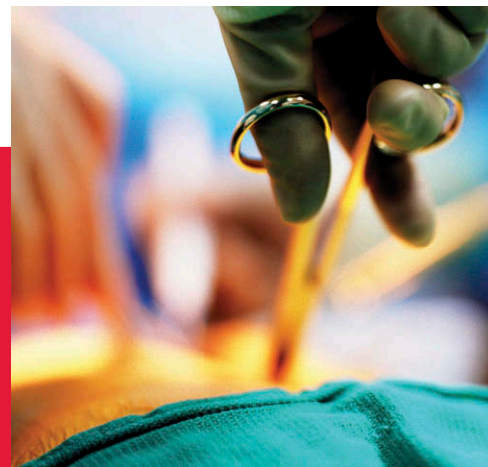
Even more promising is INGAP therapy, a treatment aimed at stimulating the pancreas to re-grow new insulin producing cells itself — a process known as neogenesis. Once perfected, this therapy has the potential to reduce or even eliminate the need for some people with diabetes to take insulin.

The foundation for INGAP therapy was laid ten years ago, when Dr. Rosenberg and a colleague discovered that injecting a newly discovered protein known as INGAP (islet neogenesis associated protein) stimulates the growth of new insulin-producing cells in the pancreas. Human patients were recently treated with a modified version of the protein in a phase two trial. Preliminary results were promising, and a follow-up trial is scheduled within a year at McGill.

Our goal is to let the diabetic community access a whole range of emerging technologies,”  
says Dr. Rosenberg



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## WE THINK PREVENTION SHOULD BE ON THE FRONTLINES OF HEALTH CARE

*MUHC doctor on her way to helping prevent the often silent killer, ovarian cancer*

“Prevention is better than cure—and that is the general theme of my research,” says Dr. Lucy Gilbert, director of Gynecological Oncology at the MUHC. “My interest in prevention led me to study cervical cancer vaccines, and to launch the DOVE study of early symptoms of ovarian cancer.”

In 2002, Dr. Gilbert became involved in clinical trials of an HPV (human papilloma virus) vaccine, designed to immunize against strains of the virus responsible for most cervical cancers. “We were testing a vaccine designed to protect against two strains, which cause 70 per cent of cervical cancers, as well as two that cause 80 per cent of genital warts,” she explains. “At the MUHC, 53 women were enrolled in this trial. Overall, researchers collected data on more than 3,000 participants.”

The vaccine proved highly effective, and is now available commercially in North America. “I’m extremely excited about the HPV vaccine,” says Dr. Gilbert. “I believe it will make a great difference in the fight against cervical cancer.”

Two years ago, Dr. Gilbert initiated the DOVE (Detecting Ovarian Cancer Earlier) trial, a research initiative designed to find ways of diagnosing ovarian cancer at the earliest, most treatable stage.

“Text books often call ovarian cancer ‘the silent killer’ because it isn’t symptomatic until the later stages,” says Dr. Gilbert. “Late diagnosis leads to low survival rates. But it’s not undetectable. Evidence from more than 20 studies shows ovarian cancer does have symptoms most of the time. We’re trying to identify a cluster of symptoms that will help us to identify ovarian cancer early.”

“In the next phase of this trial, we’ll be recruiting women who want to participate in this study. This is an important research initiative. With early diagnosis of ovarian cancer, we could cure more than 90 per cent of cases.”



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“With early diagnosis of ovarian cancer, we could cure more than 90 per cent of cases,”  
says Dr. Gilbert







TEACHING



## WE PROMOTE PRACTICE MAKES PERFECT WITH OUR HEALTHCARE PROFESSIONALS

*At the McGill Medical Simulation Centre we offer an integrated approach to training, using a whole range of simulation technologies*

Practice makes perfect—but patients want healthcare professionals to have had a chance to perfect their skills in a safe environment outside of the real clinical domain. Thanks to modern simulation technology, the McGill Medical Simulation Centre is a leading-edge facility where medical students, nursing students, residents, and trained healthcare professionals can use simulation to hone their skills.

“At the Centre, we offer an integrated approach to training, using a whole range of simulation technologies,” says Dr. Kevin Lachapelle, Centre director, and MUHC cardiac surgeon. “On the low-tech side, actors portray patients, to replicate clinical or ethical scenarios for nurses and residents. Technical skills can be developed using simple simulation-based models or sophisticated computer-based simulations such as laparoscopic or endovascular simulations. The key is to use the right technology for what you need to accomplish.”

The Centre offers simulation-based training for healthcare professionals from every discipline throughout McGill's Faculty of Medicine. On average, between 30 and 40 people train there each day.

“We started the Centre because a needs assessment showed simulation-based training would benefit all of the healthcare disciplines,” says Dr. Lachapelle. “Simulation is an educational tool that is coming into use very quickly and we are part of this new wave.”

Working with medical educators and end users, the Centre offers standard courses as

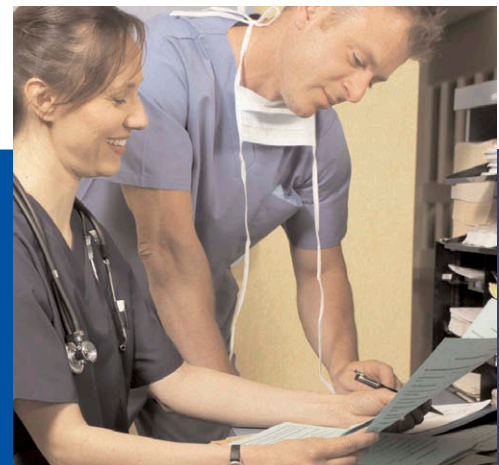
well as courses tailored to specific individuals and programs. The eventual goal is to have the Centre integrated within the curriculum of all training programs.

“The Centre's staff helps with the educational component and troubleshooting, but the teachers come from the McGill community,” explains Dr. Lachapelle. “We want the facility to be integrated within the MUHC community, so that people feel that it's their Centre. We've tried very hard from the beginning to instill a sense of ownership in all our users.” The Centre is a collaborative effort of McGill University and its affiliated hospitals.

“We offer an integrated approach to training, using a whole range of simulation technologies,”  
says Dr. Kevin Lachapelle



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## WE THINK DELIVERING BASIC AND CONTINUING MEDICAL EDUCATION IS A PRIORITY

*Dr. Peter McLeod has been at the forefront of medical education at the MUHC for many years*

Medical school is notoriously challenging—yet as much as 50 per cent of what healthcare professionals learn during their initial training will change or become obsolete within five years. Delivering basic and continuing medical education has been a major career focus of Dr. Peter McLeod, MUHC specialist in Internal Medicine and professor of Medical Pharmacology at McGill University.

“I’ve served as Director of Post Graduate Teaching in Internal Medicine in the past, and I regularly teach residents studying internal medicine, both on clinical units, and in ambulatory care settings,” says Dr. McLeod. “As a member of the Undergraduate Training Committee, I also teach undergraduate medical students—sometimes called clerks—both on wards and in clinics. Our students learn from contact with patients as well as through formal lectures and small group teaching in the hospital.”

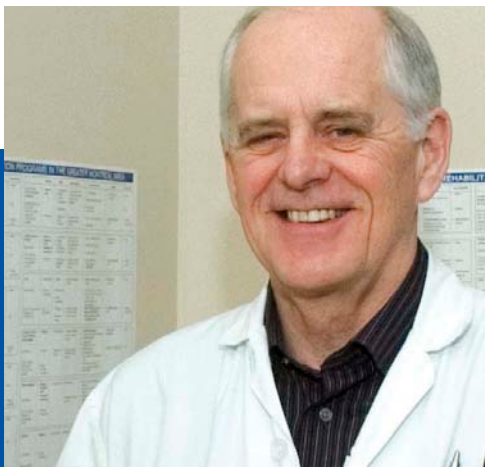
Dr. McLeod is also involved in continuing medical education, serving as lecturer and a consultant to the McGill Continuing Medical

Education (CME) Committee, an organization charged with the continuing education of physicians, nurses and allied healthcare workers. The Committee selects and approves CME courses for the Quebec medical community.

Physicians must take a certain number of CME credits per year. The College of Family Physicians of Canada requires family doctors to update themselves on a regular basis, as does the Royal College of Physicians and Surgeons. While healthcare professionals at the MUHC can choose from a wide array of educational activities at their workplace, those in smaller communities

must often rely on CME events at the university or at the MUHC to keep up with recent developments in their areas of interest.

In his capacity as CORE member and former Director of McGill’s Centre for Medical Education, Dr. McLeod also studies the theory of medical education. “Many doctors teach, but few have any formal training in teaching,” he says. “I’m interested in helping clinical instructors by giving them an understanding of basic pedagogic principles. That’s one of my areas of research—I call it ‘the ABCs of education.’”



