War & Peace
SAVING LIVES ON THE FRONT LINES AND AT HOME

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COMPASSION IS CRITICAL

WHEN I WALK THROUGH THE DOORS of Sunnybrook, I know I’m stepping into a special world with a culture, an ethos, of its own.

A culture like Sunnybrook’s grows when we bring together people determined to accomplish one thing: providing innovative care at critical times in our patients’ lives. The people of Sunnybrook come from across the globe but share the same values. One of the most important is compassion.

Every patient at Sunnybrook will get the best care available anywhere in Canada, if not the world. This is what’s expected. It’s a given. But, at Sunnybrook, excellence in medical care isn’t enough. To be its best, our care must be compassionate as well.

In this issue, you’ll read about how Sunnybrook works to ensure patients receive the most advanced treatments in a setting that is kind, caring and compassionate.

There’s our new Office of the Patient Experience, which has one focus: to make sure patients know Sunnybrook cares not only about a medical condition, but about the person who has it. The team works with staff across the entire organization, helping give the best possible experience to all who count on us.

The big things make a difference, but we all know the small things are often just as important.

Technological advances go beyond life-saving treatments at Sunnybrook. We know there are few things more stressful to family and friends than waiting for word about a loved one in surgery. Now family and friends can track a loved one through surgery online, in real time. Yes, there’s an app for that now. Sunnybrook created one to do away with that worrisome waiting. You can read about it on the back page of this issue.

As always, we have stories of lives saved and changed forever because of the great medical minds at Sunnybrook. The war stories of Drs. Tien and Feinstein, highlighted on our cover, are compelling examples.

If you take just one thing away from this issue, it is this: behind every life-saving medical intervention at Sunnybrook, there is a team of people who care deeply about those who count on them.

And that is what drives Sunnybrook. We are a world-renowned medical facility, but we are also much, much more than that.

In this issue I hope you find information that is helpful to you or someone you know. Because this magazine is meant to be a resource for you, please tell me what you’d like to know more about.

Just email me at jennifer@sunnybrook.ca.

Enjoy the read.

Jennifer Tory
Chair
Campaign for Sunnybrook
With love From Montserrat

MARY GLAVASEVICH learned an important lesson early in her life, as a child on the island of Montserrat. Her mother would cook a meal and before sitting down to eat would ask Mary to see who in the neighborhood would like to share their food. “Life is not all about just you,” Mary recalls today. That simple but powerful belief has shaped her life and work. As the Patient Care Manager for Surgical Oncology and Hearing Services, Mary not only gives her time and energy to her Sunnybrook family, but also to raising money to help nurses and nurses’ families.

Mary quickly raised $1,000 to help 18 high-risk women travel to Antigua for mammograms; she continues to take in donations for this purpose. It’s not just Montserrat that benefits from Mary’s energy and fundraising skills. In one year alone, she raised $10,000 through the Sunnybrook Run for Research. She points to a plaque on her wall reading “Top Staff Fundraiser for Sunnybrook’s Run for Research.” Mary’s name is highlighted for every year from 1996 to 2004. “The Sunnybrook Foundation eventually said, ‘Just keep it,’” she says proudly. •

Gaining a broader experience

DR. MARCELO STEVENSEN didn’t pursue his childhood dream of becoming a veterinarian, or an engineer like his grandfather, or working in the family bakery in Mexico—but he certainly helped guide his fulfilling career in medicine and vision care.

It was his mother’s acute angle closure glaucoma that influenced him to specialize in the disease, the world’s leading cause of irreversible blindness, after earning his medical degree at the University of Monterrey. He specialized in ophthalmology after training under Dr. Catherine Stevensen, a leading glaucoma and cataract specialist. His fellowship research project examines whether the anatomical preexisting conditions of each patient are related to the visual outcome of cataract surgery. “I focus on the fact each patient is different, and can be controlled and treated with either drops, pills, a laser procedure or surgery. Glaucoma surgery is my main interest,” he says. “It’s the science of medicine.”

Since graduating from the Ophthalmic Consultants of Texas, a leading eye care centre, in 2004, Dr. Stevensen is now training under Dr. Catherine Birt, a leading glaucoma and cataract specialist. His fellowship research project examines whether the anatomical preexisting conditions of each patient are related to the visual outcome of cataract surgery. “I focus on the fact each patient is different, and can be controlled and treated with either drops, pills, a laser procedure or surgery. Glaucoma surgery is my main interest along with the post-operative care, which accounts for 50 per cent of the surgery’s success.”

At the age of 32, now a part-time professor at his alma mater, through Sunnybrook’s leading innovation and real-life training, Dr. Stevensen is winding down one leg of his professional journey, only to soon begin another. In June, he will finish his fellowship at Sunnybrook and return, 3,000 kilometres home to Monterrey, to realize his dream of joining an ophthalmology practice and becoming a part-time professor at his alma mater.

“Through Sunnybrook’s leading innovation and real-life training, I have been fortunate to gain a broader international perspective, enhancing my knowledge and education. For me, it’s about gaining the most current research and expertise to provide the best patient care, all in an effort to advance the science of medicine.” •
Nerves of steel

THOUGH HE GREW UP in Sydney, Australia, Dr. Andrew Lansdown’s favourite thing about Canada is the weather. An avid fan of winter sports, he excitedly watches the forecast for news of massive snowfalls—and it’s this same sense of adventure that brought him to Sunnybrook.

As a clinical fellow with the Department of Anaesthesia, he is halfway through a one-year fellowship in regional anesthesia to block large areas of sensation.

“We’ve tried to do is develop a greater theoretical and practical knowledge, so I can take it back home as a better teacher and educator.” Being exposed to a high volume of nerve-block procedures has helped him hone his skills and gain the necessary confidence to take his new expertise back to Australia.

Under the supervision of Dr. Colin McCartney, he has appreciated the effort of the entire Department of Anaesthesia staff to provide education and guidance. He says he admires his Canadian colleagues for their ability to push themselves professionally beyond their everyday clinical roles, through side projects such as participation in research, councils and committees.

“Everyone has a special talent here, their own niche that they’re really passionate about and working on; it makes for great teamwork,” he says. Unlike most hospitals in Sydney, Dr. Lansdown says, Sunnybrook provides fellowship opportunities for international staff. Dr. Lansdown’s keen interest in gaining a diverse professional experience, as well as fulfilling his sense of adventure, brought him to Sunnybrook. But ultimately, it is his own medical expertise and unique global perspective that enrich Sunnybrook’s caring practices, and no doubt will better the entire hospital community.

FROM GUITAR RHYTHMS to circadian rhythms, Dr. Georg Bjarnason has come a long way in his life and career. In 1965, he was just a 14-year-old guitarist when his band The Falkons opened for rock legends The Kinks in Dr. Bjarnason’s native Iceland.

“It was amazing,” he recalls. “I did not realize the significance of it until after the fact.”

By age 14, he was already a gliding instructor, flying engineless over the local mountainside. He says that the trick to flying safely was staying nimble and adapting to the rhythms of nature’s air currents.

