



The magazine

Volume 03 — 2023

Tender hearts welcome

Taking care
Care—
a verb,
an action,
a vocation.

Transforming the system
We're one
minute
to midnight.

Planning for the future
It takes
trailblazers
to build
new paths.

The heart of the Foundation
We're all in
this together.



Thank you for changing lives.

Your unwavering commitment allows the Montreal Heart Institute to tirelessly provide care, prevent disease, share its know-how and explore new treatments.

In response to the major challenges facing our healthcare system, the Foundation generously supports the excellence that makes all the difference.

As you read the following articles, you'll dive deep into the heart of the personal and professional stories of people who were transformed or spurred on by your invaluable support. Men and women whose courage is matched only by their burning desire to make the world a better place—a desire you share.

Thank you for helping us change individual lives today, and our collective lives in the years to come. Together, we can build a future where all hearts are strong and healthy.

Credits

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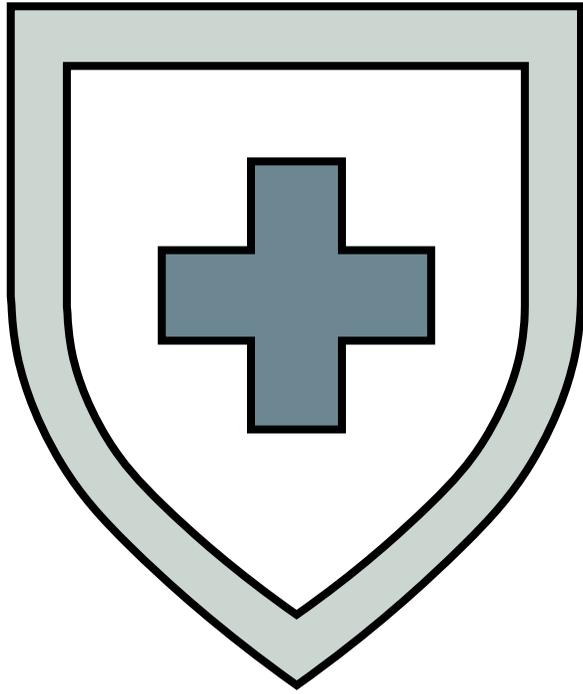
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Printing

Transcontinental

Paper

The pages of this magazine were printed on Enviro Print Text FSC 160M, and the cover was printed on Enviro Print Cover FSC 200M.



United
to save
thousands
of lives.

TC Transcontinental
is proud to support the
mission of the Montreal
Heart Institute Foundation.



Let's make wholehearted changes together



Dear reader,

As of this writing, 9 out of 10 Canadians over the age of 20 have at least one risk factor for heart disease. That's huge. Given the severity of this alarming statistic, we must act. This collective awareness has been the driving force behind our activities.

The Montreal Heart Institute Foundation is an accelerator. By working together, we have the power to develop treatments and prevention tools to help more people and radically transform our healthcare system.

How can we improve people's quality of life? How can we help patients get better and stay healthy? How can we guide them in changing their habits? How can we help them avoid getting sick? Thanks to donations towards research, prevention, training and treatment, the Foundation can give the Institute—a world leader in cardiovascular healthcare—the tools it needs to tackle the challenges that lie ahead.

Financing is vital to these public-interest projects.

Whether directly or indirectly, heart disease affects us all. We know that not everyone is as fortunate as we are. Giving isn't just a responsibility—it's a privilege. It means having a real impact and doing something meaningful by acting now.

Please join us in becoming agents of change and share in our philanthropic vision by enriching it with your personal values. This kind of transformation and change in perspective requires deep awareness to get on board.

Let's effect great change together.

In these pages, you'll meet men and women who, like you, are driven by an eagerness to make a difference. Be inspired by researchers, teachers, philanthropists, and former patients who all spoke from the heart. By the end, we have no doubt that you'll want to help us make the world a better place.

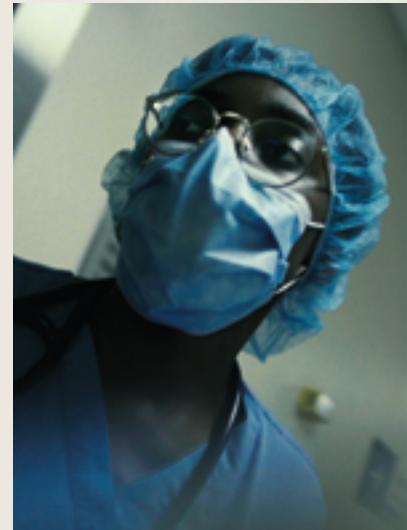
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CEO of the Montreal Heart Institute
Foundation

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Taking care

Care—a verb, an action, a vocation.

A gentle exchange between two human beings—one who gives and one who receives.

Every day, humanity shines within care units.

Every day, humanity wins.

Dive into the heart of a high-paced emergency room, read about everyday people whose lives were changed and witness the kind relationship between patient and caregiver.

“I was in no condition to walk yet, so she said, ‘I’ll be here on this floor all night. If there’s anything you need, don’t get up—just buzz me. Even if you just need someone to talk to, you can buzz me.’”

Martin Bernier

An open-heart surgery patient

Cheating death at 34

— Kim Auclair

A patient who had myxoma surgery in 2022

At only 34, Kim Auclair, mother of an eight-year-old boy and a six-year-old girl, never would have imagined that inside her chest a lump would soon almost stop her heart. Through the story of her operation, her fears, the people she met and the small victories, this young woman tells us about her personal experience—a journey of hope and humanity.

Discomfort while exercising: The first alarm bell

In the summer of 2019, a few years after her two children were born, Kim decided to get back in shape and started a workout program to lose some weight. For two years, her endurance steadily improved and she shed the extra pounds—everything seemed perfect.

But little by little, her performance deteriorated: “Each time I started a cardio workout, I felt a pressure on my sternum. It would appear in the first few minutes. But since it wasn’t painful, I kept going. After a few minutes, though, I would feel like I was about to faint. One day when I went tobogganing with the kids, I did a little sprint to get up the hill, and then I stopped dead in my tracks. For 5 minutes, I saw stars. I had to wait for it to pass so as not to collapse. That was when I realized something wasn’t right and that I had to see a doctor as soon as possible.”

Knowing your body and what it’s capable of: A game-changer

According to Kim, doing regular physical activity not only allowed her to improve her health, it also helped her quickly spot the signs of a serious problem:

“If I didn’t exercise frequently, if I didn’t know my heart, I would have ignored the signs—I would have been less attuned to them. I wouldn’t have known that something wasn’t right, I would have just thought I felt bad because I was out of shape, and that would probably have been fatal. Being sensitive to the changes in my physical ability saved my life.”

Diagnosis and surgery: Taking the difficult first steps towards recovery

Alarmed by the recent events, Kim went to a polyclinic where echocardiograms were performed. That’s when she heard her diagnosis. “The cardiologist told me I had a myxoma: a gelatinous tumour growing inside my heart. In my case, it was pretty big—like a golf ball. If the lump broke free, I could have a stroke and die, so I needed surgery quickly to remove it.”

The news was a shock and a total surprise to this healthy young woman: “It felt unreal. You say to yourself, ‘Okay, but why me?’ You’re about to have heart surgery and you can’t know exactly all that will entail. It’s a lot to take in all at once. When they mentioned surgery, I knew it was serious. That’s a scary word. I broke down, I cried. I immediately thought of my kids—are they going to lose their mom? That was the idea that kept running through my head.”

Putting your life in the hands of world-class specialists

As soon as she was diagnosed, Kim was sent to the Montreal Heart Institute, where specialists were expecting her.

“Despite my fear, I felt reassured. My family kept telling me, ‘You’re exactly where you need to be. You couldn’t be in a better place.’ That allowed me to let go, to surrender to the process—because I had no control over what was about to happen, and I knew that I was in good hands.”

She was told that, exceptionally, Dr. Michel Pellerin would be on call on a Saturday morning to perform the delicate operation. “I remember feeling very important because I had been told that there were no surgeries on the weekend. My situation was taken seriously, and people at the Institute were making sure I received the best care as quickly as possible from the best specialists.”

“A lady came to shave me from head to toe, then I was taken to the operating room. The next day, I was already walking. A few days later, I was back home. Recovery was so good and so quick that I was discharged. The nurse told me, ‘You’re not walking, you’re running!’ But yeah, I ran to get back to my kids.”

The people behind the Institute: A sensitive approach, reassuring expertise

Throughout her time at the Montreal Heart Institute, Kim was treated with a truly human touch: “I never had the feeling that I was just a number or that I was bothering anyone if I needed something. Everyone was there for me and helped me wholeheartedly. The professionalism and kindness of the people who cared for me transformed an experience that could have been traumatic into a relatively pleasant memory.”

Memorable encounters with staff and patients

During her time at the Institute, Kim met people who helped her stay strong and feel like she wasn't alone facing these incredible challenges.