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“I’m interested in helping clinical instructors by giving them an understanding of basic pedagogic principles,” says Dr. McLeod





PATIENT  
CARE  
AND  
TECHNOLOGY



## OUR SPINAL SURGERY: MOVING TOWARD MINIMALLY INVASIVE AND NAVIGATIONAL TECHNIQUES

*Computerized guidance and new materials are helping our patients go home faster and regain mobility quicker*

**Less pain, shorter hospital stays and faster patient recovery are among the benefits of the new, minimally invasive procedures in spinal surgery being pioneered by MUHC pediatric and orthopaedic spine surgeon Dr. Jean A. Ouellet and his colleagues. Minimally invasive surgery—done through a small incision with specialized instruments—is becoming more common as techniques and technologies evolve.**

"We've been removing herniated disks using minimally invasive techniques for some time," says Dr. Ouellet, chief of McGill's Scoliosis and Spine Group. "But what is new is our ability to replace a degenerative disc in the same way that we replace a hip joint using minimally invasive procedures. We are also able to do lumbar fusions and corrective spinal surgery by 'locking' vertebrae together. Until recently, these were painful procedures requiring large incisions and long recovery times."

Helping make these new techniques possible are advances in computerized guidance systems, which allow surgeons to view a virtual three-dimensional image of the spine

while they operate. Our surgeons have also developed a specialized retractor system which allows them to work through a small incision, creating a 'tunnel' through which they can do procedures on the spine. "We still need the depth perception that an incision provides, but we can now work through a five centimetre incision rather than a 25 centimetre one," says Dr. Ouellet.

Materials have also evolved. In some cases, MUHC surgeons now use special bone proteins to stimulate bone healing. "These proteins are delivered to the body in a substance that resembles toothpaste," says Dr. Ouellet. "In some cases, we inject them, while in others we soak sponges in

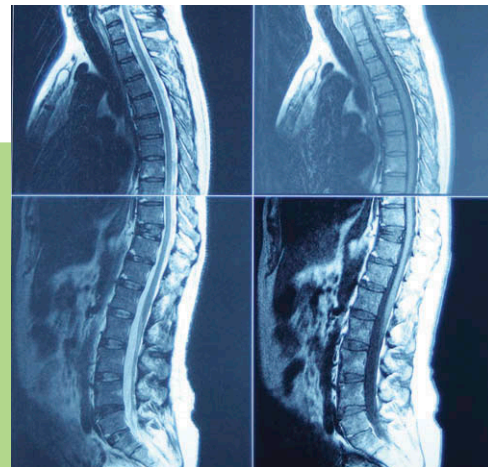
this material, and then put the sponge into place via a small incision. There, it becomes, in effect, bone".

"As the population ages, we see more and more patients with osteoporotic fractures. Often these patients are frail and standard treatments are not appropriate. But now we are able to manage their fractures by simply injecting bone cement at the fracture site allowing them immediate pain relief and early mobilization. While these new techniques have increased operating room budgets in some areas, patients go home faster, and regain mobility in a much shorter time."

"We still need the depth perception that an incision provides, but we can now work through a five centimetre incision rather than a 25 centimetre one," says Dr. Ouellet



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## WE TREAT OVER 14,000 CHILDREN AND TEENS EVERY YEAR IN OUR MCH TRAUMA PROGRAM

*At The Children's, our expert care and patient and family centred approach meet the multi-faceted and complex needs of our trauma patients*

**Trauma is the leading cause of death and disability in children and adolescents. Common causes of injury include motor vehicle collisions, sports and recreational activities, falls, abuse, fires and near drowning. Each year, over 14,000 young people seek treatment for traumatic injury at the Montreal Children's Hospital (MCH) of the MUHC.**

"As a provincially designated Pediatric and Adolescent Trauma Centre, and Neurotrauma Centre of Expertise, the MCH is well equipped to handle all types and severities of injuries," says Debbie Friedman, administrative director of the Trauma Care and Injury Prevention Program. "Members of our interdisciplinary Trauma Program are trained to manage the specialized needs of children and teens with traumatic injuries. At the MCH, our expert care and patient and family centred approach take trauma patients through the stages of medical evaluation, stabilization, treatment and early rehabilitation. Our mandate also includes clinical and academic teaching; research; injury prevention; quality assurance; advocacy and assuming a leadership role in the local, regional and provincial trauma network."

The MCH has a history of breakthroughs in trauma care. It opened Quebec's first pediatric burn unit in 1971, and its first pediatric neuro-trauma program in 1989 and concussion program dating back to 1997. Recently, the hospital pioneered ways to minimize painful dressing changes for young burn patients and speed their rehabilitation. In 2000, the MCH integrated all trauma care in an interdisciplinary program, which includes medical, surgical, nursing, rehabilitation, and psychosocial experts.

The MCH Trauma Program is also well-known for its extensive injury prevention and advocacy initiatives. "Over the last 15 years, Trauma Program experts have been involved in hundreds of media alerts, press conferences, and

interviews aimed at educating the public and providing sound recommendations for safety while encouraging activity," says Ms. Friedman.

"We have also developed a wide range of injury prevention educational resources for use by the public and community physicians. Program representatives collaborate with over 45 government and community organizations, and work closely with the media to ensure wide dissemination of trauma and prevention messages."

Some recent trauma prevention efforts include alerts on tobogganing, pedestrian safety, diving board injuries, toy safety, baby walkers, and trampolines.



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**"The MCH is well equipped to handle all types and severities of injuries,"**  
says Debbie Friedman



## OUR ADVANCED IMAGING TECHNOLOGY AND MULTIDISCIPLINARY PROGRAM MEANS HIGH-END CARE FOR BRAIN TUMOUR PATIENTS

*We receive many referrals, because doctors are confident their patients will be well cared for here* —Dr. Richard Leblanc

**No procedure is more delicate and demanding than brain surgery. Locating and removing tumours without damaging vital areas nearby is the challenge facing neurosurgeon Dr. Richard Leblanc, director of the MUHC Brain Tumour Program, and his colleagues.**

“To locate tumours, we use a whole range of diagnostic imaging technologies, including CT, MRI and positron emission tomography for functional scanning,” explains Dr. Leblanc.

“These tests not only diagnose cancer but can tell us where the lesion is, relative to key parts of the brain. For instance, they can tell us if the tumour is in the speech area, the hand area or other vital areas.

“We also use neuro-navigation to assist surgery. This software-intensive technique lets us ‘look at’ the area of the brain that interests us in virtual three-dimensional space. With this technology, we touch an area on the scalp with an instrument we call the viewing

wand, and a three-dimensional image of the structures underneath appears on the computer screen.”

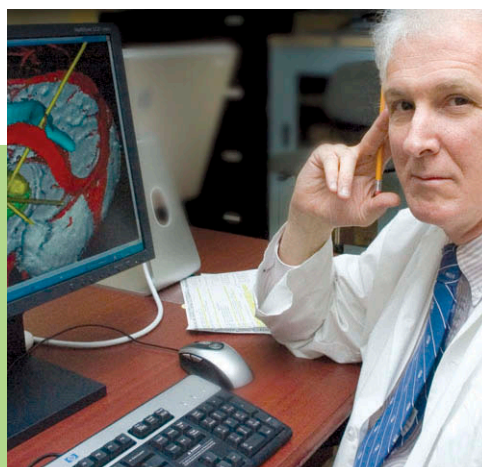
This advanced imaging technology—developed with the help of Dr. Lahbib Soualmi, MUHC director of the Neuronavigation Unit at the Montreal Neurological Institute and Hospital—allows surgeons to locate tumours very precisely and to determine the best surgical route of approach. Using it, procedures can be done more quickly, with less damage to the surrounding brain.

“We’re a very large centre; we operate on several hundred patients each year, more

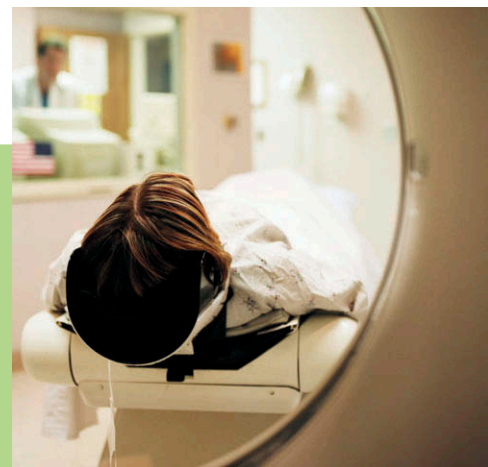
than anywhere in the province,” says Dr. Leblanc. “The Brain Tumour Program is a multidisciplinary program. Our team members are specially trained in treatment and rehabilitation of patients with brain tumours. We receive many referrals, because doctors are confident their patients will be well cared for here.