After earning his medical degree in Iceland, he came to Canada in 1983 to complete his training in internal medicine and medical oncology. Twenty years later, he’s making his biggest mark yet as a medical oncologist with Sunnybrook’s Odette Cancer Centre, an expert on kidney cancer and one of Canada’s leading researchers in biological rhythms, or chronobiology.

Here, the responsive approach he learned from flying continues to guide his research in understanding the human body to better individualize cancer treatment.

All living organisms have a 24-hour biological clock or circadian rhythm. Dr. Bjarnason has studied these rhythms and the genes that control important biological processes such as cell cycle, and has found important gender differences in genes at different times of the day that may explain gender differences in the activity and side-effects of most drugs.

Chronotherapy (therapy based on an individual’s circadian rhythm) may help doctors improve drug therapies and minimize side-effects. “Chronotherapy will not cure cancer but may make the most of the few active drugs we have,” says Dr. Bjarnason.

The senior scientist at Sunnybrook Research Institute, most recently investigating innovative scheduling of drugs using imaging technologies to understand how to best deliver therapies that block the flow of blood to tumours. He still finds time to pick up his guitar now and then, and to go gliding on annual summer trips to Iceland.

Dr. Bjarnason, also an associate professor in the Faculty of Medicine at the University of Toronto, has focused his clinical work and research on kidney cancer. He is the inaugural recipient of The Anna-Lisa Farquharson Chair in Renal Cell Cancer Research. He continues his long-standing collaborations with Drs. Robert Kerbel, Peter Burg, Greg Stansz and Stuart Foster at Sunnybrook Research Institute to understand how to best deliver therapies that block the flow of blood to tumours.

In 1985, after being invited to give a gliding demonstration, he decided to give it a go himself. In 1987, after several years of training, he completed his gliding instructors’ licence. Now he is a licensed glider pilot and continues to fly.

“I was a glider instructor, flying engineless over the local mountainside. He says that the trick to flying safely was staying nimble and adapting to the rhythms of nature’s air currents.

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IT MAY HAVE BEEN A CANADIAN who brought Dr. Paige Church to Toronto from Boston, but it’s Sunnybrook that keeps her here.

Of course, it helps that it wasn’t just any Canadian but her husband, Erik, whom she met even before earning her medical degree at the University of Vermont. And Sunnybrook isn’t just any hospital either; she says, but one that stands firmly behind what she’s trying to accomplish. “It’s like playing tennis with people who are better than you every day. You know you’re going to get better,” Dr. Church says of the team at Sunnybrook’s Neonatal Intensive Care Unit Follow-Up Clinic, of which she is director. “The team here is better than any team I’ve ever worked with.”

And Dr. Church has worked with some excellent teams. After medical school, she did her residency in paediatrics at the University of Chicago Children’s Hospital. The experience helped her develop a keen interest in children with disabilities and ultimately brought her to Boston, where she became one of only two paediatricians in North America to complete dual fellowship training and board certification through the American Board of Pediatrics in Neonatal-Perinatal Medicine and Developmental Behavioral Paediatrics. And she certainly grew up in a beautiful spot. Burlington, Vt., probably best known for being the home of Ben and Jerry’s ice cream, in fact, Dr. Church remembers having delicious ice cream scooped and served by Ben and Jerry themselves. But while she hasn’t yet learned to ice skate and misses Vermont’s beautiful ski slopes, she says she’s happy to call Toronto home.

Credit her satisfaction to Sunnybrook’s Neonatal Follow-Up Clinic, with its capacity to see up to 200 babies and children each month. The clinic is working to expand its exceptional follow-up care—already more extensive than at other centres—through collaboration within the community and schools, sharing its expertise and gaining additional expertise from community partners.

“To find a hospital with a mandate to follow children to the age of six years is an incredible investment. It is unusual and is one reflection of the commitment by the hospital to provide comprehensive care to the infants in the Neonatal Intensive Care Unit and their families, even after discharge. There’s a fundamental belief here that our clinic is essential for these children and that our care should extend to the early school years,” she says.

“For me, it’s a huge learning opportunity to work with the team at Sunnybrook and to practice what I’ve been trained to do in an environment that is very supportive. It’s a quick look at some of the cutting edge research happening at Sunnybrook. The team player

THE PEDIATRICIAN

Team player

ON THE TRAIL OF ALS

Until now, there was no known cause of amyotrophic lateral sclerosis (ALS), an incurable disease that over time causes a person’s muscles to simply stop working.

That’s changed with an international study that has discovered a gene that causes the majority of ALS. With only experimental drugs available to slow the progression of the disease, this discovery has enormous potential.

Sunnybrook researcher Dr. Lorrie Zimmam, a lead collaborator in the study, says, “There has never been more reason to be hopeful and optimistic that ALS research will provide effective therapies for those living with ALS.

With the identification of this genetic cause and effect, researchers can now find ways to slow the progress of this disease and continue to hunt for its cure.

EMOTIONAL RESCUE

People living with Alzheimer’s disease (AD) can sometimes have a hard time describing how they feel and, in later-stage AD, may not be able to speak at all. To diagnose neuropsychiatric issues in patients with AD, doctors have only subjective tools to use and must rely on caregivers for information, which can be critical to developing an effective treatment plan.

Sunnybrook researcher Dr. Krista Lanctôt and Nathan Herremans are hoping to change this with a study of new tools for testing patients. The study will measure the effectiveness of a new visual attention-scanning system by looking at AD patients’ visual attention to sad, neutral and social pictures. “The tool we are studying is a more objective way of diagnosing emotional issues, which can help clinicians make more accurate treatment decisions,” says Dr. Herrmann, who is also head of geriatric psychiatry at Sunnybrook.

DIAGNOSING DEMENTIA

With the number of people suffering dementia expected to double within a generation, family physicians will be swamped by demands for timely and accurate dementia diagnoses.

To help with this increase in demand, Drs. Mary Tierney and Jocelyn Charles are leading a group of researchers in a feasibility study of computer-administered cognitive testing called the Computed Assessment of Mild Cognitive Impairment. So far, 80 per cent of patients who tried it were able to complete it with minimal instruction. With an attendant to help those who need it, this assessment could work very well in a family practice setting. The next step is to compare the computer-administered test results with traditional paper-based results while asking the family doctors involved in the study if the new method of testing is useful.

TOPS IN RESEARCH

When you’re sick and need help, the amount of research done at your hospital isn’t the first thing on your mind. It probably isn’t on your mind at all.

But it’s very research that saves lives at Sunnybrook—that’s why research capacity is so vital.

Sunnybrook was ranked fifth in the country by Research Infosource Inc., a national research and development data firm. The 2011 ranking rates hospitals by total research funding from all possible sources in 2010. Sunnybrook’s standing was based on 2010 funding of $66 million. This is a 20 per cent increase from 2009—the highest growth among the top five hospitals.