"There was the gentleman I shared my room with before the operation—we told each other stories and the reasons that brought us to the Institute. He was so serene. For him it was a regular routine, and his composure really calmed me. I think it wasn't his first time having an operation there, and he felt very confident being in their hands. Before he left, he just said: 'If my wife calls, could you answer and tell her I've gone to have my surgery?'"

I'll always remember the night nurse too, who kept watch over me after the operation. She was so cheerful and smiley, she was a real gem. We laughed a lot together. The chemistry between the entire staff was great, which meant the atmosphere was calm and reassuring."

Dr. Michel Pellerin, a warm-hearted expert

When Kim found out a few days beforehand that it would be Dr. Michel Pellerin performing her surgery, she was informed that she'd be benefitting from his singular expertise, too. "The first time I saw him, I was told that because of his qualifications, he was able to operate on me by simply making an incision on the side of my torso. Not having to live with a giant scar running the length of my chest was an excellent piece of news, and it also showed a great deal of compassion and sensitivity."

An invitation to share her story with the Foundation

"My surgeon's confidence was really contagious. He was so calm, so sure everything would be okay, that I was instantly at ease. After the operation, he came to see me, all smiles, and showed me a picture of the lump that he'd removed from my heart. He was sincerely happy. Then he invited me to get involved with the Foundation and share my experience. I accepted, because of him. It was my way of saying thank you for saving my life."

Learning to live life to the fullest and push the limits

There was a definite before and after—the unexpected challenges that Kim had to overcome in the past year changed her outlook on life forever. "It's like getting a second chance. It might sound simple, but it really made me realize that life is fragile. Now I tell myself, 'Take full advantage, get out of your comfort zone, stop limiting yourself, try everything, get your feet wet, live life to the hilt.'"

A few months after her surgery, when she was once again invited to take part in her company's union, Kim didn't hesitate and went for it. "Everyone could see me doing it, but before I wasn't sure. I doubted myself. This time I said yes right away, in order to learn new things, have new experiences, and always surpass myself."



"The staff at the Institute saved my life and made it so my children still have a mom. I swore to my kids that I'd come home, and thanks to those skilled professionals I was able to keep my promise."

“My values as a caregiver guide me in everything I do. As long as I stay healthy and can be useful, that’s what I intend to do. There are so many ways to help others and make a real difference.”



Heart to heart: The special relationship between nurse and patient

Clarissa Nolasco

Nurse at the Institute’s Heart Failure Clinic

From the moment she walked through the doors of the Montreal Heart Institute in 2006, Clarissa Nolasco has never looked back. The clinical nurse tells us about the unparalleled nursing care they provide, focused on personalized support, and their remarkably human approach, which makes the hospital so unique.

A philosophy of nursing care in which passion and compassion go hand in hand

Arriving at the Montreal Heart Institute in 2005 for an internship at the end of her studies, Clarissa discovered a workplace where things were done differently, where the nursing staff was happy and fulfilled. “As a student, you visit many clinics as part of your practicum. It’s very easy to compare a variety of working environments. At the Institute, people looked really contented. They were smiling. The nurses were cracking jokes and working merrily, and they enjoyed an uncommon closeness with the care teams, doctors and patients. To me, this seemed incredibly rare and precious.”

From the first moments, the Institute’s approach to care—which emphasizes patient support—struck a chord with the young nurse and her work philosophy, and she decided to pursue her career there. “In 17 years, I’ve never once gone to work without a smile on my face. I’ve never come in half-heartedly. It’s a pleasure to be part of this wonderful team, and it’s invigorating to know that our efforts make a huge difference for patients.”

The work at the Heart Failure Clinic: Caring for people’s well-being every day

Since she took up her post in 2006, Clarissa has worked within several specialized units at the Institute, from the Coronary Unit and the Surgical Unit to Cardiac Emergency and the research department. Today she’s at the Heart Failure Clinic, where each nurse is responsible for following about 500 outpatients, five days a week.

“We see patients every day—we follow them closely to ensure they stay healthy and maintain a good balance and to make sure they properly recognize the signs of a decompensation episode so they can avoid having to be hospitalized. We work with them over a long period, we get to know them, they tell us how they’re doing, and we support them in a personalized way. Since the doctors spend a lot of time doing research in order to offer the greatest number of treatment and care options, we help patients navigate everything they need to know so they can play an active role in their own healthcare.”

Being present: Caring beyond clinical acts

For this incredibly professional and warm-hearted nurse, her job goes beyond the technical aspect of care to include the human dimension:

“Patients appreciate how we take care of them, and they often tell us. The way I see it, a nurse’s job is to support, reassure and develop a rapport with patients. As a caregiver, this kind of quality relationship allows me to ensure they’ve properly understood what’s going on and that they’re able to trust us. It’s very enriching on a personal level. I know my patients, I talk to them, and they’re happy to see me at our appointments. Families feel supported, and that’s the way it is for all the care my colleagues and I provide.”

“We also share the more difficult moments, the loss of independence, the transition to palliative care. In those latter cases, we’re accompanying patients more than providing active care. We adapt to the rhythm of the patient and their family, and we’re with them right up to the end. It’s a deeply human aspect of my job.”

Clarissa recalled a pivotal moment from early in her nursing career: “I was watching a more experienced nurse at the bedside of a patient with arrhythmia, a woman nearing the end of her life. Very naturally, the nurse got closer, sat down, and held her hand to be with her as she passed on. I remember thinking, ‘This is what nursing is all about. Just being present.’ The nurse was there for the woman. And even though she could no longer see, she felt the nurse’s presence.”

Getting involved in order to change things

For several years now, Clarissa has been the Foundation’s official ambassador for the Emerging Leaders Committee, an organization that brings young entrepreneurs and healthcare workers together to achieve a common mission: rally people around the cause of cardiovascular health.

Doctors of the World: A unique partnership

For the past 5 years, the Montreal Heart Institute has helped the community by offering free healthcare to people without a social safety net, through Doctors of the World. As the initiator of this compassionate humanitarian project, Clarissa acts as the liaison between the international organization and professionals at the Institute.

“The team of volunteer doctors and I provide care for patients who, for all sorts of reasons, don’t have access to health insurance. I’m incredibly proud to be part of a project like this—the Institute is the only healthcare centre in Quebec that has a partnership with Doctors of the World.”

With a kindness that knows no bounds, Clarissa dreams of a day when universal healthcare is truly a reality. She also hopes with all her heart that the quality of nursing care and the patient-staff relationship, which makes the Montreal Heart Institute such an exceptional place, remains unchanged.

Emergency cardiac care: In the eye of the hurricane

— Dr. Julie Sirois

Chief of Emergency Medicine

Dr. Julie Sirois was initially pursuing a career as an oboist, but instead became Chief of Emergency Medicine at the Montreal Heart Institute in 2021. This superwoman has much to say about her job and what it's like to work in the emergency room at a specialized centre.

The Montreal Heart Institute: The perfect place to flourish

A practising physician since 2010, Dr. Sirois first specialized in family medicine, then trained in emergency medicine as a subspecialty before joining the Montreal Heart Institute in 2014. “After I finished school, I interned at the Institute and immediately fell in love with the place. The friendly, tight-knit team of doctors here have known each other for years. There's a clear sense of equity: everyone collaborates on an equal level, whether you're a nurse or a doctor. It's wonderful to see.”

At the beginning of her career, she was also excited by the exceptional opportunities that came with working in specialized emergency.

“I'd just come back from the Far North, where I worked at a frontline centre with very limited resources. Compare that to the Institute, which is extraordinary from a technical standpoint—healthcare staff have access to all the tools they need. Our cardiology experts have extensive and specific knowledge, and the quality of patient care is next level.”

At that pivotal stage of her career, Dr. Alain Vadeboncoeur, the Chief of Emergency Medicine at the time, invited her to stay. Seven years later, her mentor passed her the torch and things are running as smoothly as ever.

Working in emergency: The race against the clock

Why choose to be at the frontline every day? For Dr. Sirois, the answer is clear: this energetic woman feels right in her element in the ER. “I love the adrenaline you get from working in acute care. I feel most comfortable, most useful when I'm in the middle of the action. I feed off that rush!”

The advantage of a specialized centre: Having the resources needed to save lives

As an ER doctor at a centre specializing in cardiology, Dr. Sirois sees patients with heart issues every day. She performs resuscitations and assesses why someone may be experiencing chest pain, palpitations or respiratory distress.

“What makes us different from other emergency rooms is that everything we need to take action is right here—scanners, MRIs, operating rooms, you name it. For instance, if a patient comes in and needs emergency heart surgery, we can proceed within 20 minutes because we're a subspecialty.”

In an environment where every minute counts, these specialized resources make a world of difference. “I remember one of my first shifts as a young doctor here. I was alone and I performed three resuscitations at the same time, which is very rare. If we were in the Far North, these patients would have died under our care—but thanks to the amazing resources at our disposal, we were able to save their lives.”

The Foundation: The cornerstone for training and excellence in emergency services

According to the Chief of Emergency Medicine, the Foundation is at the core of every action in her department at the Montreal Heart Institute. “Thanks to donor support, the emergency team is able to get advanced training to strengthen their knowledge, treat patients faster, and guide them quickly towards the right resource, which means better diagnosing. Education is central to our practice.”