“Our program not only encompasses patients’ medical needs, our team members help patients deal with the whole range of medical and social challenges they and their families may face after a brain tumour has been diagnosed.”

“To locate tumours, we use a whole range of diagnostic imaging technologies,” says Dr. Richard Leblanc



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## WE ARE MINIMIZING TRAUMA FOR OUR PATIENTS WITH PROSTATE CANCER

*Successful combination of high-dose brachytherapy and short course of external radiation at the MUHC is cutting edge nationwide*

**High-dose brachytherapy, an innovative form of radiotherapy, is showing promise in men with intermediate risk prostate cancer. A six-year trial of this therapy at the MUHC has produced very encouraging preliminary results, says Dr. Luis Souhami, MUHC associate director of Radiation Oncology.**

In brachytherapy, the source of radioactivity is placed as close as possible to the tumour. "In high-dose brachytherapy for prostate cancer, treatment is delivered using a radioactive source which is automatically advanced along several catheters placed into the prostate, allowing a very conformal radiation treatment to the target, explains Dr. Souhami. "This way, we can tailor the dose much more precisely and avoid irradiating normal tissue."

In this treatment approach, done with the Department of Urology, patients are given spinal anesthesia. Then, several hollow catheters are placed very precisely in the prostate, a computer-controlled radioactive

source automatically delivers the planned dose along the catheters and a high dose of radiotherapy is then given to the prostate. Patients stay overnight for observation or even go home the same day. A week later, they start on a supplementary, four-week course of external radiation, which replaces the standard eight-week course of treatment.

"It's the combination of the high-dose of brachytherapy and the short course of external radiation that is novel," explains Dr. Souhami. "We started trials of this method in 2001, and results are extremely encouraging. The vast majority of patients we have followed up have no signs of prostate cancer at this

point. We expect to publish our results in the very near future."

The new form of treatment has several major advantages. First, it minimizes trauma to patients. Preliminary results show no long-term ill effects on urinary flow or sexual function. Because the treatment is shorter than standard therapy, it also delivers large savings in terms of patient time and health-care resources. "The results, both at the level of tumour control and lower complications have been beyond our expectations," says Dr. Souhami.



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"The results, both at the level of tumour control and lower complications, have been beyond our expectations,"  
says Dr. Souhami

### OUR MENTAL HEALTH UNDERGOES REORGANIZATION IN THE NAME OF THE PATIENT

*Plus, the MUHC enlists a support organization for families of people with mental illness*

**The Mental Health Mission of the MUHC is preparing for a new role as responsibility for primary care of psychiatric illness shifts from large institutions to CLSCs and family doctors. “In Quebec, we are starting to move towards a system in which uncomplicated cases of depression and other psychiatric disorders will be treated by family doctors,” explains Dr. Warren Steiner, MUHC psychiatrist-in-chief. “Ultimately, about 3,000 of our patients will be affected.**

Many MUHC staff will also be transferred to CLSCs as part of this reorganization to ensure continuity of multidisciplinary care and communication between the health centre and the CLSCs. The MUHC will give secondary-level care in complex cases, for example, someone with depression who does not respond to standard treatment. We'll also be giving third-level care—innovative treatments such as special cognitive behavioural therapy—in non-responsive schizophrenia.”

At the moment, the MUHC treats over 7,000 people on an outpatient basis. These patients suffer from a range of mental health problems including mood, anxiety and personality disorders, schizophrenic spectrum illnesses, addictions and geriatric

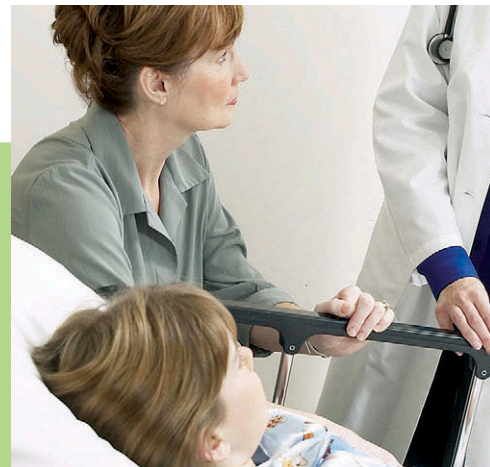
mental health disorders. “For these patients, we offer multidisciplinary clinics in our six major program areas,” explains Dr. Steiner. “Leadership of each program is shared between a medical and an allied-health professional, either a nurse, a social worker, an occupational therapist or a psychologist.”

The MUHC also treats about 60 inpatients, and offers a transition unit, a day program that can accommodate about 20 patients who are sub-acutely ill or still need structured support and therapy during the day. Patients who previously would have been hospitalized now attend this day program and return home at night. A hospital-based assertive community treatment team also works to prevent hospitalizations by providing community-based treatment for

patients who are too ill to benefit from traditional hospital-based programs. “These two programs have allowed us to reduce bed numbers while providing better service and maintaining patients in their homes and communities,” says Dr. Steiner.

In an effort to improve services for families, the MUHC Mental Health Mission has recently partnered with AMI-Quebec (Alliance for the Mentally Ill), a support organization for families of people with mental illness. “One of their educators has an office on the ward and works with hospitalized patients' families, educating them, answering questions and providing peer-support,” says Dr. Steiner. “This has proved a most effective collaboration and is a model for other hospitals.”

“At the moment, the MUHC treats over 7,000 people on an outpatient basis,” says Dr. Steiner





## OUR TREND—LESS INVASIVE APPROACH TO DISEASE

*MUHC surgeons have refined and perfected minimally invasive vascular surgery*

Surgeons at the MUHC are relying more and more on minimally invasive surgery to repair weakened or clogged blood vessels from the inside out. Benefits of this technique (also known as endovascular surgery) include less surgical trauma, lower risk of complications and faster recovery, according to Dr. Oren Steinmetz, chief of Service, Division of Vascular Surgery at the Royal Victoria Hospital of the MUHC, and a pioneer in minimally invasive vascular surgery.

To perform minimally invasive surgery on blood vessels, surgeons thread a catheter—a long, thin tube—into a blood vessel through a small incision. Then, they guide it into exactly the right position, using advanced imaging techniques. Once the catheter is in place, surgeons use it to deploy instruments that open up the blood vessel from the inside. They can also insert a special device, called a stent, to reinforce a weakened area on the vessel wall.

Angioplasty, a common form of minimally invasive vascular surgery, has been used for many years to open up partially blocked

coronary arteries. At the MUHC, potential aneurysms—weak areas in the wall of the blood vessel—have also been repaired using minimally invasive techniques since 1997. The procedure has been refined and perfected during that time.

“We’re expanding the number of minimally invasive procedures we do,” explains Dr. Steinmetz. “For instance, we’re now doing more and more angioplasties on blocked arteries in the leg—bringing the patient in for day surgery and using a catheter to open the blocked blood vessel instead of performing open surgical bypass.

Thanks to new equipment and materials, the literature shows improved results with these less invasive procedures.”

As techniques and equipment have improved, MUHC surgeons are also using this technique as a first option when treating frail or high-risk patients who need surgery to open clogged carotid arteries. “The trend across many different diseases is towards a less invasive and more endovascular approach,” says Dr. Steinmetz.



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“The trend across many different diseases is towards a less invasive and more endovascular approach,”  
says Dr. Steinmetz

## OUR NURSING HEALTHCARE PROFESSIONALS PRACTICE AT GIVING THE BEST CARE

*The MUHC's emphasis on best practice guidelines in nursing is paying off in tangible gains for patients —Dr. Andrea Laizner*

How do healthcare professionals know they are giving the best possible care to patients? At the MUHC, nurses rely on best practice guidelines, evidence-based standards for care. These guidelines, developed through a systematic survey of evidence, provide a solid foundation for consistent, high-quality nursing care. The MUHC's emphasis on best practice guidelines in nursing is paying off in tangible gains for patients, according to Dr. Andrea Laizner, MUHC nursing research consultant.

"The MUHC currently tracks the effects of standardized, evidence-based approaches to nursing care using four key indicators: pain assessment and management, skin integrity, fall prevention and restraint use," says Dr. Laizner. In 2002, skin integrity, falls prevention and pain management were chosen as quality indicators. In 2003, the Council of Nurses Quality Care Committee established task forces on skin integrity as well as pain and symptom management. The Falls Prevention Task Force was established in 2004. In 2005, a survey of restraint use was added to identify current practices, determine equipment needs and

review standards. Each task force was asked to clearly define its indicator, assess its status at the MUHC, implement guidelines, and assess their effects.