Of the top five, Sunnybrook is the only general hospital with just one research institute. This research engine ultimately drives the innovative treatments Sunnybrook patients count on at critical times in their lives.
DUTY CALLS

THE ORDER OF MILITARY MERIT IS ONLY THE LATEST HONOUR IN THE DISTINGUISHED CAREER OF COLONEL, TRAUMA PHYSICIAN AND MILITARY MENTOR DR. HOMER TIEN, BOTH AT SUNNYBROOK AND ON THE BATTLEFIELD

By Alexis Dobranowski
Lt. Trevor Greene doesn’t know Dr. Homer Tien.

He knows Dr. Tien was at the Kandahar Base Hospital on March 4, 2006. He knows Dr. Tien prepped the trauma team when word spread that Trevor, on his first tour in Afghanistan, was en route to the base with a severe head injury. And he knows Dr. Tien stabilized him and stopped the bleeding.

Trevor doesn’t know Dr. Tien, but he knows he saved his life.

A soldier’s story
It was Trevor’s 50th day in Afghanistan. A Taliban-influenced teenager attacked him with an axe, leaving a three-inch gash in his brain. In the Kandahar Base Hospital, Col. (then Maj.) Homer Tien, a Sunnybrook trauma surgeon who was also on his first tour in Afghanistan, received word a casualty was on the way. It was a surgical priority, though details were unclear.

When Trevor, bleeding profusely, arrived with combat medics, it was clear he had significant injury to his head. “In the trauma bay, the priority was to secure an airway, and so he was intubated and resuscitated, as he had bled quite a bit and was in shock,” Dr. Tien recalls. “We then took him to the operating room to stop the bleeding from the injury. We did this, and bandaged up his head.

Dr. Tien stabilized him and resuscitated, as he had bled quite a bit and was in shock,” Dr. Tien says. “He kept me alive,” Trevor says.

A doctor’s story
Dr. Tien says he didn’t join the Canadian military because of any grand ambition. “Embarrassingly enough, 20 years ago, I joined to pay for medical school,” he says. At first, there was adventure, like parachuting and diving. But what really drew him in was the leadership training the military provided. “As a medical student, you don’t really get formal leadership training,” he says. “It’s intriguing to be in a position as, say, a 25-year-old—which I was in Yugoslavia—and a medical platoon commander. I was the captain in charge of 40 medics. That, in itself, is quite the life experience for me. It wasn’t just about how to treat a sprained ankle.”

Now, two decades and many tours later, the colonel is the national practice leader in trauma for the Canadian Forces and medical director of Sunnybrook’s Tory Regional Trauma Centre. He was also recently a script advisor for the Global TV drama series Combat Hospital.

Leadership training has continued to serve him well. As national practice leader, he advises the Surgeon General of the Canadian Forces on issues surrounding trauma care, such as which trauma protocol should be used in a given situation or care for critically injured patients. As a result, Dr. Tien has witnessed—and brought about—many changes in combat care. As a result, Dr. Tien has witnessed—and brought about—many changes in combat care. He recently spearheaded a supplement in the Canadian Journal of Surgery examining “Lessons learned from the Afghan war.”

His research focuses on establishing and validating the guidelines usable for people when they are fighting and not in a military hospital. Dr. Tien was honored with the Order of Military Merit, awarded by the Governor General of Canada to Canadian Forces members who have demonstrated outstanding service and leadership.
"I admire the courage and tenacity Trevor has displayed in overcoming the adversity resulting from his injuries. It reminds me why I still serve in uniform, to support our fighting front-line troops."

DR. HOMER TIEN (speaking to another patient, above)
War torn: the cost of bearing witness

Dr. Anthony Feinstein’s research, treatment and an Oscar short-listed documentary focus on post-traumatic stress disorder often faced by journalists on the front line.

By Michael McKinnon

The Journalists Memorial in Washington’s Newseum includes more than 1,800 names and hundreds of photos of journalists who died covering conflict.
It has long been understood that the atrocities of war don’t always remain on the battlefield when soldiers come home, but a Sunnybrook psychiatrist is proving journalists suffer much the same damage as those behind the gun.

“If you’re a journalist going off to war, you can experience horrible things that will lead you to be vulnerable to post-traumatic stress disorder [PTSD],” explains Dr. Anthony Feinstein, producer of Under Fire: Journalists in Combat, a documentary about the mental health risks these journalists face. “This is an issue that is clearly not going to go away. The world is in a big mess, and there’s enough conflict in the world to make sure a lot of journalists are going to get hurt.”

The documentary, short-listed for a 2012 Oscar nomination, examines the horrors of war through the stories of journalists sent to cover it—and these stories are indeed horrific. Viewers meet Jon Steele, for example, author of War Junkie and a cameraman for Independent Television Network, who describes a little girl injured in Sarajevo waiting for him to bring her candy. He tries to visit her in hospital, but is brought to her dead body stretched out on the floor instead.

There is Ian Stewart, who was head of the Associated Press’ West Africa bureau in 1999 when a young rebel—a boy, really—fired his AK-47 into Stewart’s vehicle, killing another journalist and lodging a bullet in Stewart’s brain. Partially paralyzed, he says he still pictures the screaming and agonized faces of war when he closes his eyes.

And there is the Toronto Star’s Paul Watson, author of Where War Lives, who is probably best known for his 1994 Pulitzer Prize-winning photograph of a dead American soldier being dragged through the streets of Mogadishu, Somalia. Interviewed in Under Fire, he says he is still haunted by his decision to take that photograph, feels like a participant in the desecration of a body and swears he would never again take such a picture while covering conflict.

“But not only had most of the news organizations not provided for the psychological welfare of their war reporters, but trauma researchers had ignored them too,” Dr. Feinstein writes in his 2006 book Journalists Under Fire: The Psychological Hazards of Covering War. “Trawling through the literature, I could not find a single reference to the subject—no articles, chapters or abstracts. I had stumbled on a virgin topic, lying unrecognized within a larger literature devoted to the emotional consequences of traumatic events.”

And so, backed by financial support from the Freedom Forum, a Washington-based organization focused on protecting freedom of speech, Dr. Feinstein interviewed 149 war correspondents by the end of 2001 and published his first book on the subject, Dangerous Lives, in 2003. He later received funding from CNN, the BBC and the Dart Foundation to further his work. “Journalists who they’ve seen them. They’re part of their memories.”

As those front-line journalists attempt to combat the fallout from their experiences, the results can be devastating: substance abuse, depression, thoughts of suicide or a sense they no longer fit within society. Relationships crumble and sleep suffers.

“When I started out covering conflicts almost 25 years ago, few journalists spoke openly about the psychological risks,” Watson says. “We self-medicated with drugs and alcohol. Talking about something like post-traumatic stress disorder would have been seen as a weakness. That has changed. And Dr. Feinstein’s work must have helped make that change happen.”

To be sure, the idea that journalists could suffer from PTSD (once called shell shock, battle fatigue and other names) was unheard of until a patient was referred to Dr. Feinstein in 2000. She presented with recurring neurological symptoms such as incoherence, agitation, sweating, occasionally lapsing in and out of consciousness, but her chart showed no physical abnormalities. Her personal history was typical of those he would hear from other journalists in the coming years: a decade-plus of cumulative stress, near-death experiences and conflict coverage, followed by self-medication with drugs and alcohol. It was an issue that no one—not journalists, their employers or trauma researchers—was addressing.