The Foundation has made many training opportunities possible, including in echocardiograms, radiology, virtual reality simulations, knowledge-sharing through clinical case studies, and targeted AI. It’s the kind of knowledge-building that benefits the medicine community at large in Quebec, because doctors who intern at the Institute can bring what they’ve learned to other hospitals throughout the province.

Becoming a global leader in emergency cardiac care

Dr. Sirois is bursting with ideas and sees a bright future for the Institute. “With financial support from the Foundation, we hope to create a fellowship in emergency cardiac care where doctors will train intensively for 12 months to earn their certification. We’re also building a website to share our protocols with the rest of the medical world.”

And what’s her biggest dream? “My vision is for the Institute to be a global leader in emergency cardiac care and for us to share our expertise with other ERs to optimize patient care in this specialized field.” With a passion for teaching, this mother of two has been able to juggle her music and medical careers for a while now. Every day, she swaps her oboe for a stethoscope from an eagerness to treat patients, and firmly believes that by constantly improving yourself where you are, you can truly make a difference in the world.



“Everything became clear to me during a humanitarian trip to Sri Lanka, after it was hit by a tsunami that ravaged South Asia. I wanted to take care of people—that feeling had been inside me for a long time and it only grew stronger. That trip solidified my decision to do more for people than I could as a musician.”

A race for life: The story of a marathon runner with a heart murmur

— Martin Bernier

An open-heart surgery patient in 2003



“I count my lucky stars every day. I’m now healthy thanks to the Institute. People see me and say, ‘Martin, you’re unstoppable! How do you do it?’ It’s simple— I just feel good.”

Martin Bernier, 63, had open-heart surgery when he was just 45 years old and in peak physical shape. On the heels of a 53-day bike trek across Canada, he shared memories of everything he went through during his stay at the Institute.

When a hip surgery turns into heart surgery

For Martin, an active man with several marathons under his belt, the last thing he ever expected was to have to leave Saguenay in 2003 for heart surgery. “I had to go to Chicoutimi for a hip replacement, which isn’t too unusual for people like me who are avid runners. During the pre-op checkup, my orthopedic surgeon detected a heart murmur. He immediately referred me to a local cardiologist. After he examined me, he told me I had to get to the Montreal Heart Institute as soon as possible for open-heart surgery.”

“I remember the cardiologist telling me, They have so much experience over there. The surgeon you’re going to meet, Dr. Philippe Demers, is the expert in mitral valve repairs, which is what you need. He trained outside the country to perfect his skills in that area.”

Understanding the inexplicable:

A problem of congenital origin

When he was just 45 years old, this father and art teacher struggled to understand why he had a heart condition. His diagnosis shook him to the core, and he started asking himself all kinds of questions.

“It was like a dream—it didn’t feel real. I was asking myself all these questions because it felt so unfair. I’d always eaten well and exercised. I didn’t drink. Yet suddenly, I was finding out that I needed open-heart surgery.”

Martin recalls bringing up breathing problems to his GP a few months earlier. “I was starting to experience issues when I was training, but my doctor reassured me that since I’d run 14 marathons up to that point, I had nothing to worry about. I was completely healthy.”

At the Montreal Heart Institute, they explained that his particular heart issue was mechanical in nature and had nothing to do with his lifestyle. It was a genetic heart condition beyond his control that got worse over time.

The Institute’s healthcare workers: Kind folks you can trust

Martin remembers everyone at the Institute being dedicated, supportive and empathetic during his stay. From his first meeting with Dr. Demers, he felt like he was in good hands. “I liked him right away! He was a young doctor and he talked to me like we were buddies, which made me feel better. He looked at my file, added me to the list as a priority case and said, ‘The next time we see each other, it’ll be for your surgery.’”

Nurses always by your side

Among all the different healthcare professionals who took care of him throughout his stay, two nurses in particular stood out as individuals that Martin will never forget.

“There was one nurse who was there when I woke up and who was around for a long while after my surgery. She explained how it went and told me everything I needed to know. I was in no condition to walk yet, so she said, ‘I’ll be here on this floor all night. If there’s anything you need, don’t get up—just buzz me. Even if you just need someone to talk to, you can buzz me.’”

“I also remember being really hungry after the operation. It was way past dinnertime, so this other nurse who was checking up on me told me, ‘I’ll make you a ham sandwich. How do you like it?’” Throughout his recovery, Martin was moved by every little act of kindness shown to him by the devoted nursing staff.

Biking across Canada at 63 years old

This intense period of Martin’s life awakened his steadfast desire to achieve new dreams and live life to the fullest. “It changes your way of thinking. It makes you want to do things now, take advantage of every moment and tell the people you love how much they mean to you. It makes you aware of everything you have in life.”

In summer 2022, after many months of training, Martin fulfilled one of his biggest dreams: biking across Canada. “We left Vancouver on July 4 and arrived in Montreal on August 26. We averaged 140 km a day. The entire time—despite the hills, the wind and the exhaustion—I told myself how lucky I was to be doing this.”

With a happy heart, he expressed how grateful he was for the experts at the Montreal Heart Institute, without whom his bike trip wouldn’t have been possible. And he’s nowhere near done, with two more adventures on the horizon. “My wife and I want to visit Italy and do some biking over there. After that, I’d love to bike across Gaspésie.”



2

Transforming the system

We're one minute to midnight.

Our healthcare system, in its current state, is on the verge of reaching its capacity limit.

How will we take care of an aging population that's getting sicker and sicker? In the world of medicine, change is on the horizon.

Be inspired by visionaries with the courage to question, rethink and shape the future of health and humanity.

"It's crazy to think that the same four risk factors are at the root of the diseases with the highest mortality rates—diet, smoking, alcohol use, and inactivity. It's high time for this to change."

Dr. Josep Iglesias-Grau
A cardiologist doing a fellowship
in preventive medicine

A more holistic approach to medicine that looks at the patient as a whole

— Dr. Philippe L.-L’Allier

Director of Prevention and hemodynamics cardiologist

Recently appointed Director of Prevention, Dr. Philippe L.-L’Allier’s mind is overflowing with ideas for projects, but he remains clearheaded about what can be realistically accomplished. As an intervention cardiology specialist concerned with current challenges to preventive medicine, he shared his vision of modern cardiology and what lies ahead for the EPIC Center.

A hemodynamics cardiologist’s perspective on the power of prevention

With a love for interventional cardiology, Dr. L.-L’Allier has always paid particular attention to patients’ overall health. “My interest in atherosclerosis—also known as coronary artery disease—has driven my whole career. During my fellowship in the States, I focused on researching and developing treatments for this condition. Although everything is centred on treatment and surgery, I believe that a holistic approach to modern cardiology—one where we look at the patient as a whole—is both realistic and ideal.”

Dr. L.-L’Allier has had a fairly unique career path, which is an advantage in the field of prevention. “I’ve always considered it obvious, natural and completely normal to pay close attention to how a patient’s lifestyle influences their health. This doesn’t conflict with more technical or interventional medical approaches—I believe it complements them. My background in hemodynamics gives me a different perspective on prevention—I can see how a particular change in habit affects a patient. As a hemodynamics cardiologist, I have a holistic view of that impact. In a single day, I can treat a heart attack, then think about the patient’s options in terms of adjusting their lifestyle.”

New role, new challenges: The new Director of Prevention

In September 2022, Dr. L.-L’Allier proudly took over for Dr. Martin Juneau as Director of Prevention. “I’ve known Dr. Juneau for over 20 years. I have so much respect for him—he’s a man of science, with great passion and a talent for simplifying medical jargon. He gave me the opportunity to continue his pioneering work at an exceptional centre that’s unique in the world. After eight years as Chief of Hemodynamics, I feel like I’ve come full circle because prevention is perfectly in line with my long-term vision of modern cardiology. It’s a privilege to take this step and expand my knowledge in this area, so we can hopefully make a difference.”

A race against the clock to unburden the healthcare system

Dr. L.-L’Allier believes that in 2023, it’s more important than ever to put prevention at the heart of our priorities. “For example, we’re expecting diabetes to be an increasingly significant concern in the coming years. How will we take care of these patients and all their related health issues, cardiac or otherwise? We need to limit these chronic illnesses because we don’t have enough resources in our healthcare system. We need to act early and prevent people from ever having a heart problem.”

“The biggest challenge is persuading the general population by sharing information. People don’t like being told what to do, so we simply have to explain it to them. Without forcing them to do anything, we need to offer reasonable suggestions that will help them implement effective changes. As I often say, our goal is to make them feel better, improve their quality of life significantly, and help them maintain good habits. It can be as simple as giving them a prescription for fresh air, where we’ll encourage them to take a walk in nature. It’s good for both the body and the soul, so it’s a win-win.”

The future of the EPIC Center: More research, more action

Eager to swiftly move forward with their key heart disease prevention initiatives, the new director of the EPIC Center has a clear vision of its future. “We have these big research projects, and we want to create an environment where scientific discovery is quickly put into practice at the prevention centre. The knowledge should translate directly into application.”