"Each year, we survey hundreds of patients on these indicators—and we're able to see changes," says Dr. Laizner. "For example, in 2003, 21.3 per cent of patients surveyed had pressure ulcers. In 2005, it was down to 16.6 per cent on the same units. We believe this is a result of following guidelines for types of mattresses, patient assessments and nursing interventions to prevent pressure ulcers.

"We're also standardizing MUHC assessment methods and documentation related to these indicators. For example, we are using a 0-to-10 pain intensity rating scale for reporting patients' pain. This helps us compare pain levels across groups of patients from year to year. Our average pain levels have remained about the same from year to year, and naturally we would like to see more patients pain-free. This is still a challenge."

Improvements have been recorded in fall prevention since standardized care was introduced. From 2003 to 2006, the fall rate

"Each year, we survey hundreds of patients on these indicators — and we're able to see changes," says Dr. Laizner.



Dr. Andrea Laizner, left, and Andréanne Saucier, right.

© Pierre Dubois



at the MUHC decreased from 3.2 to 3.1 falls per 1,000 patient days. During the same period, falls resulting in injury decreased from 34 percent to 30 percent. These improvements were achieved through a blend of strategies including staff training, interdisciplinary collaboration, improved risk assessment methods, environment and equipment audits and patient education.

The MUHC Department of Quality and Risk collects information on falls and works closely with the Falls Task Force. Reporting procedures have evolved from simply reporting falls to measuring "fall rate" (the number of falls per 1,000 patient days), and falls with injury or severe injury. The MUHC is also modifying fall reporting forms to increase the amount of information captured. This information will be used to fine-tune practice guidelines.

Annual surveys of quality indicators are coordinated by Dr. Laizner. Over 100 members of site quality care committees and nursing leaders act as surveyors, with 30 to 50 nurses surveying one site in a day. After

information is collected and analyzed, reports are distributed to leadership groups.

Best practice guidelines are also being applied to the treatment of cancer patients. "We now advise and assess cancer patients via telephone," explains Andréanne Saucier, MUHC associate director of Nursing for Oncology, Palliative Care and Respiratory Services. "Based on guidelines, we assess how urgent the problem is and propose an appropriate intervention right over the phone."

The service, piloted at the MUHC last year, is now being used at the Oncology Day Centre and in the specialized cancer inpatient unit. "We are currently doing a quality evaluation of this approach, seeing which symptoms are being reported and tracking outcomes," says Ms. Saucier.

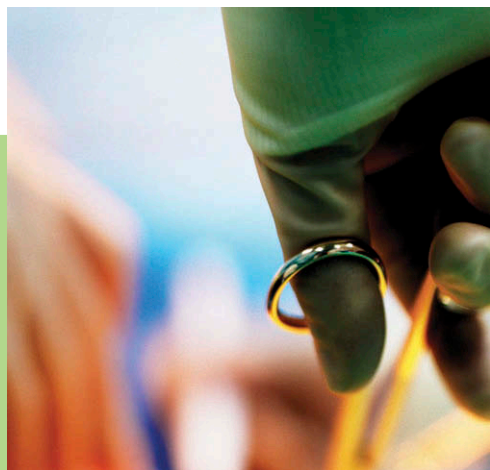
Nurses at the MUHC are also using best practice guidelines to treat asthma patients. "We have adopted national guidelines for interventions during asthma crises," explains Ms. Saucier. "In more and more areas, we are seeing knowledge translated

into best practice guidelines, which are then implemented and evaluated."

"Implementing best practice guidelines is a collaborative effort," says Dr. Laizner. "Different members of the nursing team participate—asking questions, making clinical observations and recording essential data. Many of our interdisciplinary colleagues collaborate with us in this process. The results are gaining us national and international recognition, and—far more important—making a real difference to our patients."

*Editorial note at time of publication of the 2005-2006 MUHC Annual Report:*

"Their use of best practice guidelines recently brought MUHC nurses and their colleagues at Hôpital Charles LeMoine the Clinical Innovation 3M Grand Prize from the Ordre des Infirmières et Infirmiers du Québec's (OIIQ, November 2006). The prize was awarded for teamwork in the implementation of best practice guidelines to improve nursing care for pressure ulcers, falls and controllable pain. "



### ENVIRONMENT CONTINUOUS QUALITY IMPROVEMENT TEAM BRINGS TOGETHER MANY DISCIPLINES THAT ENSURE IMPROVED SAFETY AND SECURITY FOR OUR PATIENTS, VISITORS AND STAFF

The germ of the idea to have an Environment Continuous Quality Improvement Team to conduct rounds at the MUHC was conceived following the last MUHC Accreditation.

"We saw the need for this," says Lorraine Mossman, MUHC advisor of Risk Management. "We want to be proactive about what needs to be improved environmentally in many areas of every department of the MUHC."

The multidisciplinary group that conducts the Environmental Rounds consists of members from Organizational and Physical Programming, Biomedical Engineering, Quality and Risk Management, Food Services, Housekeeping, Infection Control and Prevention, Infrastructure Services, Laundry, Warehouse and Distribution,

Occupational Health and Safety, Parking and Grounds, Radiation Safety and Protection, Security, Emergency Measures and Prevention, Sterilization, and Transport. It looks for any hazards that need to be identified and corrected and then it prioritizes items that need to be fixed.

Originally the group's four main areas of focus when visiting a department included building issues; use of space; emergency and disaster planning; and cleanliness. Soon more indicators related to such issues as infection control, equipment, and falls prevention were added to the list.

As it is now, when the team goes to a department to do its rounds it divides into two or more groups and goes to work. Team members are very sensitive to patients' privacy issues.

"The aim is to improve work environments, making them more efficient and safe," says Mossman. "It also encourages people to think of these issues on a continuous basis. This not only prepares us for Accreditation, which comes every three years, it improves the lives of patients. We also see it improving staff morale."



## MAUDE UNIT FUNCTIONS IN A MULTIDISCIPLINARY FASHION

*Our patients have multiple medical problems, so we have a full array of collaborators in key specialty areas*  
—Dr. Ariane Marelli

**In healthcare, a multidisciplinary approach to patient care is often vital—and nowhere more so than at The McGill Adult Unit for Congenital Heart Disease Unit. Better known as the MAUDE Unit, in honour of Dr. Maude Abbott, a Quebec pioneer in medical research, it is one of the few facilities in North America specializing in multidisciplinary treatment of adults with congenital heart problems.**

"Our patients have multiple medical problems, so we have a full array of collaborators in key specialty areas," says MAUDE Unit Director Dr. Ariane Marelli. "We are multidisciplinary across medicine, pediatrics and surgery, and we call on specialists in a variety of fields. Within cardiology, we work with consultants in electrophysiology and heart failure. In medicine we rely on consultants in endocrinology, neurology, respirology and hematology. We also have consultants in other areas such as obstetrics and surgery."

Obstetrics is especially important, because patients with congenital heart problems are more likely to have high-risk

pregnancies. Not only can patients' cardiac functions be compromised by pregnancy, they are at higher risk of bearing children with congenital heart problems themselves.

The MAUDE Unit recently acquired its own ultrasound equipment, and is in the process of expanding its facilities. This expansion reflects the recent increase in patient numbers. This year, the unit will treat over 1,000 patients within the MUHC network, a substantial increase over last year's figure.

"This increase is partially because we've integrated our service across all the MUHC hospitals," explains Dr. Marelli. "Also, about 100 new patients come to us from the Montreal Children's Hospital every year."

The average age of MAUDE Unit patients is about 30, although the oldest patient is in her nineties. As MAUDE patients age, they are developing the diseases associated with maturity, as well as those associated with congenital heart problems, making a multidisciplinary approach even more essential.

# AWARDS

The following are just a small sample of the awards received at the MUHC over the 2005-2006 year in recognition of the outstanding contribution we make worldwide

**Dr. Albert J. Aguayo**, MUHC neurobiologist, was honoured with the Frederic Newton Gisborne Starr Award from the Canadian Medical Association

**Dr. Jeffrey Barkun**, MUHC head of General Surgery and McGill University chair of General Surgery, received a tier two Canada research chair from McGill, the Frank Dawson Award for five years

**Dr. David Fleischer**, MUHC general surgeon and director of Educational Informatics, was named to the 2005 faculty honour list for Education Excellence in recognition of his contribution to teaching in the Faculty of Medicine

**Celeste Johnston**, MUHC nurse scientist (honourary), and a James McGill Professor at McGill University, was elected as Fellow of the Canadian Academy of Health Sciences

**Dr. George Karpati**, the Isaac Walton Killam professor of Neurology in the Faculty of Medicine at McGill University and director of the Neuromuscular Research Unit at the Montreal Neurological Institute and Hospital, was awarded the *Ordre national du Québec*. As announced by Premier Jean Charest, he was appointed as a Knight of the *Ordre* in recognition of his outstanding contributions to the development of Quebec society.