Feinstein notes, leaves more than 70 per cent who present with recurring neurological symptoms such as incoherence, agitation, sweating, occasionally lapsing in and out of consciousness, but her chart showed no physical abnormalities. Her personal history was typical of those he would hear from other journalists in the coming years: a decade-plus of cumulative stress, near-death experiences and conflict coverage, followed by self-medication with drugs and alcohol. It was an issue that no one—not journalists, their employers or trauma researchers—was addressing.

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He is quick to point out that not all journalists who cover conflict are suffering; some return from the battlefield largely unscathed. That 29 per cent of war journalists develop PTSD, Dr. Feinstein notes, leaves more than 70 per cent who don’t. Likewise, 76 per cent of journalists do not develop depression. Many do not develop drinking problems. But the rates are still significantly higher than those in the general population and higher, for example, than rates for police officers, fire fighters and veterans who have not seen active combat.

It is truly a dangerous time for journalists: 908 have been killed covering combat in the past two decades compared to just two killed covering the First World War. “Iraq has been by far the most lethal conflict for journalists, with close to 200 members of the press killed so far. This number exceeds the mortality rate for journalists from World Wars I and II and the Vietnam War combined,” says Dr. Feinstein.

Whether steered by confidential help lines established by news outlets, or encouraged by Dr. Feinstein’s books, his documentary or his reputation, journalists are turning to him in increasing numbers. He responds, depending on the severity of their symptoms, with an array of treatment options including cognitive-behavioral therapy, cautious use of medication and counseling. For those with full blown PTSD or depression, taking a break is often his first
recommendation. "If someone is acutely trau-
matized and in a war zone, my advice to them is,
"You need to take a break from this and look after
yourself," he explains. "That's common sense; if
you're a long-distance runner and you've devel-
oped a fractured leg, you're going to take a break
from running."

For those in remote areas, he will set aside an
hour a week to counsel them remotely
over the
phone; he has treated journalists this way for
several months at a stretch. (The opening scene in
_Under Fire_, for example, shows Reuters photog-
rapher Finbarr O'Reilly preparing for an assign-
ment in West Africa by packing his flak jacket and
calling Dr. Feinstein in Toronto.) For those whose
problems turn out to be more acute, he recom-
mends returning home—wherever home might
be—to seek local expertise.

Graeme Smith, who covered the war in Afghani-
stan for _The Globe and Mail_ from 2005 to 2009,
visited Dr. Feinstein at his Sunnybrook offices as a
precaution. "I wanted to get my head checked, to
put it bluntly, and he assured me I'm not suffering
from PTSD or depression," says Smith, adding
that the session gave him a clear picture of what
he should be watching for: changes in sleeping
habits, relationships or appetites for food or sex.

"He also told me to watch for any irrational avoid-
ance behaviour, a tip-off that somebody can be
scarred by a particular experience and unwilling
to do it again." But much of Dr. Feinstein's work is more proac-
tive than reactive, working with news outlets and
journalists before problems arise.

In 2007, Dr. Feinstein designed and helped
launch a confidential online self-help resource
(conflict-study.com) that allows journalists to
complete self-assessments of PTSD symptoms,
depression, general psychological well-being and
alcohol and substance use. Users receive immedi-
ate feedback that can be used to facilitate access
to a family doctor or an employee assistance
program for therapy, if needed.

And Dr. Feinstein spreads the word through in-depth educational seminars, such as the one he
led at the New York offices of CNN in December.
There, he offered a series of two-hour sessions
in which he presented data from his research,
explained PTSD, depression and substance abuse;
and facilitated a Q&A. The format benefits jour-
nalists who cover conflict far from home, he says,
but also those who cover domestic events such as
9/11 and Hurricane Katrina.

Perhaps the most unusual seminar he led was in
Boston, by invitation from National Public Radio,
which involved Israeli and Palestinian journalists
across from one another at one table. "Interest-
ingly, the issue of PTSD was very familiar to the
Israelis, but it was a completely new issue among
the Palestinians; they were fascinated by it,"
recalls Dr. Feinstein.

He was a keynote speaker at the 2008 Journal-
ism in a Violent World conference, part of the
Canadian Journalism Forum on Violence and
Trauma, of which he is director.

His message is sinking in, and _Under Fire_
should help spread that message with screenings
in New York, Los Angeles, England and Toronto.
Canadian media are behind the curve, Dr. Fein-
stein admits, while organizations such as CNN are
leading the way. "It's people's personal responsi-
bility whether they want to look after themselves
or not. The way you break through the barrier
and convince people to take the issues seriously
is through education," he says. "And the culture is
changing—and that's been very rewarding."

Changing, but still with far to go, as one journal-
ist points out. "I'm stunned to hear that media
professionals who have seen the film are
shocked," says the _Toronto Star_ 's Watson.
"Which tells me that even people in the busi-
ness, who I assumed knew what we were going
through, largely didn't."
Some tools offer diagnostic or treatment advantages to the patient, such as a new tool provides quality control and quality assurance on the system and simulates the treatment,” says Easton.

### Building better MRIs

WHAT IT IS: Specially designed coil-and-bed system to improve the detection and biopsy of breast cancer.

WHAT IT DOES: MRI images help doctors detect cancerous lesions in the body. Specially designed coils surround the body part of interest and receives the signals that are transformed into images. For years, breast MRIs were done using coils designed for something else.

WHO CREATED IT: Twenty years ago, Dr. Don Plewes, a senior scientist at the Sunnybrook Research Institute, with then-graduate student Cameron Piron, began developing a system that would improve MRI results, particularly among women with a high risk of developing breast cancer. “The design optimizes the signal-to-noise ratio to improve the image quality and puts it into an elegant package that could be coupled to any commercial hardware,” says Dr. Stuart Foster, the head of Core Oncology.

THE PAYOFF: In 2007, Sunnybrook was awarded $74-million from the federal government’s Canada Foundation for Innovation to expand the hospital’s research facilities, including opening the Centre for Medical Device Design. The new facility (which is slated to open in mid-2012) will be a hub of activity for the design, fabrication, testing and validation of medical devices, bringing team members together, and provide them with state-of-art equipment. The new Centre will bring team members together, and provide them with state-of-the-art equipment. The new Centre will be a hub of activity for the design, fabrication, testing and validation of medical devices, bringing team members together, and provide them with state-of-the-art equipment. The new Centre will be a hub of activity for the design, fabrication, testing and validation of medical devices, bringing team members together, and provide them with state-of-the-art equipment.

### Standing in for treatment

WHAT IT IS: The Lucy Phantom helps treat inoperable brain tumours or arterial venous malformations that can be attacked with an intense, pencil-thin X-ray beam. The more focused the beam, the better the treatment.

WHAT IT DOES: The Lucite globe has roughly the same density as the brain (1.3 g/cm3). The oncologist can use the Lucy Phantom to tweak the x, y and z coordinates of the radiation beam so it will hit precisely the right spot in the brain during the patient’s treatment.