“We’d like to offer training to doctors, share our knowledge with the public and reach out to folks by finding creative ways to communicate with them—whether that’s through radio, social media, sporting events, or something else—to give them a genuine chance to access the information. We want to do more research and intervention in the fields of sports cardiology, neurocognition and cardiometabolic health.”

Prevention for all: Reaching people through telehealth

Most Quebecers have very limited access to Montreal's EPIC Center. But according to Dr. L.-L'Allier, this could soon change thanks to new infrastructure that will allow them to offer their support services remotely.

“Telehealth and telerehabilitation mean we can interact with people in remote regions like Abitibi. We've developed better, more suitable tools since the pandemic, but this kind of technology requires a considerable amount of investment in infrastructure. We need sensors, heart rate monitors and other specialized equipment for our patients so we can give them feedback on their exercises. With support from the Foundation and its donors, we can provide prevention services throughout the province and beyond.”

Dr. L.-L'Allier's brother, Mathieu, is also involved in the fight against heart disease as a board member at the Montreal Heart Institute Foundation. “He's incredibly committed to the cause—I wanted to share that. This mission of ours is driven by our family history, because our father died suddenly at the age of 50 due to heart problems. He never had the option to get treatment—he never got a second chance. That's why I've dedicated my career to advancing the area of prevention. I want things to change.”

“Even when I'm performing complex procedures like unclogging arteries, I never lose sight of the patient in their overall journey. We need to understand where they're coming from and the reasons that brought them here. Medication and surgery can't fix everything—they simply offer an immediate solution. We need a long-term non-pharmacological approach that focuses on healthy eating and regular exercise.”



“I’ve seen the mindset change before my very eyes. At first, it felt like I was talking to a brick wall. People said, ‘You have to die from something.’ Nowadays, they understand how important a healthy lifestyle is in preventing heart disease, and the Institute has wonderful ways of helping them turn their intentions into action.”



Heart disease prevention: A key issue of the 21st century

Dr. Martin Juneau

A cardiologist specializing in preventive medicine

Dr. Martin Juneau has devoted his career to preventing heart disease and played a significant role in shifting Quebecers' way of thinking. With Dr. Philippe L.-L'Allier having recently taken over for him as Director of Prevention, Dr. Juneau took the time to look back on his career, reflect on society's changing views and highlight the importance of developing intervention tools to prevent cardiovascular disease.

The power of prevention in cardiovascular health

Dr. Juneau first developed an interest in the effects of exercise on the cardiovascular system in the '80s when he was a cardiology resident at the Institute.

"The Institute encouraged me to go to Stanford in California to do a fellowship with a group of specialists who published a lot of research on that topic. That's where I learned that exercise was more than just a prevention tool—it can also be used to treat heart disease. They also did research on nutrition, stress management and smoking—bear in mind that back then, half of all people smoked! It was a complete immersion in prevention healthcare, both intellectually as well as physically. Not only were these specialists doing the research, they were also practising what they preached and following that lifestyle. I adopted it too as soon as I arrived in Palo Alto, and I've kept at it ever since."

A healthy lifestyle is the best medicine

Dr. Juneau believes that the effects of good lifestyle habits on cardiovascular health is now taken as fact.

"If you live by the five pillars of health—no smoking, exercising, having a balanced diet, maintaining a healthy weight, and drinking in moderation—then your chances of having a heart attack in your lifetime drop by 85%. That's huge—there's no medication that can do that. For people who've had a heart attack, the benefits are even more significant—their risk of having another is reduced by 30–40% if they exercise a little bit, and if all they do is stop smoking, then the risk is cut in half within the first year of quitting. The effects are similar if they manage their stress, eat well and maintain a healthy weight."

New challenges: Excess weight, diabetes and life expectancy

Even though prevention is seemingly on everyone's mind now, Dr. Juneau remains cautious. "Still today, 50% of Quebecers don't eat enough fruit and veggies. We still have a long way to go when it comes to nutrition. The rates of obesity have tripled since the '80s and type 2 diabetes has become commonplace among younger people. Currently, over 900,000 Quebecers have diabetes and there are at least as many who are pre-diabetic. What's more, a significant proportion of people with diabetes don't even know they have it. Taking into account the fact that it takes 8 to 10 years before diabetes leads to heart disease, we're expecting a drastic increase in heart conditions in the coming years, especially among those aged 35 to 60."

The aging population is another new issue to take under serious consideration. Dr. Juneau explained that "there's currently a 10-year gap between total life expectancy and health expectancy. People are indeed living longer, but how's their quality of life? To be healthy in their old age, without any crippling disease, people understand that they have to change their lifestyle. What's important right now is to give them the tools they need to translate intention into concrete action."

The EPIC Center: The largest hub for cardiovascular disease prevention in Canada

For the last 18 years, Dr. Juneau has led the EPIC Center, a landmark facility at the Montreal Heart Institute dedicated entirely to heart disease prevention. One of its kind in Canada due to its size and approach, this is a hub where many healthcare specialists provide all kinds of support to members—and it's open to everyone. It's an essential vehicle in helping people take action.

"We have nearly 5,000 active members who are here for prevention or rehabilitation. We host over 300,000 visits every year. Exercises are supervised by kinesiologists, consultations are offered by nutritionists, and nurses and cardiologists are here for physical exams or to administer treatment should anything occur while someone's training. Thanks to the Foundation's support, the Institute's patients all have free access to a three-month prevention program that includes these services."

The Foundation's crucial role in furthering preventive healthcare

Dr. Juneau explained how in addition to cardiac rehabilitation, the Foundation backs key projects that bolster their efforts to prevent heart disease.

"The Foundation supported the inauguration of the Diabetes Prevention Clinic, which is without equal here in Canada because it focuses on type 2 diabetes remission. It also finances the Observatoire de la prévention (Prevention Watch) thanks to its annual campaign Funds from the heart. It helps us stay on the cutting edge of preventive healthcare, remain up to date on the latest advances, and share this information with the general population. On top of all that, the Foundation powered the creation of a chair in the prevention of cognitive decline and supports our research on the effects of heatwaves. Without this organization, prevention simply wouldn't have a place at the Institute."

Named Emeritus Cardiologist by the Association des cardiologues du Québec in 2020 and 2021 for his work and exceptional contribution to the advancement of cardiology in Quebec, Dr. Juneau continues to be open-minded and enthusiastic about his mission. "The younger generations fill me with so much hope, because they're environmentally conscious and care about animal welfare. Indirectly, their consumption habits have a positive impact on prevention, which kind of makes them allies in this area of healthcare. The global movement they're spearheading will affect the entire world—for the better."

From Barcelona to Montreal: Going beyond borders to champion the prevention and remission of diabetes

— Dr. Josep Iglesias-Grau

A cardiologist doing a fellowship at the EPIC Center

Originally from Catalonia, Dr. Josep Iglesias-Grau has been doing a fellowship in preventive cardiology at the EPIC Center since 2020. The young specialist is passionate about this promising new approach, in which the Montreal Heart Institute has played a key role on the world stage.

The EPIC Center: A hub for the future of preventive cardiovascular medicine

Having trained as a cardiologist in Barcelona, Dr. Iglesias-Grau instinctively turned to preventive medicine early on in his studies. “I immediately gravitated towards all aspects of cardiovascular prevention and the many facets of patient management. Together, nutrition, exercise, smoking cessation, the proper use of medications, and treatment adherence play a significant role in preventing heart disease and other conditions. The reasons why I’m interested in this field are obvious—I feel that this proven preventive approach isn’t being given enough attention,” he said.

In 2017, while doing his residency in Europe, Dr. Iglesias-Grau realized how much ground had to be gained.

“In Europe, there’s extensive expertise when it comes to care and great advancements in cutting-edge technology, but when patients ask what they can do to prevent disease, what changes they should make to their diet, or what they should do to improve their health, the responses from healthcare professionals are quick and sometimes evasive, often because they don’t have the time. Diet isn’t discussed enough in European universities, and physicians aren’t taught how to write a personalized prescription for exercise,” he explained.

So, when he went in search of a health institution for a specialization in preventive medicine, he looked overseas. “Like the rest of Europe, Catalonia has no formal program in heart disease prevention. Two of my mentors told me about the EPIC Center and the possibility of receiving unparalleled training as part of a fellowship in preventive medicine here. I first came

for a visit in 2018 to express my interest in the program, and I started my training at the Institute in 2020. I have absolutely no regrets,” he noted.

The Diabetes Clinic: Hope of reversing the disease

Since arriving at the EPIC Center, Dr. Iglesias-Grau has spent a lot of time working at the Diabetes Prevention Clinic. “A major part of my fellowship is devoted to the prevention and remission of prediabetes and type 2 diabetes—two risk factors for cardiovascular disease—and I’m investigating the possibility of reversing this disease through lifestyle changes. I’m also interested in early insulin resistance, a factor in the development of the disease that’s not given enough consideration,” he said.