**Dr. Srinivasan Krishnamurthy**, MUHC physician in Obstetrics and Gynecology and director of the Residency Program in Obstetrics and Gynecology, received the Association of Professors of Obstetrics and Gynaecology of Canada's 2005 APOG Educator of the Year Award in recognition of his outstanding contribution to the field of teaching

**The Nursing Team of the Oncology Day Centre at the RVH site** won the national award CANO (Canadian Association for Nurses Oncology) for Innovation in Oncology Patient and Family Education

**Dr. Emil Skamene**, past scientific director of the MUHC Research Institute (1998 to 2006), senior physician (Immunologist and Allergist) at the MGH site, and professor of Medicine at McGill University, was awarded the *Ordre national du Québec*. As announced by Premier Jean Charest, he was appointed as a Knight of the *Ordre* in recognition of his outstanding contributions to the development of Quebec society.

**Robyn Tamblyn**, MUHC scientific director of Clinical and Health Informatics research, was selected as co-winner of the Health Services Research Advancement Award for 2005 given by the Canadian Health Services Research Foundation (CHSRF)

**Dr. Ted Tewfik**, MUHC otorhinolaryngologist, received an honour award from American Academy of Otolaryngology-Head and Neck surgery

**Dr. Robert Usher** of the MUHC Division of Neonatology, Department of Obstetrics and Gynecology, received the 2006 Ross Award from the Canadian Paediatric Society in recognition of excellence of achievement in the field of pediatric research, education, child health and child advocacy. Unfortunately, Dr. Usher passed away in the Spring of 2006, but he leaves a long legacy of excellence in the area of Pediatric Care, not only at the MUHC, but around the world.

**Dr. Robert Usher** was born in 1929 at the Royal Victoria Hospital, the very hospital he ended up working in for most of his life. He was a pioneer in neonatology, the care of newborn babies, which emerged as a subspecialty of pediatrics in the 1950s. He is the only Canadian to ever receive the Virginia Apgar Award for Perinatal Medicine, which was awarded him in 2000. He was the recipient of the Prix Letondal in 1993 from the *Association des Pédiatres du Québec* for his pioneering work in perinatal medicine. The neonatal perinatal medicine section of the Canadian Pediatric Society recognized him for his outstanding contribution.

Dr. Usher assumed directorship of the Royal Victoria's Neonatal Intensive Care Unit in 1959, a position he held until the year 2000. He epitomized the clinician-researcher, focused on the needs of each of the tiny babies brought into his care, alert to the trends he observed in practice and committed to discovering the causes of disease and debilitation in order to improve care.

Dr. Usher's scientific contributions to perinatal medicine over half a century were not only important, but have stood the test of time. Always clear and authoritative, they revealed the depth of his clinical experience as well as his powers of observation, original thought, and analysis. His earlier papers dealt with clinical and therapeutic aspects of the respiratory distress syndrome of prematurity. The introduction of the "Usher's regime" throughout the world in the early 1960s did much to arouse pediatric interest in the neonatal period. Also, following a year spent with Professor John Lind in Stockholm in 1962, he made important contributions on the influence that management of the umbilical cord at birth might have on the neonatal blood volume, on polycythemia, and on cardiopulmonary function. Other research subjects include perinatal maturation, nutrition and growth, maternal diabetes in pregnancy, and the influence of delivery on fetal adaptation at birth. Usher was also most interested in the organization and audit of perinatal care, including the causes and prevention of mortality and morbidity. Indeed his latest efforts before his death were to ensure that the Montreal obstetric and neonatal database was in good working order. For 46 years he had personally reviewed the charts of every baby (and of their mothers) born at the Royal Victoria Hospital. His extensive knowledge of perinatal care and epidemiology was made available to international bodies such as the World Health Organization, as well as to governments. In particular he gave great support to the Brazilian and Cuban perinatal services.



# FOUNDATIONS

**Over 2005-06 the MUHC Foundations continued to play a crucial role toward ensuring the delivery of quality care and services for our patients. We are proud and grateful for the continuing tradition of private philanthropy that supports outstanding patient care, medical research and teaching for the Best Care for Life at the MUHC.**

## **MUHC Foundation**

During 2005-06, the MUHC Foundation continued to work with its partner foundations on advancing the *Best Care for Life* campaign. Thanks to the generosity of its donors and the contributions of its partners, the campaign received more than \$10 million in new commitments. September 2005 saw the campaign's Public Launch: a festive two-day celebration featuring events on all of the hospital sites and an elegant evening gala. The launch brought together the MUHC, McGill, the Foundations, the Auxiliaries and countless enthusiastic volunteers, and galvanized the community in support of the campaign and the redevelopment project.

The *Best Care for Life* campaign has now secured more than \$140 million in commitments and is moving steadily towards the halfway mark of its \$300-million objective. During 2005-06 the MUHC Foundation continued to move the campaign forward on several fronts, including the development of the \$15-million Women's Health division, its continuing partnership with the Cedars Cancer Institute and through its ongoing solicitations of leadership donors. The Foundation also worked with the Foundation of the *Centre hospitalier de l'Université de Montréal* (CHUM) to prepare for the official launch of the Joint Corporate Campaign, expected in 2007, and it began preparations for the Campaign's Community Phase.

The MUHC Foundation was able to support a number of important projects across the MUHC in 2005-06. Among these, significant contributions from the McConnell Family Foundation supported the redevelopment of the Angiography/Cath Lab Unit at the Montreal Children's Hospital and new construction and the reorganization of outpatient services in Mental Health at the RVH site. Donations from other individuals and foundations generously funded otolaryngology and nursing equipment across the adult sites, as well as research projects focused on peanut allergy and calcium metabolism. The MUHC Foundation also continued to promote the MUHC and its

activities across the community, partnering with generous third parties such as the Montreal International Auto Show, the organizers of the Texas Hold 'Em Charity Tournament and the Cedars Cancer Institute for high-profile events, sponsoring the MUHC's *From Microscope to Stethoscope* lecture series and organizing its own enormously successful *New Faces, New Ideas* speakers' series, which brings the MUHC's talent to different venues and audiences across the city. ([www.muhcfoundation.com](http://www.muhcfoundation.com))

## **MCH Foundation**

The year 2005-06 was marked by great achievements for The Montreal Children's Hospital Foundation. Donations from thousands of donors and from more than 300 fundraising events reflect strong community support for The Children's. A contribution of more than \$4.8 million from the Foundation helped hospital staff in responding to the ever growing needs of the hospital's young patients. Among these projects were the completion of the minimally invasive surgery room (\$685,000) and the new hematology/oncology ward (\$1.5 million); the opening of an ultra-specialized heart catheterization and angiography suite (\$500,000); the establishment of Canada's first freestanding Pediatric Insulin Pump Centre (\$115,000); the launch of the BAHA (bone-anchored hearing aid) program (\$25,000); investment of more than \$5.6 million in medical equipment and services. A three-year, \$2-million corporate campaign for the renovation of The Children's Emergency Room reached 75 per cent of its fundraising goal. Phase I of this four-phase project was completed, namely the construction of a new psychiatric evaluation room. The third annual *Caring for Kids Radiothon* once again broke records with an outstanding \$2.2 million raised for the Hospital.

In addition to responding to the hospital's most pressing needs, the Foundation has put great emphasis on the \$100 million *Best Care for Children* capital campaign, in anticipation of the construction of



the new Children's. Featuring Shilvi, with the theme *Help me build a new Children's*, this campaign is progressing well. Community leaders who are giving their support to the new hospital include Bell Canada, with a gift of \$5 million towards the advancement of telemedicine, and *Opération Enfant Soleil*, with a pledge of \$10 million towards the construction of the new Emergency Room.

([www.childrenfoundation.com](http://www.childrenfoundation.com))

### **MGH Foundation**

The Montreal General Hospital Foundation is pleased to report another record year of fundraising, under the Chairmanship of Bertin Nadeau, and with the support of a dedicated Board and thousands of generous donors. The MGH Foundation continues to be a leader in soliciting support for the *Best Care for Life* campaign, highlighted by a leadership commitment of \$12 million from the Molson Foundation. A portion of this wonderfully generous gift was dedicated to the reconstruction and enhancement of the Emergency Department, an essential element in the redevelopment of the MGH.

The improvements to the Emergency Department, particularly the new advanced trauma facilities, proved invaluable during the recent Dawson College tragedy as did the Foundation's support for the Trauma Team Leader Program.