WHO CREATED IT: Easton’s lab developed the Lucy Phantom, one of the most-known devices to come out of the machine shop at Odette.

THE PAYOFF: Oncologists can better plan the treatment for each patient. “The tool provides quality control and quality assurance on the system and simulates the treatment,” says Easton.

### Sowing seeds of treatment

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### Lining up the lasers

WHAT IT IS: Oncology treatment machines must be calibrated before treatment can begin, but rarely are there physical devices that ensure the machines are in peak shape.

WHAT IT DOES: A transparent block allows technicians to calibrate the lasers used to position a patient in before his or her treatment. If the lasers are off even slightly, the radiation beam won’t hit its target precisely. When the block is in place, clinicians can see that immediately: the laser beams won’t line up with the marks on the block.

WHO CREATED IT: Easton and his crew at the Odette lab.

THE PAYOFF: The device is now being used in locations in Canada and in Florida.

### Shooting microimages

WHAT IT IS: The world’s first high-frequency ultrasound tool.

WHAT IT DOES: It uses high-frequency transducers, making it possible to see tiny features in real time. Clinical applications include neonatal imaging and the diagnosis of eye and skin diseases.

WHO CREATED IT: When Dr. Stuart Foster couldn’t find a device that would allow him and his team to look at the tiny blood vessels that feed blood into a mouse tumour, he decided to build it himself.

THE PAYOFF: Universities and national health labs wanted them and hundreds were sold. The company, VisualSonics Inc., was bought by Sonosite Inc., in 2010 for $71-million.
BABY STEPS

Sunnybrook guides older mothers through the challenges, possible complications—and, of course, the joys—of pregnancy by Michael McKinnon

FORTY MAY INDEED BE the new 30, but some women are surprised their bodies haven’t “gotten the memo” when it comes to having a baby. Women who decide to start a family in their late 30s or 40s often learn even conceiving is out of the question without assistance, and that getting pregnant is only the beginning, older moms-to-be face increased risks of gestational diabetes, hypertension and premature births, among other concerns.

“This is not groundbreaking news: the average age of women getting pregnant for the first time is going up and that can lead to consequences,” says Dr. Arthur Zaltz, interim chief of Obstetrics and Gynaecology. “The older you are, the greater the probability you’re going to have the whole gamut of issues.”

Dr. Zaltz is quick to point out this demographic has its advantages, too. “The reality is that most of the women in my practice are older, 35 and beyond, and sometimes they are healthier and take better care of themselves than the younger women I look after,” he says. “Women who are getting pregnant at a later age are often highly educated, less likely to be smokers or overweight, and are in physically better condition.”

To be sure, Sunnybrook—with a $160 million, state-of-the-art Women & Babies space, including the county’s most modern neonatal intensive care unit (NICU) and a program focused on high-risk moms—is uniquely positioned to care for these patients should complications arise. Here’s how Sunnybrook helps.

FERTILITY

A woman’s ability to get pregnant naturally begins declining at age 30, that’s according to the American College of Obstetrics and Gynecology, says Dr. Zaltz. “Most problems can be dealt with.” But both Drs. Zaltz and Dixon urge women to start the conversation long before starting a family is even on the horizon. “And this is to empower women,” says Dr. Dixon. “In your 20s, when finishing your education and starting your first job and thinking about your career, you need to also have the thought, ‘Do I even want a family?’ If you do, be proactive about it and be sure the clock isn’t ticking faster than you expect it to.”

GESTATIONAL DIABETES

Older women are three times more likely to develop gestational diabetes than their younger counterparts, according to In Due Time: Why Maternal Age Matters, a September 2011 report by the Canadian Institute for Health Information. Using 2007 data, the report indicates women over 40 have a one-in-eight chance of gestational diabetes, compared to a one-in-12 chance for women 34 to 39, and one-in-24 for women 20 to 34.

“Poor blood sugar management can lead to problems for both mom and baby,” explains Julie Paterson, a Sunnybrook diabetes nurse educator. “Babies can grow too large for example, causing trauma during delivery, or suffer a low blood sugar reaction during delivery and require care in the neonatal intensive care unit. These patients are also more prone to breathing problems at delivery and developing jaundice, while larger babies can lead to an increased risk of Caesarian sections.”

Sunnybrook gestational diabetes patients receive a blood glucose meter with which to test and record levels. They also attend educational classes about healthy eating habits, and are followed every two weeks in the obstetrics endocrine clinic until they deliver, and then post-partum. “If we can control the blood sugars, we can prevent these things from happening,” says Paterson.

HYPERTENSION

Older women are also at an increased risk of developing gestational hypertension, which can lead to low birth weight and early delivery. In Due Time indicates 28- to 34-year-olds have a 3.9 per cent chance of getting gestational hypertension, 35- to 39-year-olds a 4.2 per cent chance, and those 40-plus a 5.6 per cent chance. The risk of pre-eclampsia also increases significantly for those over 35. While the condition is treatable, the tricky part for some is trading that business trip or important trial for much-needed bed rest. While these patients may not be used to losing control of their careers, Dr. Zaltz says most realize getting off their feet and slowing down is for the better. “It becomes about the baby and not them.”

PRETERM

Women 35 and over have an increased risk of preterm births, with rates more than 20 per cent higher than for those 20 to 34, according to In Due Time. This demographic is also more likely to have multiples due to their increased use of assistive reproductive technology, and Reassuring Expectations points out more than 50 per cent of twins and 90 per cent of triplets are born prematurely.

Prematurity comes with a long list of complications, including lung infections and learning disabilities. Sunnybrook’s NICU, which opened in September 2010 and is the newest and most modern level III facility in the country, cares for 20 per cent of all infants in Ontario weighing less than three pounds.

Sunnybrook is also the only hospital in Ontario using human donor milk, which has proven to drastically reduce infections and improve patient outcomes, and is among the top three hospitals in Canada for healthy lung outcomes.

And the NICU Follow-Up Clinic tracks the progress of each child at least until the age of six, working to ensure these patients have the support they need within their communities, follow-up care for premies elsewhere typically ends at the age of two. The clinic is directed by Dr. Paige Church, one of only two pediatricians in North America and the only one in Canada with a combined fellowship in Neonatal-Perinatal Medicine and Developmental Pediatrics.

The good news is, that with the help of Sunnybrook’s multidisciplinary team, starting a family can absolutely be a dream come true for these patients. “Despite the increased concerns with advancing maternal age, good preventative care, good health and supportive obstetrical care can lead to the birth of a healthy baby,” says Dr. Zaltz.
LIVING WITH HEART

Patients can live a normal life with an implanted defibrillator device, with some awareness and basic precautions

By Alexis Dobranowski

RUDY NUSINIK LIVED EACH DAY with a looming fear of dying when an ICD (implantable cardioverter-defibrillator) was first put into his chest. “When it was first in there I was scared to death,” Rudy, 63, recalls. “It’s the unknown. You’ve gone through an episode [heart attack] where the bulk of people never make it past the stretcher. And now you are going to put this in you with the fear that when it happens again, it is going to work!” Every little twitch you think, ‘Oh my God. This is it. This is the end.’” But after nearly two decades of living with heart disease and heart attacks, Rudy has grown to trust the little device that can save his life. “I think it’s something they did that caused the shock, and so they want to disengage in life,” she says. “We encourage people to carry on living their lives fully. This is there as an emergency system and if it were to happen, know you are protected.”