“For the last 50 years, every person newly diagnosed with diabetes has simply been told, ‘Sorry, but you’re diabetic. Take this medication for the rest of your life... Get more exercise and eat healthy.’ That works only to a certain extent—the disease continues to progress and the patient is eventually readmitted to hospital. I’m trying to better understand the conditions associated with these situations and how they tie in with cardiac disorders to find a way to achieve remission. I hope to go from ‘There’s not much we can do’ to ‘We might be able to reverse the disease.’ It’s a huge change in paradigm,” he added.

A greater need to support a growing number of patients

The Diabetes Clinic at the EPIC Center is growing rapidly and now has more than 350 participants, including former patients of the Montreal Heart Institute who are prediabetic, diabetic or insulin-resistant, but also people with diabetes who aren’t associated with the Institute. Dr. Iglesias-Grau feels this rapid growth demands additional resources. “I firmly believe in the clinic and EPIC Center’s potential—we’re really pushing the prevention approach, and the results are promising. But there’s a long waiting list because we can’t meet the demand,” he said.

“To offer better patient management and improve our services, we need to hire more staff. We need qualified health professionals like nutritionists, kinesiologists and nurses to provide the appropriate advice and support. Prevention is another way of understanding disease—it takes a lot of coaching to inspire patients to change their habits and guide them through the process. What we offer at the EPIC Center and the Institute is rare in the world, and support from donors would allow us to help more people,” he added.

The dream of a health system focused on prevention

As he gets ready to embark on a promising career, Dr. Iglesias-Grau is hoping to be part of a major change in mindset in the healthcare field. “I hope to see more cardiac prevention centres across Canada, in Europe and around the planet. I’d love for us to be able to offer many different resources to the population at large and to the family physicians who closely monitor their patients’ health,” he said.

“It’s crazy to think that the same four risk factors are at the root of the diseases with the highest mortality rates—diet, smoking, alcohol use, and inactivity. It’s high time we invested more in preventive medicine, not only because managing these patients costs the State a lot of money, but also because it’s a valuable opportunity to markedly improve people’s quality of life. We need to put prevention at the heart of our health system, and in the process, the EPIC Center could become an international benchmark,” he noted.

“After spending three years at the Montreal Heart Institute, Dr. Iglesias-Grau said he’s delighted to continue his path at such an outstanding facility. “I love the EPIC Center and I believe that what’s happening here today can make a real difference. As a clinical researcher, I’d like to help champion the cause by showing that prevention is the approach we need to invest in, and the Institute is a fantastic place to carry out research projects that are close to my heart,” he added.”

“When it comes to health, an ounce of prevention is worth a pound of cure. It’s time to change the paradigm, rethink our system, which focuses on treatment, and invest more heavily in preventive medicine. I chose the Montreal Heart Institute because it’s simply the best place to make that shift happen.”





3

Planning for the future

It takes trailblazers to build new paths.

Whether through research, innovation or knowledge-sharing, behind all our efforts to drive progress, there's the will to do more and do better. The pursuit and steadfast determination to have an impact, here and now.

Explore a creative world filled with researchers, teachers and experts who push the limits of what's possible and come up with new ways of improving current treatments.

"I see our doctors proactively take our research and put it into practice. They want to work with our researchers to make an immediate difference for the current generation—for the patients they're treating today."

Dr. Marie-Pierre Dubé
Researcher and Director
of the Beaulieu-Saucier
Pharmacogenomics Centre

Right on target: Medical treatment with accuracy, thanks to genetics

— Dr. Marie-Pierre Dubé
Director, Beaulieu-Saucier Pharmacogenomics Centre

As a distinguished researcher and the director of the Beaulieu-Saucier Pharmacogenomics Centre at the Montreal Heart Institute, Dr. Marie-Pierre Dubé pushes the limits of genetics to understand its wide-ranging impact on health. She took the time to explain the basic principles of precision medicine, which allows doctors to personalize patient treatment by analyzing their genetics.

Health and genetics: When DNA helps us understand disease

A real math and biology whiz, Dr. Dubé first developed a keen interest in genetics during university. “I fell in love with genetics. I saw it as the quantitative science of biology—it allows us to apply math and statistics to health.”

In her quest to understand the role genes play in the development of diseases, this young woman completed a doctorate in genetic statistics. Dr. Dubé happily recalled the days when they were still laying the foundations of precision medicine. “In the early aughts, it was all pretty new. People were only interested in mutations with strong effects that explained certain rare diseases. But a new statistical model that looked at more subtle variations was just coming to light.”

To illustrate this innovative vision, Dr. Dubé began, “Why does a person have thin or curly or brown hair? It’s due to a number of genes all converging to result in a particular expression. That’s what human diversity is—it’s the product of tiny genetic variations. The same thing applies to health. Beyond studying genetic mutations with strong effects, we can now develop models for many variations with weak effects to explain diseases more precisely.”

Personalized treatment: Precision medicine for proper care

Pharmacogenomics is the part of precision medicine that focuses on personalizing treatment, which is at the heart of Dr. Dubé’s research. “Genetics has very concrete applications. In pharmacogenomics, we use information about genes to develop better, more personalized medication that can be prescribed to the right person, with the right dosage. Two people with the same disease can react differently to the same medication—a treatment that proves to be highly effective for one person can turn out to be ineffective or even harmful for another. Pharmacogenomics allows us to get it right the first time.”

Going from scientific discovery to medical applications

Dr. Dubé believes that genetics research on the effectiveness of medication will make a big difference in people’s lives in the near future. “Our studies have shown that precision medicine works and that we can change the paradigms in the development process for medication. Some research, initiated at the Montreal Heart Institute and conducted in many countries around the world, suggest that one type of medication used to prevent a heart attack from recurring is suitable for 20% of people who recently suffered a heart attack. These promising results push us to keep going. Ultimately, we’d like everyone to be able to get the best benefits from the right medication.”

The Beaulieu-Saucier Pharmacogenomics Centre: A leader and agent of change

The experiments are tightly controlled at the genomics labs and research facilities within the Montreal Heart Institute’s Beaulieu-Saucier Pharmacogenomics Centre, making it a world leader in its field.

“We have over 600,000 samples stored at our pharmacogenomics centre—they help us in our research, which is based on clinical studies. They allow us to measure and sequence DNA, quantify proteins in the blood and identify which groups of patients would most benefit from one type of medication over another,” the researcher explained.

“We’re leaders in terms of computational power and our ability to work in tandem with the clinical trials being conducted. We don’t have to wait for the end of the study—we collect biological samples so we can

act during the trial and guide the development of new treatments. We're trying to change the prescriptions that are offered to patients—we want to have a real impact on healthcare," added Dr. Dubé, who's been leading the centre for over 10 years.

A new DNA sequencer, thanks to donors

Thanks to the Foundation, the pharmacogenomics centre recently acquired a next-gen DNA sequencer to help them carry out their many research projects. According to Dr. Dubé, this hi-tech robotic device will help the team further their knowledge of genetic mutations.

"Everyone's DNA comes from their parents. People think DNA is static, but it can alter over time—these changes are called somatic mutations. With our DNA sequencer, we can study the role they have in the proliferation of blood cells and how these mutations relate to heart disease. This device allows us to do parallel sequencing on different cells so we can uncover the mutations that develop in our lifetime and see if certain medications can limit their harmful effects. We're the first to ever do this and it's all thanks to the Foundation."

Both researcher and patient: An insider's hope for personalized medicine

Dr. Dubé was born with a heart condition, so she can speak first-hand about the impact of the research being done at the Montreal Heart Institute.

"I rarely talk about it, but my personal history with the Institute inspires me and spurs me on. I was a patient here and I see the potential of all our research, which will always be focused on people's well-being. I'm on the front line and I see our doctors proactively take our research and put it into practice. They want to work with our researchers to make an immediate difference for the current generation—for the patients they're treating today."

"It's the medicine of the future—thanks to the specific genetic information we collect, we'll be able to improve prevention, detect conditions early, diagnose our patients better, and select the most effective medication for each individual."



Building the future of education with a new centre focused on simulation

— Dr. Serge Doucet
Director of Education

— Amélie Doherty
Nurse and Assistant to the Director of Education

“Thanks to this high-calibre centre, cardiovascular healthcare professionals will receive even better training. Treatments will be safer, faster and more accurate—and the patient will be able to handle them better,” said Dr. Serge Doucet.



After its inauguration in spring 2022, the brand-new Centre de formation d'excellence en santé cardiovasculaire (CESC) started welcoming teachers and students alike just a few steps from the Institute. Dr. Doucet and Amélie Doherty, R.N., bring us into the heart of this major innovative project, whose goal is to train seasoned professionals devoted to providing the highest standard of care possible.

An interdisciplinary centre with remarkable accessibility

The idea of having an education centre built into the Institute first came up in the early aughts. “Our classrooms used to be scattered all over the hospital. We wanted to create an interdisciplinary learning centre where simulation would play a prominent role and whose labs, auditorium and training facilities would all be located in one place,” explained Dr. Doucet.