During the past year the MGH Foundation has provided assistance for numerous projects as part of the Redevelopment Plan of the MUHC at the MGH including: Echo Endoscopy System (\$450,000), used for colon cancer screening; 64 Slice CT for Trauma (\$1.5 million); MR Simulator Installation (\$800,000); Radiation Oncology Renovations (\$200,000); Minimally Invasive Surgery Enhancements (\$670,000); Research Laboratories facilities (\$500,000), new RI Scientific Director & Research Team. The Foundation has established an Endowed Fund of \$1.5 million in support of the new Department of Oncology and the MUHC's Comprehensive Cancer Care mission. Support was provided also for cardiology, orthopedics, ophthalmology, geriatric medicine, palliative care and special nursing initiatives. This year the MGH Foundation also presented some 75 Research Awards to our leading medical and nursing professionals totalling \$1.8 million.

### **RVH Foundation**

During 2005-06, the RVH Foundation enjoyed a record year of fundraising under the Chairmanship of Glenn Rourke and continued its commitment to advancing the \$300 million *Best Care for Life* campaign. Among many of the success stories made possible by the RVH Foundation, a few include the relocation of the Transplant Ward, a \$1 million project; a \$1.2 million commitment to Canada's very first MR Simulator funded in large part through the generosity of Mike and Valeria Rosenbloom; the reorganization of the Pharmacy, a \$1 million project; and a leadership commitment of \$1,425,000 to the long-awaited renovations of the Gynecology-Oncology Ward, in cooperation with the J.W. McConnell Family Foundation, the Cedars Cancer Institute and the RVH Auxiliary. The RVH Foundation also underscored its commitment to patient support services in Oncology through its contributions to the Cancer Nutrition Rehabilitation Program and the funding of a part-time psychologist at the Cedars Breast Clinic. The RVH Foundation also maintained its commitment to the MUHC Research Institute through the funding of fellowship and scholarships, to Nursing Education through the C.N.A. Bursary Program, as well as essential equipment throughout the hospital. ([www.royalvic.com](http://www.royalvic.com))

### **MCI Foundation**

The MCI Foundation, the smallest of the MUHC Foundations, had a successful 2005-06 year, and was able to fund the renovation of four patient bathrooms, which dated back to the 1950's. Thanks to generous supporters this project was completed at a cost of over \$400,000. The Montreal Chest Institute now needs to have its ICU completely renovated for at an estimated cost of \$1.5 million. The Foundation has launched a campaign and is counting on its generous donors to be able to finance this major project and meet its commitments. It continues to help support the *Best Care for Life* campaign. ([www.chestfoundation.com](http://www.chestfoundation.com))



## AUXILIARIES

**Patients and families, as well as MUHC staff, were once again the benefactors of the generosity in time and energy of the MUHC Auxiliaries. Over the 2005-06 the Auxiliaries provided funding for items and areas such as:**

### **The MCH Auxiliary**

10 sleeping chairs for parents; Portable baby measuring table; Furniture and toys for MRI waiting area; Infant baby scale for peritoneal dialysis; IV poles; Laparoscopy set and container; 10 rocking chairs, 5 stackable infant chairs and 5 stools on wheels; Non-invasive blood pressure monitor

### **The MGH Auxiliary**

Research Institute; Cystoscopes; CPA Pumps; Emergency Room Equipment; Mattresses; Renovations of the 12th-floor Orthopedics Family Room

### **RVH Auxiliary**

Surgical Instruments for Gynecology; Cardiology, Ultrasound Machines; Birthing Centre, Epidural Pumps and Baby Blanket Warmer; Montreal Children's Hospital, Foetal Heart Monitor; Decorating wards and family visiting areas; Various small equipment for pavilions

### **MCI Auxiliary**

Patient activities; Furniture; Equipment

### **The Friends of the Neuro:**

The Friends are volunteers who circulate a cart with a variety of personal items and reading material for patients and families. Occasionally, McGill University student volunteers also provide social and recreational activities through this group. The Friends of the Neuro also organize numerous fundraising activities throughout the year and money raised, together with the proceeds of the Café Neuro, is used to meet direct patient-care needs.



## VOLUNTEERS



Volunteer "Lou" Pacaud, has been volunteering twice a week at the MGH since 1983. In this almost past quarter century she has enjoyed every minute of her time spent with staff, patients, families and fellow volunteers. "I love it here," she says. "I love to meet interesting people and everyone is so nice."

Lou, whose real name is Loucille Eveline Harriet, has been pushing her "Loumobile,"—a cart—through the halls of almost all of the floors of the MGH since she started. Rita Giulione, interim manager of Volunteers for the adult sites, says she is a walking variety store selling items on her cart such as candy, gum, books and magazines, which she loads up at the MGH Auxiliary Hospitality Corner.

Even though she is approaching 100, she has not slowed down and sees no need to as long as she is fit and capable. This little dynamo is just one unique example of the type of volunteers the MUHC can happily say a big thank you to!

**In 2005–2006 close to 1,700 volunteers donated over 125,000 hours to support and assist patients and families who come to the adult and pediatric hospitals of the MUHC. Their "caring" makes our hospitals a much more welcoming place.**

Our volunteers are courageous, giving and unafraid to take risks. They come to the MUHC on a weekly basis to offer support and kindness to complete strangers. It takes courage to extend a hand to a fellow human being in pain and to share in his/her worry and fear. Although we focus a great deal of our energy on training volunteers at the MUHC, it always comes down to the volunteer and the patient. We cannot train for compassion or empathy. "Working with these people reinforces your faith in humanity," says Nevine Fateen, director of Volunteer Services at the MUHC adult sites.

"We greatly appreciate all of the volunteers for their energy and compassion toward our young

patients and their parents," says Ann Hebert, Volunteer coordinator at the Montreal Children's Hospital.

Staff always speak highly of the volunteers. They are our best recruiters and they are instrumental in creating an environment where volunteers want to stay. Many staff members volunteer themselves. We are immensely proud of them.

Our volunteers work within many different programs. One very unique program is called Step (Student training and education program). It is entirely supported by Pfizer and is directed at student volunteers from high school and CEGEP. It is meant to introduce students to health care in the hope that they will consider it as a career choice. We have welcomed groups of 40 volunteers every summer since 2004, and we hope it continues for years to come.

# CEDARS CANCER INSTITUTE

**The Cedars Cancer Institute was founded in 1966. 2005-06 represented its 40th year of fundraising to improve cancer-care in a comprehensive way for thousands of cancer patients who are treated at the MUHC annually.**

This single purpose has been the legacy of Cedars—raising much-needed funds to purchase diagnostic equipment and improving facilities, funding programs such as Cedars CanSupport, funding fellowships, research and public education programs. Since it started, over \$23 million has been contributed to adult oncology programs and facilities at the MUHC. As well, Cedars reaches out through the Sarah Cook Fund to pediatric oncology at

the MCH. Special mention goes to the inauguration of Sarah's Floor at the MCH, a newly renovated in-patient ward in hematology-oncology that was realized by the wonderful donors and sponsors of the Sarah Cook Fund.

In 2005-06, Cedars committed over \$1.5 million dollars in support of oncology programs and facilities. Initiatives include providing the necessary funds to upgrade a new CT Scanner in Radiology at the RVH from 16-slice to 64-slice capability, nuclear medicine camera for Diagnostic Radiology at the RVH, support for the Cancer Nutrition & Rehabilitation Program and support for the ovum preservation program. As well, Cedars has pledged \$120,000 to the Henry R. Shibata Scholarship Program

supporting young doctors and scientists in oncology. Awards were presented to: Dr. Dana Faingold [Ophthalmology], Dr. Jordan Steinberg [Urology], Dr. Stephanie Chevalier [Nutrition], Dr. Mona el-Khoury [Radiology], Dr. Nicholas Bertos [Genomics], and Dr. Thierry Muanaza [Radiation Oncology].

Cedars is proud of Cedars CanSupport and the leadership of founder, Gwen Nacos and the new Cedars Program Director Dr. Sharon Wexler along with all the CanSupport staff and volunteers. A special tribute goes to the Howick Family for their continued support of the Howick Humanitarian Fund.

([www.cedars.ca](http://www.cedars.ca))

## CEDARS CANSUPPORT

Since its inception in January 1987, Cedars CanSupport has been committed to being at the forefront in supportive cancer care at the MUHC. Through its two resource centre offices located at the Royal Victoria Hospital (RVH) and the Montreal General Hospital (MGH), a wide range of free, humanitarian and psychosocial services are designed and offered to meet the varying needs of patients and families as they navigate through their cancer experiences.