It’s an adjustment for the whole family, Rudy says. His adult children might wonder if it’s safe for him to hold an infant grandchild, for instance, or to babysit. The fear factor can affect intimate relationships as well, Dr. Newman and Suzette point out. “There’s the patient’s perceived sense of frailty. There’s angst over proximity to death,” Dr. Newman says. “There’s the physical fear of getting shocks, or even of giving their partner a shock—which is not a realistic or practical concern, but you can imagine where that goes in someone’s imagination.”

Suzette encourages patients to start with simple acts, like hugging, cuddling and kissing. And Rudy says his treatment has brought him closer to his wife Petra. “Wishing you the best—all of them deemed appropriate. It feels like my chest is exploding,” he describes the ICD action. “Now I’m starting to feel like I can go around without any fears, without any apprehension of having to rely on someone else with an external defibrillator. I know I’ve got my little buddy inside of me that can give me a whack.”

“Getting a shock—appropriate or inappropriate—allows some patients to feel greatly reassured,” Dr. Newman says. “For other patients, getting a shock is a reminder of their frailty.”

Rudy, for instance, has received nine shocks—all of them deemed appropriate. “It feels like my chest is exploding,” he describes the ICD action. “Now I’m starting to feel like I can go around without any fears, without any apprehension of having to rely on someone else with an external defibrillator. I know I’ve got my little buddy inside of me that can give me a whack.”

But while living with an implantable heart device has complex psychological effects, it shouldn’t stop patients from living a full life. Sunnybrook nurse practitioner Suzette Turner meets with patients in the arrhythmia clinic to help them deal with their ICDs in a positive way. Many patients suffer from shock anxiety and behavioral avoidance, she says. “They may think it’s something they did that caused the shock,” she says. “It’s a benefit that can save your life. It’s a security thing, and the alternative isn’t any good. It’s not always easy but it’s worth it.”

4 Tips for Living with an ICD

1. ASK QUESTIONS. Be assertive in expressing your concerns to your health-care provider in the device clinic. While down your questions in between appointments, seek support from a counselor or psychologist if you are having difficulty coping or having trouble with intimacy.

2. PARTICIPATE IN PHYSICAL AND SOCIAL ACTIVITIES.

3. TRY RELAXATION TECHNIQUES LIKE YOGA OR BREATHING EXERCISES.

4. FOCUS ON THE POSITIVE ASPECTS. “Everyone has a different notion to living a life. Live your life,” nurse practitioner Suzette Turner says.

DRIVING WITH AN ICD

After receiving a shock, ICD patients are unable to drive for one to six months, depending on why a device was originally implanted and if the shock was deemed appropriate. Generally, the recommendation not to drive is communicated to the Ministry of Transportation, which then decides what to do about the patient’s driver’s licence status.

“The machine, you will recall, is not necessarily there to prevent an [abnormal rhythm or heart attack], it’s generally there to treat after the fact,” Dr. Newman says. “So imagine, you are driving along on the 401 and the machine works. It’s still going to take eight to 10 seconds, at the shortest, to sense that there’s an abnormal rhythm and charge up and shock your heart back to normal.”

During this time, the patient may feel dizzy, lightheaded and may feel a shock. “If you are behind the wheel, this may impair you. We tell patients they shouldn’t swim by themselves or ride a horse by themselves,” Dr. Newman says.

Rudy has been cleared to drive, but limits his trips. “Personally I won’t drive in to the city,” he says. “I don’t want to endanger anybody else. I know what could happen.” Rudy relies on public transit or his wife, Petra, to take the wheel on longer trips.

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‘THREE STROKES, YOU’RE OUT’

A Sunnybrook team detected one patient’s high risk factors, performing delicate surgery that saved him from a massive stroke. Here’s how the stroke team did it. By Celia Milne

ON CANADA DAY 2011, Robert Fitzgibbon held onto life by a thread. While other families frolicked in the sunshine, enjoying a national holiday, Robert underwent a delicate procedure at Sunnybrook while his daughter Joy paced the halls. The surgery—which went well and, by all accounts, saved Robert’s life—was a carotid endarterectomy. It was needed to remove a large blockage in his left carotid artery, the major supply of blood flow to the brain. While the operation itself is a minor miracle, the detective work involved in figuring out that Robert needed this life-saving surgery is a modern medical marvel.

The joy of Robert’s story is that astute doctors in Sunnybrook’s Regional Stroke Prevention Clinic realized he was a ticking time bomb, and that they had to act with lightning speed. “If we had done nothing, I fear we would have suffered a major disabling stroke,” says Dr. David Gladstone, a stroke neurologist and director of the clinic.

Robert’s whirlwind story began in June 2011, when he had a knee replacement operation at a hospital near his home. He was long overdue for this surgery, but had been consumed for years with caring for his wife, who died of acute leukemia in 2009. Two days after Robert’s knee surgery, he had a transient ischemic attack (TIA, a minor stroke), resulting in sudden weakness, loss of feeling and incoordination of his right arm and hand. A week after that, he had another TIA, this time affecting vision in his left eye. These were stroke-warning events.

When his doctors consulted colleagues at Sunnybrook’s Regional Stroke Prevention Clinic, they identified danger signs and initiated a treatment plan for aggressive risk reduction. “I call it one-stop shopping for stroke prevention,” says Robert. The clinic is a teaching ground for international trainees and Accreditation Canada praised the clinic as a “leading practice” in its external review of Sunnybrook last year.

State-of-the-art diagnostic imaging includes MRI scanning of the brain and blood vessels, specialized neuro-Doppler ultrasound studies performed by Diane Brodie and colleagues to identify dangerous blockages, and cardiac testing. “With the advanced diagnostics at our disposal we aim to obtain the most rapid and accurate assessments for patients with stroke warning symptoms,” says Dr. Gladstone.

This is important because research shows up to 80 per cent of strokes that occur after a TIA may be prevented if the underlying causes can be found and treated right away—a significant statistic, given strokes are very common, some strokes die or is disabled by a stroke every 10 minutes in Canada, making it a leading cause of death, disability and dementia.

Robert and Joy remember many staff members staying late on that last June night to complete tests, adjust Robert’s medications and compile a detailed report on his condition. “Dr. Gladstone and his team moved with such urgency and such efficiency, it’s hard to believe,” says Joy. Robert’s tests revealed his mini-strokes were coming from a heavily calcified atherosclerotic plaque blocking 80 per cent of his left carotid artery, an extremely precarious and life-threatening situation. “When a plaque starts to rupture like this,” says Dr. Gladstone, “there is an immediate risk of more strokes, so it had to be treated right away.”