As the person in charge of all activities at the education centre, Amélie is on top of all the inspiring projects that have emerged since the centre was opened. “Our service offering is exceptional. We can host major events to train professionals from outside the city and hold international symposiums, because we now have the physical space and equipment to do so. We can organize different treatment simulations at the same time on any day of the week.”

Proximity: A major obstacle to knowledge acquisition

The new centre is located right next to the Institute's main entrance and offers an uncommon degree of accessibility, according to the director of education. “Because it's on the first floor, the CESC benefits from direct communication with clinical care and the technical centres at the Institute. The current generation of students has tight schedules to manage. Being able to quickly get from clinical care to the simulation facilities saves time and improves access to new ways to learn. They can attend a training session on their lunch break or at the end of their day, for example.”

The simulation centre:

Training tomorrow's specialists

Simulation-based teaching plays a significant role at the CESC, which is in keeping with modern practices. “It's 2022—we can't teach the same way we used to. Ethically, and to ensure patient safety, we have to simulate situations before facing them in real life. Some techniques have to be practiced ten times on a mannequin before being used on an actual patient. That's perfectly normal—we're following ethics,” stated Dr. Doucet.

The director believes that this standard of education is a comfort to the patient and valuable in more ways than one.

“For instance, by simulating echocardiography, we can reproduce an anatomical heart using virtual reality and more easily visualize how it works. This saves us hours in the classroom—something that used to take two weeks can now be taught in a single day. When you invest your time in the right places, it improves retention, the treatments are first-rate and we have the opportunity to do even more.”

Nursing care and simulation-based teaching: Setting the standard for excellence in cardiology

According to Amélie, the Institute's nursing staff also gains much from simulation-based teaching. “When a new nurse is hired at the Institute, even if they have 10 years of experience, they still have to take a mandatory class in cardiology because we have a complex client base. Thanks to simulation-based teaching, we can prepare new personnel for all kinds of issues, reproduce our various care units and help people develop the skills they need during onboarding before working on the floor.”

Learning to work as a team, thanks to simulation

Simulation-based teaching helps with more than just technical skills—it also facilitates interdisciplinary work. Amélie explained that “we set up simulations in our labs that sometimes involve large teams of medical residents, orderlies, nurses, respiratory therapists, anesthesiologists, and other specialists.”

“With simulated scenarios, teams can work on their technical abilities as well as their communication and interpersonal skills, which are just as important when working in a group,” said Dr. Doucet.

Donors: Providing invaluable support to education

It's clear in Amélie's estimation that donors play a crucial role in supporting these advancements.

“The healthcare network can't afford to pay for this expensive simulation equipment. We would never have access to the tools we need without support from the Foundation and its donors. Training healthcare professionals the way we do would simply be impossible.”

Dr. Doucet added, “Education is sometimes undervalued or taken for granted. People mistakenly believe that teaching is straightforward, but we need training specialists and qualified educators to instruct our staff so they in turn become great teachers themselves. The Foundation has always supported us in that regard—knowledge-sharing is vital to the advancement of medicine and our practices.”

Thirty years after first stepping foot at the Institute, the director of education has witnessed a radical change in the teaching methods there and is glad that the means available to teachers to strive for excellence continue to grow. He's confident in a promising future for the CESC. “We want to become the standard for cardiovascular training in Canada and in the world. The goal will always be to provide the best care possible to everyone who needs it.”

Clinical perfusionists: Working behind the scenes

— Hosham Ased
Clinical perfusionist

The recipient of the third edition of the Dr. Denis Roy Awards for Excellence in Cardiovascular Care, Hosham Ased is an ambassador of his profession. He works tirelessly to help advance the practices used in his field, and below he talks about the little-known yet critical role of clinical perfusionists.

From engineer to clinical perfusionist— a natural progression

It was back in 2006, when he was working towards a bachelor's in biomedical science with the aim of specializing in engineering, that Hosham first learned about the profession of perfusionist. "A colleague of mine at the time was doing an internship in perfusion, and he said, 'Come see, we're in the operating room—it's lively, we have contact with the patients, there's lots of adrenaline, and we play a valuable role.' It piqued my curiosity, because in biomedical engineering, there's no direct contact with patients. I was immediately intrigued by the balance between developing technologies and working closely with medical practitioners," he explained.

While working towards a master's degree in biomedical engineering, Hosham discovered just how appropriate his career path was, despite an apparent disconnect: "I learned that the first perfusionists to work at the Montreal Heart Institute, where I was doing my engineering internship, were also engineers by training. Understanding how the human body works coupled with technological know-how is a major asset. Given that the aim of a biomedical engineer is to leverage innovation to improve patient care, the decision to work more closely with patients by becoming a clinical perfusionist once I had finished my master's degree was a natural transition for me," he said.

Maintaining the body's vital functions during surgery

Since 2011, Hosham has been part of the team of perfusionists at the Montreal Heart Institute. Every day, he monitors machines that keep the patient's blood flowing and organs functioning during complex surgeries.

"We divert the blood from the heart so it can be repaired. Same thing for the lungs, to clear the passageway and make it easier to operate. The aim is to remove the blood from the area being operated on. This gives the surgeon more time to operate. Before perfusion was introduced, you had to hurry to avoid damage to the vital organs. It was risky and the margin of error was huge," he explained.

A clinical role focused on creativity and collaboration

Working in the background, perfusionists spend most of their time in the operating suite: "We enter the picture once the patient is under anesthesia. We work in tandem with the surgeon. There's a true synchronicity between the two specialties—it's like two musical instruments playing off each other. The perfusionists at the Montreal Heart Institute have known each other for a long time. When complications arise, we rely on each other. We don't even have to say a word—we just know. The ties that bind us are very strong."

Advancing clinical perfusion practices through knowledge transfer

In recognition of his outstanding contribution to the advancement of his profession, Hosham was honoured with the Dr. Denis Roy Awards for Excellence in Cardiovascular Care, highlighting the extent of his efforts. "I'm heavily involved at the Institute because I've always wanted to have an impact, make a difference, and make strides in the field. My longing to share my knowledge and drive innovation is what continues to inspire me," he said.

Since 2013, Hosham teaches in the clinical perfusion program at Université de Montréal, where his engineering expertise is recognized and valued. As clinical coordinator and monitor at the Montreal Heart Institute, he oversees the practical training of young perfusionists. “It allows me to explore a side of myself that loves to communicate, to share. I also believe that the best way to understand and master a practice and stay up to date on what’s happening in the field is to teach,” he noted.

“In my teaching, I value contact with different specialties, because they can all help advance the perfusion practice. In this profession, there’s a lot of room for creativity and problem-solving, dealing with the unexpected and making quick decisions, since every situation is unique and our care approach needs be adapted to each individual patient,” he added.

Innovative research projects to benefit patients

Constantly pushing the boundaries of his discipline, Hosham is currently completing a doctorate on the

strategies to minimize hemodilution during extracorporeal circulation.

“I’m looking to reduce the circuit, meaning the length of the tubes the blood flows through outside the body. The goal is to achieve extracorporeal circulation in which red blood cells don’t get diluted—where no physiological liquid has to be given to the patient. This would prevent the need for post-operative blood transfusions, which can have negative health effects. Ultimately, we’d only use the patient’s blood for extracorporeal circulation, in a very short circuit,” he said.

In June 2022, Hosham was invited to a symposium of perfusionists in Saint-Malo, France—a sign that his work has reverberations around the world. “The French want to use the model we built here and the deep expertise we’ve developed in clinical perfusion over the last 15 years. We’re on the leading edge because we have access to advanced technology and we’re continuously honing our skills. I’m proud to help boost the Institute’s international reputation in a field I love and, more importantly, to leave my mark here by making a real difference, one patient at a time.”



“With the help of external equipment, we keep the blood flowing and keep the body alive during surgery that requires the heart to be free of blood. We reproduce the human physiology and replace the functions of the heart and lungs to ensure they’re well oxygenated.”



“Every week, there’s at least one patient whose surgical plan will completely change because of their echography or ultrasound. These images allow us to take appropriate action and see what a typical physical exam can’t show us.”

Echocardiography: A window into what the eye can’t see

— Dr. André Denault

Anesthesiologist, critical care physician and clinical researcher

Since the beginning of his career, Dr. André Denault, anesthesiologist and critical care physician at the Institute, has been interested in ultrasounds' exceptional potential for treating patients. This world specialist in cardiac anesthesia was excited to speak to us about the practice he implemented at the Institute that revolutionized the way medical professionals around the globe make diagnoses.

Discovering the extraordinary potential of ultrasounds

Dr. Denault first learned about echocardiography during his internal medicine residency in 1989. "Someone was going into cardiac arrest—the situation was critical. The chief cardiologist made an urgent request for an emergency ultrasound. The images gave us information about the patient's condition in a non-invasive way and allowed us to make an informed diagnosis. I was fascinated. That's when I knew that I had to learn how to use this incredible tool."