Humanitarian funds help cancer patients and their families with transportation and home-care expenses. Support groups are held both during and after clinic hours and are facilitated by the professional staff of social workers and psychologists and co-facilitated by the well-trained volunteers. As well, at both the RVH and MGH, CanSupport hosts the international 'Look Good Feel Better' program that helps female cancer patients with make-up and grooming advice. Other support services include a lending library, free wigs and hats, cancer-related educational and informational pamphlets, refreshments, in-patient and day-patient visits, and television and computer access.

This year, Cedars CanSupport sponsored holiday hospitality carts with sweets, chips, fruit and drinks at the RVH and MGH.

Gift baskets and monetary aide were donated to cancer patients in need and their families during the holiday season. Throughout the year, four free public information lectures on prostate, breast, and ovarian cancers and one dedicated to lymphedema were organized by CanSupport. The interdisciplinary MUHC cancer treatment professionals spoke at these lectures.

Cedars CanSupport's dedicated, trained and supervised volunteers, many of them former cancer patients, offered over 21,000 hours of compassionate care, friendly visits and helpful supportive care to patients and their families this past year. Interested people are invited, who have or have not experienced cancer, to become a CanSupport volunteer.

CanSupport strives for excellence and relevancy using multidisciplinary teamwork, evidence-based research, and accreditation by self-analysis and measurement. As a member of the multidisciplinary treatment team, our goal is to reach every newly diagnosed patient and their family in order to provide psychosocial support and information to help them navigate through this challenging illness.



# THE FUTURE MUHC

## OUR REDEVELOPMENT PROJECT

The MUHC is stewarding a future model of academic medicine built on two campuses—new facilities at the Glen Campus, which borders the City of Westmount and the Côte-des-Neiges-Notre-Dame-De-Grâce borough at the top of the St-Jacques Street escarpment, and fully modernized and expanded facilities at the Montreal General Hospital site or the Mountain Campus, located in the heart of Montreal on Pine and Cedar Avenues. The redeveloped MUHC will provide the best possible environment for patient care and academic medicine. Our vision is a MUHC for the next century where patients receive the most advanced and complex care and where medical research and teaching are integrated into all of our activities. The goal is to attract and retain the very best healthcare experts and to have state-of-the-art technology at our disposal, as well as be capable of adapting as the field of medicine evolves. Remaining true to our values and our academic mission will allow us to provide leading-edge tertiary and quaternary health care within the McGill Health Network (the RUIS), while also continuing to be a reference of excellence around the world.



A lot of important work took place during the 2005-06 year with respect to planning for and implementing the new MUHC sites. The following represent some of the year's highlights:

### Clinical Plan

Clinical and research leadership analyzed future needs for patient care, research and teaching. This is the foundation for everything that is to follow. The plan for the Mountain and Glen campuses offers the MUHC a unique opportunity to challenge itself on what sets the institution apart from other healthcare centres today, and what will make it outstanding in the future. The government must approve the entire functional program for both campuses before the green light to proceed with the architectural design and construction phases is provided.

### Mountain Campus Plan

After clinical leadership and the MUHC administration agreed to the distribution of services on each campus, a preliminary building master plan was established for the current Montreal General Hospital site. This master plan entails the reorganization of inpatient units to accommodate single patient rooms and a better floor set-up that meets the latest government standards. It also includes a new pavilion to house the Montreal Neurological Hospital, the Emergency Department and Trauma Centre.

Critical services, such as imaging, operating rooms and intensive care units, will be grouped together. This will improve patient safety. Other renovation projects, which are part of the redevelopment, also took place during the year. The state-of-the-art minimally invasive surgery suite is a fine example of how this hospital can deliver outstanding care.

### Environmental Remediation

Remediation of the Glen Campus was carried out by Hébert-Loiselle-Quéformat in accordance with the strict environmental regulations of the Quebec Ministry of Sustainable Development, Environment and Parks, the City of Montréal and the LEED (Leadership in Energy & Environmental Design) Green Building Rating System—an internationally recognized system for guiding and evaluating the design, construction and operation of high-performance green buildings.

### Public Consultations / Adoption of By-laws

The City's municipal council voted unanimously to pass draft by-laws on the proposed amendment to the CDN-NDG Borough's urban plan so that the MUHC

could build its Glen Campus. This motion paved the way for the public consultation sessions organized by the *Office de consultation publique de Montréal* (OCPM). More than 200 citizens participated and the MUHC gained invaluable insights into their concerns. Westmount held a parallel public process, independent of the OCPM. At a general sitting of the Borough Council of Westmount, the by-law RCA05 23036, entitled "By-Law to Further Amend Zoning By-Law 1303 - MUHC," was adopted. Meetings with the City and the Ville-Marie Borough also got underway for the Mountain Campus.

### Architectural Charette

The MUHC invited architectural experts from Canada and the United States to review the master plan for the Glen Campus. Experts analyzed the initial concept's urban integration, building flexibility, as well as the location of each service. Particular attention was given to the proposed site layout, general circulation of goods and movement of vehicles and pedestrians. Advice on sustainable design elements was also provided.

Clinical and research leadership analyzed future needs for patient care, research and teaching.



# McGILL UNIVERSITY HEALTH CENTRE BOARD OF DIRECTORS 2002-2006



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## QUALITY AND RISK MANAGEMENT

**Nine Quality and Risk Management committee meetings were held during 2005-2006.**

**The following issues were reviewed:**

- > Status of Clinical Information System implementation
- > Hospital infection rates, specifically C. Difficile
- > Sentinel policy implementation
- > Review of insurance coverage
- > Implementation of Nursing Best Practice Guidelines
- > Review of preventive maintenance issues
- > Fire/disaster planning
- > Update on Quality Assurance Research Ethics
- > Pharmacy delivery issues
- > Housekeeping services
- > Food services
- > Radiation oncology quality management program
- > Management of stroke patients
- > Accreditation status updates
- > Updates on patient satisfaction
- > Re-use of Single Use Medical Devices
- > Update on Pathology Laboratory services
- > Summary of claims against hospital
- > Infected Healthcare Worker Policy
- > Regular updates on incident/accident rates
- > Mission reports on quality activities

**Multiple quality improvement and safety projects were implemented across all sites. Examples include:**

- > creation of the Patient Safety Coordinator position
- > development of the MUHC patient safety plan
- > development of the code stroke algorithm
- > safety culture survey pilot at the MNH
- > MSSS accreditation of MCH trauma team as part of Moderate and Severe Brain injury consortium
- > 16 patient safety training sessions, which addressed 300 participants
- > 34 program-specific patient satisfaction surveys
- > first issue of QM newsletter
- > pilot Palliative Care CCHSA standards
- > *Lutte contre le cancer*

# FINANCIAL REPORT

# FINANCIAL REPORT

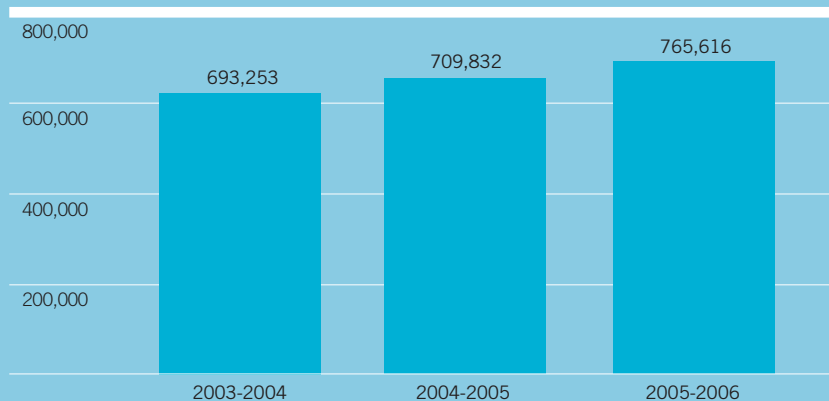
March 31, 2006

## EXPENSES

(thousands \$)

	2003-2004	2004-2005	2005-2006
Nursing Care	163,205	162,884	162,884
Diagnostic and Therapeutic Services	221,811	228,810	228,810
Technical and Support Services	116,035	117,917	117,917
Administration	35,254	37,071	37,071
Other	156,948	163,150	163,150
<b>Total</b>	<b>693,253</b>	<b>709,832</b>	<b>709,832</b>

(thousands \$)



2003-2004



2004-2005



2005-2006

- Diagnostic and therapeutic services
- Nursing care
- Other
- Technical and support services
- Administration