Joy, who has a PhD in political science and works in public health policy, remembers Dr. Gladstone telling her that her dad had leapfrogged to the top of the surgical list. “He was very calm. He didn’t alarm us, but he was very serious. I’ve never thought medical exams could be graceful and fluid. Dr. Gladstone was poetry in motion,” she says.

Surgeon Dr. Dueck was brought in to perform Robert’s carotid endarterectomy on the July 1 statutory holiday, just two days after the diagnosis was established. In contrast, provincial wait times for this procedure have averaged 30 days, according to Dr. Gladstone’s research—a statistic he wants to see improve province-wide.

Robert, who is now fully recovered after rehabilitation therapy, continues to operate two book stores and has not had any more attacks. He is grateful to the team at Sunnybrook, knowing how close he came to death.

“I don’t know if I would have lasted another day. Another stroke would have been fatal. Three strokes, you’re out. They saved my life, literally.”

Robert Fitzgibbon
Patient, Regional Stroke Prevention Clinic

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“if you’ve had a TIA, you are five times more likely to have a stroke over the next two years, according to the Heart & Stroke Foundation. Each year 15,000 people in Canada experience TIA’s.

If you or someone you know is experiencing the sudden onset of these symptoms, even temporarily, call 911.

• Sudden weakness, numbness or tingling in the face, arm or leg
• Sudden loss of speech or trouble understanding speech
• Sudden loss of vision, particularly in one eye, or double vision
• Sudden severe and unusual headache
• Sudden loss of balance, especially with any of the above signs

To prevent strokes, factors you can control include maintaining a healthy lifestyle, ensuring good blood pressure control, healthy diet, exercise, and not smoking. •

WARNING SIGNS
How to spot a possible TIA — and how to prevent one

Having a mini stroke is a warning sign the big one might be coming. A transient ischemic attack (TIA, a mini stroke) occurs when a blood clot prevents blood flow to the brain for a short time, depriving it of oxygen and glucose. Symptoms are the same as in stroke, but they generally disappear within a few minutes or hours. That’s where the expression “transient” comes from.

If you’ve had a TIA, you are five times more likely to have a stroke over the next two years, according to the Heart & Stroke Foundation.
IF IT WEREN’T FOR a pioneering abdominal wall hernia surgery, a complex hernia may have prevented Peter Landers from playing with his grandchildren in the sand this past spring break.

“This hernia was debilitating: on a scale of one to 10 it was a 10,” Peter says. “I had to wear the girdle 24/7 to hold my stomach in. Tenderness kept him laid up for nearly four months later, Peter had his bags packed for Florida, brand new beach buckets for his grandchildren and his golf clubs waiting by the door.

"All of a sudden there’s a light at the end of the tunnel," Peter says. "My hand is on the switch now, and it’s a matter of taking my time and doing it right and we don’t end up with a problem again."
To Screen or Not to Screen?

By Dan Birch

Last November, a Canadian task force of medical professionals concluded women in their 40s at average risk of developing breast cancer should not be routinely screened with mammography. The potential harms of so-called false positives and unnecessary biopsies outweighed the potential benefits of screening in average-risk women, the Canadian Task Force on Preventive Health Care guidelines said, stoking an ongoing and contentious debate.

The task force made five additional breast cancer screening recommendations for average-risk women, including on the use of magnetic resonance imaging and breast self-exams. Three Sunnybrook staff with expertise in breast cancer care and imaging recently sat down to discuss all the recommendations.

“Women should really seek out information to find out if they really are average risk, because many women aren’t aware of the full impact, for example, of family history on both sides of the family and other risk factors that may increase their risk of breast cancer.”

Dr. Andrea Eisen, co-chair of Cancer Care Ontario’s Breast Site Group, is head of Sunnybrook’s Familial Cancer Program, which provides risk assessment of hereditary cancer syndromes to patients and their families with a focus on breast, ovarian and colorectal cancers.

“From personal experience, having had callbacks for mammograms and biopsies that turned out to be benign, it’s incredibly stressful... There are more women who have the stress that turns out to be for nothing, than there are women who actually have their cancer diagnosed.”

Dr. Ellen Warner is a medical oncologist at Sunnybrook’s Odette Cancer Centre who led a study proving the benefits of adding MRI to mammography for screening very high-risk women. She is also the author of a recent review article in the New England Journal of Medicine on breast screening for average-risk women.

“The reason the Canadian Task Force on Preventive Health Care have taken this position is they believe the benefits of the lives saved through screening are not much greater than those harms. I disagree strongly with the recommendations.”

Dr. Martin Yaffe PhD and senior imaging scientist at Sunnybrook Research Institute, led the invention of digital mammography and is co-leader of the Smarter Imaging Program, an initiative of the Ontario Institute for Cancer Research.
**EARLY SCREENING: ONE WOMAN’S STORY**

Susan Silverman, 62, watched with concern late last year as the debate over screening mammography was making headlines. More than a decade earlier, when the Thornhill, Ontario, resident was 48, a mammogram detected a tumour in her breast. “It showed right away,” says Susan, a mother of three who has been married to her husband, Albert, for 42 years. She opted to have a mammogram after two family members were diagnosed with breast cancer in their 30s and 40s. Further imaging and surgery followed, plus post-surgical chemotherapy and radiation at Sunnybrook, leaving Susan cancer-free to this day. At the time of her diagnosis, she was in the category the task force now says should not be routinely screened with mammography. “That’s a very bad idea,” she says of the recommendation average-risk women should wait until their 50s to get mammography screening. “Just like any other part of your body, you have to be on top of everything.” Susan worries about the impact the recommendation will have. She wonders if it will discourage women in their 40s from being proactive about their breast health. She also thinks the health-care system will be worse off if breast cancers are discovered later. “To save a few pennies at the front and then pay for it at the end, what are they achieving? I don’t get that.”

She is thankful the mammogram 14 years ago detected the cancer that might have robbed her of the chance to see her grandchildren. Susan was finishing up her breast cancer treatments in 1998 when she learned she would become a grandmother for the first time. “I said, ‘I want to see this little boy grow up, and he has his bar mitzvah.’ “She is getting her wish this spring. She needs to know what her breasts normally feel like, so that if something changes she can say, ‘Hey, that wasn’t there a month ago, I better go see my doctor right away.’”

Plus, there are various lifestyle things women can do that are helpful: avoiding hormone replacement therapy if they go into menopause and don’t need it, minimizing alcohol consumption, exercising and keeping their weight down, especially after menopause. **DR. EISEN:** Women should really seek out information to find out if they really are average risk, because many women aren’t aware of the full impact, for example, of family history on both sides of the family and other risk factors that may increase their risk of breast cancer. There is in Ontario, late 40s, over screening mammography and MRI at age 30 for women who may increase their risk of breast cancer. **DR. EISEN:** We think that is really a concern in general because the uptake of screening mammography, even for women eligible for the organized screening program in the over-50 category, is far from ideal. In Ontario, it’s about 70 per cent of women who are eligible that obtain routine screening mammography. What about using mammography to diagnose a breast concern, such as a lump? Is there any debate? **DR. EISEN:** There is no controversy whatsoever about the value of diagnostic imaging if a woman has symptoms or any kinds of signs of breast cancer. Even those who most strongly oppose screening don’t dispute that. The issue is really screening not frequently, when the media conveys that message to the public, they will simply say something like, “Mammogram not useful, experts say.”