Wanting to specialize in intensive care, Dr. Denault completed a two-year fellowship in Pittsburgh. That's where he first came across transesophageal echocardiograms (TEE). "When the images taken from the surface of the body are inadequate, or if this is simply not possible, instead of putting the ultrasound on the thorax, it can be inserted into the esophagus and placed right behind the heart. This produces amazingly clear images. In 1991, we were only just starting to perform this type of echocardiography. I remember thinking, 'This is the future. It's going to be used all the time in operating rooms and intensive care.' It's a precious opportunity to understand what's going on with a patient."

An innovative practice at the Montreal Heart Institute

Dr. Denault was invited to join the Montreal Heart Institute in 1999. That same year, in collaboration with Dr. Pierre Couture, he fulfilled the task of bringing the practice of TEE to their operating rooms. He's proud of how far they've come in the last 25 years.

"Today, every single anesthesiologist at the Institute is trained in doing ultrasounds. About 40,000 TEEs have been done to date. We now have cutting-edge ultrasound equipment in our seven operating rooms—there's no place better equipped for helping patients."

According to Dr. Denault, the implementation of echocardiography to the Institute inspired new methods that are now used globally. "The fact that the anesthesiologist is getting images in real time enables a closer relationship between them and the surgeon—they're in constant communication before, during and after the operation, which leads to better decision-making. Doctors from around the world come here to train in cardiac anesthesia so they can learn from the expertise we've developed over the years thanks to this tool. We've become a model in this field."

Targeted ultrasounds: The fifth pillar of physical exams

Using ultrasounds to examine patients unlocks a potential that goes beyond the heart alone. Dr. Denault believes that targeted ultrasounds—which allow physicians to evaluate a person's lungs, abdomen, brain, blood vessels, and more—will become a universal practice in critical care.

"It's a mini revolution in the art of physical examination. Insonation is becoming the fifth pillar, adding to inspection, palpation, percussion and auscultation when performing a general patient evaluation. Modern ultrasound devices produce images that allow us to determine with certainty what's going on in all parts of the body."

Training healthcare professionals to do ultrasounds

These promising avenues led to the development of new training opportunities at the Institute, as well as the founding of the Centre de formation et d'excellence en santé cardiovasculaire (Cardiovascular centre for training and excellence) in 2022. "Among other things, the Foundation has given us these amazing ultrasound simulation tools to help train professionals and students. Many doctors come to the Institute to take advantage of our ultrasound simulation centre. They can observe more simulated pathologies in a single day than they've ever seen in their entire career. It's vital when you're trying to make an accurate diagnosis."

Research on ultrasounds, with support from the Foundation

Thanks to the Foundation's donors, anesthesiologists and researchers alike benefit from the support needed to learn more about ultrasounds. "We have a lot of research to do to uncover the full potential of this practice. Every year, I can rely on the Foundation's invaluable help to pursue projects that improve patient care."

Dr. Denault is enthusiastic about all the ways ultrasounds will be used in the future. "Physiotherapists already use it in their own practice to observe the lungs and musculoskeletal injuries. Family doctors could use it in outpatient clinics to help them make better diagnoses. Nurses could use it to find a vein before inserting a needle. There are so many situations where we'll be able to observe before intervening, and the patient will be better for it."



The heart of the Foundation

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Behind all the advancements in treatment, prevention, research, and training at the Montreal Heart Institute are devoted men and women with the kind of passion that can move mountains.

Join these agents of change, who understand the extraordinary power of philanthropy.

“Even in a recession, no matter what, people are always willing to help their neighbour. When it comes to making a difference, they always answer the call. There are loyal donors who have been around for 40 years and have never missed a year. That’s the kind of loyalty that keeps the heart of the Foundation beating.”

Guylaine Banville
Director, Direct Marketing

A personal and professional view of the Foundation

— Guylaine Banville

Director, Direct Marketing

For the past 36 years, Guylaine Banville has been fighting for her life's cause—cardiovascular health. The Foundation's director of Direct Marketing tells us about her unique relationship with the Institute and how it's grown over the years.

Living with a child who has a heart defect

Because of her family and work situation, Guylaine has witnessed all the Foundation's efforts and the direct impact they have on people's lives. "In my work, I can see the advancements. I'm fortunate enough to see the difference they make, every day. The mission really is to save more lives, and that gives me the boost I need to always do better," she said.

"Thanks to my relationship with donors, I have the privilege of helping people who, like my daughter, need support. I'm experiencing both the emotional and philanthropic aspects at the same time," she added.

When the Montreal Heart Institute changes the lives of an entire family

Followed by the Montreal Heart Institute since the age of 15, Guylaine's daughter has received a lot of compassionate care:

"Audrey was supported through all the major steps of her personal journey, whether it was surgery, lifestyle changes or her pregnancy. I firmly believe in the Institute's expertise, because I've seen it as an employee, but also—and foremost—as a mother."

Prevention, an approach that constitutes one of the Institute's greatest strengths according to Guylaine, is what allowed her daughter to grow up healthy and thrive. "Diet, exercise, healthy lifestyle habits—we followed all of the Institute's advice," she explained. The knowledge the healthcare professionals shared with Guylaine and her family has touched every aspect of their lives.

36 years of growth: Seeing the Foundation transform

Curious and passionate by nature, Guylaine is driven by innovative ideas and challenges. In her 36-year career, she's helped raise the Foundation's profile to save even more lives.

From 5 to 28 employees: A team that's growing to help more people

"My greatest achievement is having put in place a direct marketing framework aimed at personalizing communications with current and prospective donors, through letter mail, for example. I was directly involved in growing the Foundation by forming teams, devising strategies and managing all the changes in technology throughout the year," she noted.

Today, the Foundation boasts a large department dedicated to events and major and planned gifts, which helps direct donors to causes they're passionate about. The approach is personalized, the database is rich, and the donor is at the heart of all communications and activities.

Generosity and loyalty: A heartwarming history with donors

Over the years, Guylaine has built strong ties with the people who valiantly champion the cause. As director of Direct Marketing, she's well placed to understand just how crucial their role is:

"I've had the chance to experience heartfelt moments with our donors, to see the depth of their generosity and their values. I've met Dr. Paul David, the founder of the Montreal Heart Institute, as well as philanthropist Jean-Louis Lévesque, who provided outstanding support for medical research. Spending time with these major contributors provided the basis for my work in philanthropy—their kindness and compassion inspired me," she explained.

Every day, Guylaine is touched by the tremendous generosity of Quebecers. Donors—mostly individuals directly or indirectly affected by heart disease—always rise to the occasion. “Even in a recession, no matter what, people are always willing to help their neighbour. When it comes to making a difference, they always answer the call. There are loyal donors who’ve been around for 40 years and have never missed a year. That’s the kind of loyalty that keeps the heart of the Foundation beating,” she noted.

Both in her personal and professional life, Guylaine keeps looking forward, and the future is bright. “Life has given us the best gift of all—a healthy grandson. My daughter, now a new mother, has a promising career and stays active. We even ran a half-marathon together! Thirty-six years later, I’m just as proud to be part of the Foundation’s success and to help patients.”



“When your child is born with a heart defect, you’re aware of the stress, the disbelief, the needs, and the entire range of challenges it involves. I’ve experienced all of it first-hand, with my daughter Audrey. In my work, I can pay the generosity I was shown forward.”

“As a sports fan, I’ve noticed that there are more and more healthy athletes with heart problems. Supporting research is crucial to helping us understand this complex organ, and I want to be part of the solution.”



The heart of the matter

Martine St-Victor

Foundation board member

Newly appointed to the Foundation’s board of directors, Martine St-Victor wants to create a strong connection between the public and the masterful work accomplished by the Institute’s experts. She talked to us about commitment, governance and the importance of people’s stories, which is what ties us to the cause.

An expert in PR, communications and human stories

As a communications strategist, Martine has spent her career working in media. She managed her own PR firm for 18 years before becoming the general manager of Edelman Montréal. As head of this impressive organization, she oversees their various areas of expertise, from media relations and technology to marketing. In addition to her full-time job, she writes for daily newspapers La Presse and the Montreal Gazette and is a contributor to the CBC and Radio-Canada.

Being the voice for causes dear to her heart

With an open and mindful spirit, Martine is always looking to shed light on matters that don’t always get the attention they deserve. “I’m a curious person who likes to know what’s going on behind the scenes and understand every layer of an organization. I like stories about people and sharing them with others.”

The power of volunteering

For this communications strategist, getting involved on the boards of organizations that inspire her has always come naturally. “Governance is so important. In companies where there’s no governance, projects don’t go anywhere. That’s why I feel compelled to be a part of it and contribute however I can to change things for the better,” she said.

There’s no questioning her commitment—she’s also on the board of directors at the Musée d’art contemporain de Montréal, the KANPE foundation, the Fondation du Pensionnat du Saint-Nom-de-Marie, and the Institute for Research on Public Policy. Plus, she created Je Love Haiti, a clothing brand that promotes a positive image of her parents’ home country.

Getting involved in cardiovascular healthcare: Everything starts with the heart

Martine wasn’t expecting an invitation to join the Foundation’s board of directors.