# FINANCIAL REPORT

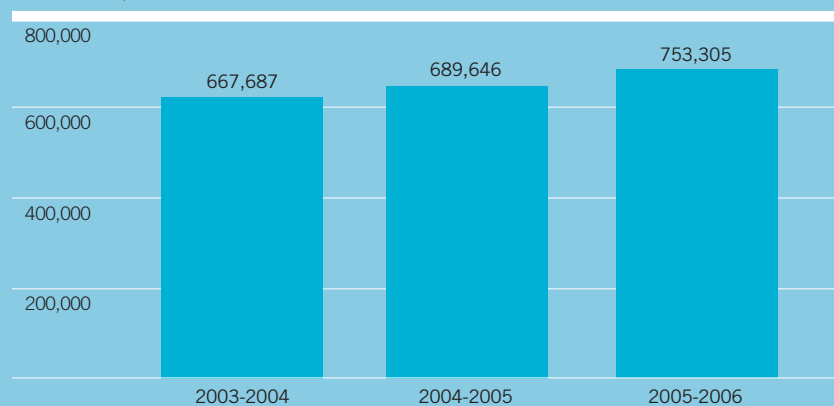
March 31, 2006

## REVENUE

(thousands \$)

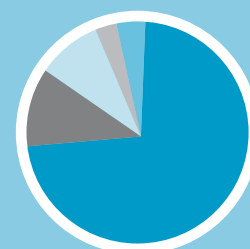
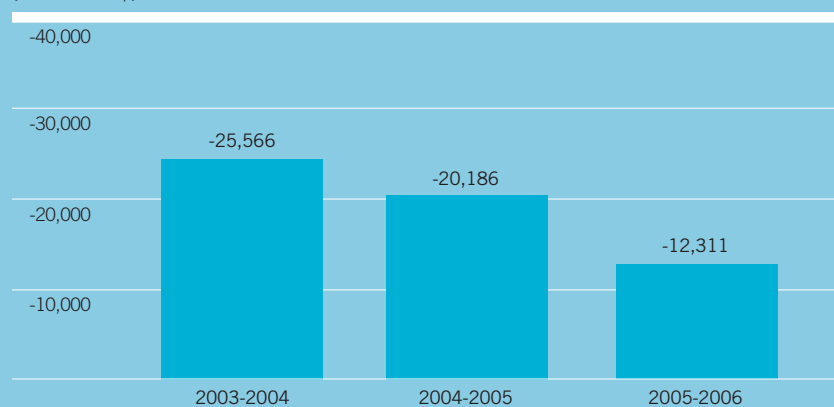
	2003-2004	2004-2005	2005-2006
RRSSS	479,504	497,524	563,202
Sales & Recoveries	22,895	18,901	25,659
Patients	19,409	19,555	17,048
Research	67,005	71,758	64,427
Other	78,874	81,908	82,969
<b>Total</b>	<b>667,687</b>	<b>689,646</b>	<b>753,305</b>

(thousands \$)

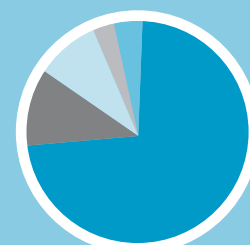


## SURPLUS (DEFICIT)

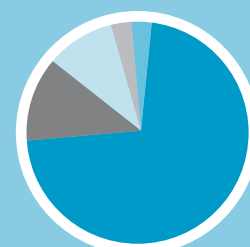
(thousands \$)



2003-2004



2003-2004



2005-2006





# FINANCIAL REPORT

March 31, 2006

INPATIENTS	2001-02	2002-03	2003-04	2004-05	2005-06
<b>Bed Set-up</b>					
Acute Care - Adults and Children	1,056	1,094	1,079	1,041	1,029
Newborns - General Care	26	26	26	26	26
Newborns - Intensive Care	55	55	55	55	55
Chronic Care - Adults	115	115	115	117	117
<b>Total</b>	<b>1,252</b>	<b>1,290</b>	<b>1,275</b>	<b>1,239</b>	<b>1,227</b>
<b>Admissions</b>					
Acute Care - Adults and Children	31,356	32,331	33,509	32,593	33,959
Newborns - General Care	3,340	3,378	3,497	3,484	3,518
Newborns - Intensive Care	702	664	740	699	741
Chronic Care - Adults	336	400	422	401	424
<b>Total</b>	<b>35,734</b>	<b>36,773</b>	<b>38,168</b>	<b>37,177</b>	<b>38,642</b>
<b>Patient Days</b>					
Acute Care - Adults and Children	299,610	299,192	296,719	284,006	286,235
Newborns - General Care	8,350	8,295	8,485	8,483	8,359
Newborns - Intensive Care	12,889	13,627	15,327	14,070	13,723
Chronic Care - Adults	42,475	48,152	42,930	45,747	48,616
<b>Total</b>	<b>363,324</b>	<b>369,266</b>	<b>363,461</b>	<b>352,306</b>	<b>356,933</b>
<b>Average Length of Stay</b>					
Acute Care - Adults and Children	9.56	9.25	8.85	8.71	8.43
Newborns - General Care	2.50	2.46	2.43	2.43	2.38
Newborns - Intensive Care	18.36	20.52	20.71	20.13	18.52
Chronic Care - Adults	126.41	120.38	101.73	114.08	114.66
<b>Weighed Total</b>	<b>10.17</b>	<b>10.04</b>	<b>9.52</b>	<b>9.48</b>	<b>9.24</b>
<b>Average Occupancy</b>					
Acute Care - Adults and Children	77.73%	74.93%	75.34%	74.75%	76.21%
Newborns - General Care	87.99%	87.41%	89.41%	89.39%	88.08%
Newborns - Intensive Care	64.20%	67.88%	76.35%	70.09%	68.36%
Chronic Care - Adults ( note 1 )	101.19%	114.72%	102.28%	107.12%	113.84%
<b>Weighed Total</b>	<b>79.51%</b>	<b>78.43%</b>	<b>78.10%</b>	<b>77.90%</b>	<b>79.70%</b>

Note 1: Due to the fact that the bed utilization exceeds the number of chronic beds declared in the official AS-478 report, the occupancy rate of the chronic care adults exceeds 100%.

# FINANCIAL REPORT

March 31, 2006

ALTERNATIVE CARE TO HOSPITALIZATION	2001-02	2002-03	2003-04	2004-05	2005-06
<b>Ambulatory Services (visits)</b>					
Emergency	133,821	131,619	132,083	134,580	138,484
Outpatient Clinics	645,557	657,943	668,482	644,131	634,953
Family Planning	21,333	20,757	22,625	19,365	20,341
<b>Total</b>	<b>800,711</b>	<b>810,319</b>	<b>823,190</b>	<b>798,076</b>	<b>793,778</b>
<b>Day Care Medicine (treatment day)</b>					
Physical Disease	57,960	62,758	67,002	68,387	86,652
Parenteral Nutrition	6,693	7,045	6,293	6,257	6,835
Oncology and Hematology	18,982	16,976	20,162	21,821	21,732
<b>Total</b>	<b>83,635</b>	<b>86,779</b>	<b>93,457</b>	<b>96,465</b>	<b>115,219</b>
<b>Day Hospital (attendance)</b>					
Geriatrics	2,352	2,183	2,372	2,084	2,932
Psychiatry	13,582	12,949	13,458	11,794	11,272
<b>Total</b>	<b>15,934</b>	<b>15,132</b>	<b>15,830</b>	<b>13,878</b>	<b>14,204</b>
<b>Nursing Day Care</b>					
Day Surgery (patient)	17,539	18,453	18,857	17,212	16,703
Endoscopy and Cystoscopy (treatment)	19,987	19,861	20,917	21,452	23,005
<b>Total</b>	<b>37,526</b>	<b>38,314</b>	<b>39,774</b>	<b>38,664</b>	<b>39,708</b>
<b>Others (treatment)</b>					
Hemodialysis	41,946	43,652	44,800	45,543	46,082
Peritoneal Dialysis	23,137	24,543	20,107	19,022	17,670
Interventional Radiology	7,023	7,255	8,713	9,352	12,333
Cardiac Angiography	4,787	4,176	4,193	4,002	3,791
Lithotripsy	2,239	807	711	758	876
<b>Total</b>	<b>79,132</b>	<b>80,433</b>	<b>78,524</b>	<b>78,677</b>	<b>80,752</b>



## **MUHC HOSPITALS**

### **MONTREAL CHILDREN'S HOSPITAL**

2300 Tupper Street,  
Montreal, Quebec, H3H 1P3

### **MONTREAL GENERAL HOSPITAL**

1650 Cedar Avenue,  
Montreal, Quebec, H3G 1A4

### **MONTREAL NEUROLOGICAL INSTITUTE/HOSPITAL**

3801 University Street,  
Montreal, Quebec, H3A 2B4

### **ROYAL VICTORIA HOSPITAL**

687 Pine Avenue West,  
Montreal, Quebec, H3A 1A1

### **MONTREAL CHEST INSTITUTE**

3650 St-Urbain,  
Montreal, Quebec, H2X 2P4

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