“This opportunity was such a pleasant surprise. I have so much respect for the work they do at the Montreal Heart Institute and I’m so glad I get to help raise its profile. The heart is at the core of every single thing—it’s that simple.”

In volunteering her time to support cardiovascular healthcare, Martine hopes to use her talent and experience as a communications expert to raise awareness of the Foundation’s main causes, namely training, research, treatment and prevention.

Building bridges between the Foundation and the general public

For Martine, getting to know the people behind an organization is crucial. She gave the example of Quebecer Farah Alibay, an aerospace engineer at the NASA Jet Propulsion Laboratory who’s worked on various spacecrafts sent on missions to Mars. “This young woman completely changed my perception of what’s being done in space. She made me more aware. Thanks to her story, I grasped the complexities of her field. It’s people who help us relate to a particular situation—who make it real.”

Likewise, she considers it her duty to live up to the Foundation’s reputation and properly convey what the Institute stands for.

“The experts at the Montreal Heart Institute perform miracles every day. Photos of open-heart surgery show 20 people around a patient, all working towards the same goal. Every drop of blood is accounted for. Every action is carried out with precision.”

The privilege of having a close relationship with the teams at the Institute also comes with a responsibility, which is to speak on behalf of these extraordinary professionals. Martine’s job is to support patients, doctors and nurses in their efforts and give them the visibility they deserve.

An invitation to donate what you can to the cause

When asked to share her thoughts on philanthropy’s role in today’s medical world, Martine had an answer that reflects her beliefs. “The approach has changed. We see now that everyone wants to take part by donating not just money, but their time. We have a varied pool of volunteers and that’s largely because we’ve been able to build a genuine relationship between healthcare organizations and the general public,” she said.

Inspired by the exceptional people who sit on the Foundation’s board with her, Martine is encouraged by the skills and knowledge of everyone who backs the Institute’s mission. Their eagerness to “do more and do better” have motivated her to proudly and wholeheartedly step into her new role as a member of the team.

Fostering strong relationships with donors to actively support the cause

Yannick Elliott

Vice President, Philanthropic Development

Yannick Elliott presented an overview of the close relationship of trust between the Foundation and its donors, as well as everything they can achieve together through philanthropy. He's the one who coordinates the major gifts team, among other groups, and he spoke to us about how this important partnership evolved.

From 1977 to now: An evolving relationship with donors

Since its beginnings in 1977, the Foundation has changed on every level, just as everyone's relationship with philanthropy has evolved. According to Yannick, this exciting development can largely be credited to donors. "Nowadays, they're very familiar with our projects and philanthropy. Not only are they aware of their donations' impact, but they also know about the tax incentives they can benefit from. The relationship we currently have with our major donors is like a business partnership."

Running a charity that benefits both donors and patients

Over time, the donations teams have expanded, leading to a richer relationship that's evolved alongside donors' growing ambitions. "Our philanthropy professionals have developed specialized skills—they saw the rise of direct marketing, planned giving and custom events. Our teams can support donors with an approach that suits their intentions, values and interests, and patients are always at the heart of the matter."

A more transparent relationship in the digital era

Yannick believes that digital tools and artificial intelligence have revolutionized communications and, consequently, the relationship between the Foundation and its donors.

"We're truly living in an age of transparency. On one hand, we've been able to build rich databases, so we can really get to know each donor and meet their needs. On the other, having so many different communications touchpoints means we need to be transparent about our projects' progress. It's easier to communicate with our donors and it's brought our relationship with them to another level. We're no longer talking about charity—it's all about impactful solutions."

While the reasons for donating have remained the same, the Foundation's ability to share the Institute's accomplishments with their supporters has greatly improved. This closer relationship presented a new challenge for the philanthropy team, whose role now includes explaining medical jargon in simpler terms. "We've become the bridge between donors and our researchers and medical specialists. We're more of a go-between than ever because donors are curious—they want to know and understand how their donation affects both patients and the healthcare system as a whole. We're proud to be able to show them the impact of their contribution," Yannick explained.

Letting your values and interests guide your involvement

The Montreal Heart Institute invites anyone who would like to join the fight against cardiovascular diseases to do so by supporting research, training, treatment or prevention, depending on the area that resonates with them the most.

"We make donors aware of the growing number of opportunities for them to make a difference, which leads to more people getting involved. They can make targeted donations so that 100% of their support goes towards, say, financing technology or developing less invasive treatments that benefit the patient's well-being."

As Vice President, Philanthropic Development, Yannick shared that donors who choose the Montreal Heart Institute Foundation have the power to help major projects succeed. They themselves become agents of change by giving healthcare professionals the means to make an immediate difference in the lives of patients and build a healthier future for coming generations, both in Quebec and around the world.



“The Foundation is the best way to tackle the various challenges surrounding cardiovascular health, because it’s attentive to what donors want. The Montreal Heart Institute has an exceptional ecosystem allowing folks to get involved in the area that interests them most, be it training, research, treatment or prevention.”



“Virtually every person living on Earth will die of either a heart condition or cancer. The Montreal Heart Institute was a logical and necessary choice for me, as my goal is to give back to the community by making the greatest possible impact on people’s lives.”

When philanthropy is a social responsibility

— Murray Dalfen

Chairman of Dalfen Industrial and Major Donor to the Foundation

Murray Dalfen, Chairman of Dalfen Industrial, a real estate investment management company, is part of the Foundation's valued family of major donors. He shares his personal story and why he contributes to the Montreal Heart Institute through philanthropy.

Cardiovascular health: A family affair

Murray has a very personal relationship with cardiac health and the Montreal Heart Institute. "Heart disease runs in my family. My grandparents dealt with it; my mother and father were treated at the Montreal Heart Institute, as well as my sisters and eventually, so was I," he explained.

"At the age of 40, when I was playing squash three times a week, I had atrial fibrillation during a match. As I walked off the court, I naturally thought, 'I think it would be wise to go to the Institute.' It's become a family tradition: by necessity, we've developed a close bond with this exceptional institution."

Giving back to the community

When asked why he chose the Montreal Heart Institute Foundation as one of his preferred charities, Murray said it's important to walk the talk:

"To me, giving is not a choice—it's a responsibility. You must give back to society when you're blessed with good fortune. This vision is part of my culture and the family values I inherited."

"Having witnessed the outstanding quality of the professionals and care offered at the Montreal Heart Institute, my wife and I were convinced to invest in the cause by continuing the work of my parents, who were also donors. Today, we are extremely proud to support the significant work of the Institute's teams, who save lives every day," he continued.

Supporting a foundation that's making a real impact on health

Driven by a desire to make an impact in the present, Murray said he firmly believes in the relevance of his partnership with the Foundation.

"I don't believe in coincidences in life. The first time I came here, I met one of the most amazing people I know—arrhythmia specialist Dr. Peter Guerra. He genuinely takes his work as a caregiver to heart, and it's very inspiring. This meeting directly led to my first donation to the Foundation, after Dr. Guerra suggested that I support the purchase of a cutting-edge heart monitor which, at that time, would be the first in Canada."

"This highly advanced machine can take 3D colour images of a heart during surgery. Not only did I want to support the project, but I also got involved in the acquisition process by leveraging my expertise. Little did I know that a few months later, I myself would need the device during a medical procedure. This wasn't of my intention, but was able to witness my donation at work."

As donors, keen to see their contributions in action, Murray and his wife, Karen, feel heartened: "We always aim for the greatest possible impact, and the acquisition of this machine, which is currently being used to treat several patients, is a perfect example of this. Dr. Guerra assured me it would be used very often and would significantly improve treatment, and it really has," Murray noted.

The arrhythmia centre: A specialized wing for a higher standard of care

He himself an arrhythmia patient, Murray recently joined Dr. Peter Guerra and Dr. Laurent Macle in supporting the creation of an arrhythmia centre at the Montreal Heart Institute. "We want to finally offer a dedicated facility where all people suffering from atrial fibrillation or other forms of arrhythmia could be treated at a single centre of expertise."

Once again, to him, the motivations behind this partnership are obvious. "Pun intended, I could say that the cause of arrhythmia is very close to my heart. Having lived through it, I know what it's like. I truly believe that having specialized capabilities in this area could lead to better treatments and outcomes. When we focus on a specific specialty, our chances of success increase dramatically," he said.

"It's like high-level sports. A hockey team has forwards and defenders: the same players don't play both positions, and each is specialized, leading to much better results. Having a centre dedicated to arrhythmia is very appealing in that sense, because with more extensive and more focused expertise, you can solve problems more effectively."

Having strong roots in his community, Murray is pleased to be involved locally through the Foundation. "The best cardiology centre in Canada is right here in Montreal. It's one of our greatest assets. We need to show even more support for organizations that contribute to Quebec and Canadian society and are leaders in their fields."

Thank you. Thank you for being there.

Together, let's start a new chapter for the cause. Let's be agents of change. Let's empower the experts and researchers who develop new prevention tools and new technology to treat more people.

**Everything comes from the heart—let yours speak.
Donate now.**