**What are your thoughts on the task force’s recommendation on screening mammography for women who are in their 40s?**

**DR. YAFFE:** I disagree with the task force recommendations. Most women don’t have breast cancer. The whole idea behind screening is that you’re trying to find breast cancer in the few women who do, so there is the opportunity to save their lives through earlier treatment. The task force looked at eight trials of screening with mammography and they pooled the data from those eight trials. Across the board they found about a 15 per cent mortality reduction from screening women in their 40s. They compared that to what they considered to be the harms of screening, including what we refer to as false positives, over-diagnosis and overtreatment. The reasoning they have taken this position is they believe the benefits of the lives saved through screening are not much greater than those harms. I disagree strongly with the recommendation. First of all, the 15 per cent mortality reduction they identified is a gross underestimate because it’s based on old mammography done in a time when imaging was primitive compared to what it is today. Seven of those trials were done in the 1960s, 70s and 80s. The eighth and most recent one finished just after 2000, and there, when you look at the women who actually did receive the mammography, the result was a 24 per cent mortality reduction from screening women in their 40s. **DR. WARNER:** Treatment of breast cancer has tremendously improved. Back in the 1960s, we weren’t giving adjuvant therapy to anybody. We were doing surgery and then saying good luck. Now, most women will get some kind of additional treatment, with huge benefits. And it’s possible that 15 per cent mortality reduction due to screening mammography today is even less. So, we don’t really know, and that’s why I think that for women in their 40s it should be between the woman and her doctor to discuss the pros and the cons, and let each individual woman decide if she wants a screening mammogram. What does the task force mean when it refers to terms like false positives and over-diagnosis? **DR. YAFFE:** When screening is done two pictures are taken of each breast. Using those images, about 93 per cent of women can be told they do not have cancer. In the other seven per cent, the radiologist would like the woman to come back for additional images to make absolutely sure there is no cancer. In only about one per cent of those women screened in a needle biopsy performed, and depending on their age, one-quarter to one-third of that one per cent is found to have cancer. So when women are called back for imaging and don’t have cancer, that’s called a false positive. Certainly, being recalled induces stress. But typically it’s a relatively short-lived stress, and once you have the answer that stress disappears. It would probably be helpful if when women are called back they are informed that there is only about a one-in-20 chance they have cancer. **DR. WARNER:** From personal experience, having had culposcopy for mammograms and biopsies that turned out to be benign, it’s incredibly stressful. There are women who have an abnormal mammogram and then come back months later for an ultrasound or something else. There are women who have the stress that turns out to be for nothing, than there are women who actually have their cancer diagnosed.

What impact could the mixed messaging around mammography have on breast care in Canada? **DR. YAFFE:** In the United States, the volume of mammography in women in their 40s has gone down, despite the fact the U.S. federal government almost instantly rejected the American task force recommendations in 2009 [that suggested screening every other year for women aged 50 to 74]. Nevertheless, just because of the publicity, fewer women—not just in their 40s but for all ages—are actually getting mammograms in the U.S. **DR. EISEN:** I think that is really a concern in general because the uptake of screening mammography, even for women eligible for the organized screening program in the over-50 category, is far from ideal. In Ontario, it’s about 70 per cent of women who are eligible that obtain routine screening mammography. What about using mammography to diagnose a breast concern, such as a lump? Is there any debate? **DR. EISEN:** There is no controversy whatsoever about the value of diagnostic imaging if a woman has symptoms or any kinds of signs of breast cancer. Even those who most strongly oppose screening don’t dispute that. The issue is really screening not frequently, when the media conveys that message to the public, they will simply say something like, “Mammogram not useful, experts say.”

If you have a very large tumour you may require a mastectomy instead of a lumpectomy or breast conserving therapy. You may require chemotherapy versus no chemotherapy, or if you do need chemo you may get a more aggressive chemos regime. What are the benefits of early breast cancer detection? **DR. EISEN:** The prognosis is better and the treatment required may not be as intensive as for someone diagnosed at a later stage. At the most basic level,
PATIENTS FIRST

The new Office of the Patient Experience focuses on the whole Sunnybrook experience, from a fresh new point of view

By Allison Dunfield

FOR THE PAST DECADE. Sunnybrook’s Trish Lospinuso had been asking staff and patients to put her out of business. The former patient relations advisor finally got her wish in November (in a sense), when the new Office of the Patient Experience was created this past November.

Patient Relations, says Trish, who is now one of the hospital’s three Patient experience advisors, was basically a complaints department: when a conflict or difficulty arose, patients would be directed there, and she and her co-workers would smooth things over. But the new office comes with an entirely new philosophy toward improving patient satisfaction, in which staff and patients work together to resolve minor concerns before they escalate into major disagreements.

The new centre is based on principles of customer service. Trish admits, “It’s a real culture shift.” The idea came from a recent visit to the Cleveland Clinic, where a similar office vastly improved the treatment centre’s overall patient satisfaction, as measured by surveys. A Sunnybrook team decided the idea would translate here, where patient surveys find clinical care exceptional but the “softer side” of care was sometimes found lacking.

Sunnybrook staff will take ownership of patient experience, using tools acquired in courses designed to improve patient interaction in situations such as dealing with grief, managing angry people and telephone communications. It’s a more proactive approach. “We don’t have to wait for the patient to tell us they are unhappy,” says Trish. As well, compliments for positive actions will be highlighted to patients and staff through recognition programs.

Nicky Holmes, patient care manager of the hospital’s D4 ICU, says patients and visitors on her unit are under duress. “It’s a very stressful time for patients and their families. They are going through a lot, they are processing a lot of information.” Often, she says, patients are unwilling to “bother” the nursing staff, knowing they are extremely busy. “She sees the new office as a win-win for everybody.”

A major aspect of the new office is training an army of volunteer ambassadors, who will fan out into the various wards to talk to incoming patients and loved ones about everything from parking to where to get a good meal to the unit’s structure. (During the pilot phase, they’re in the D4 ICU, the C5 Trauma Unit and the D5 Orthopaedic and Neurosurgical unit). While the volunteers are not expected to resolve conflicts, they can inform the Patient Experience office if someone is unhappy, hopefully preventing a larger issue from ever arising.

Bob Crookston, one of the newly trained ambassadors, has been also been a Sunnybrook patient. “A new patient coming in is under enough stress as it is, just getting a TV and finding out about parking. If we can have somebody alleviate that concern a little bit, it’s a good thing.” He says one of the most important things to a patient is simply “knowing someone cares about them.”

Celine Peterson is a former patient who has already been helped by the Patient Experience office. The 20-year-old was in a serious car accident in 2009 that shattered her pelvis. She was rushed to Sunnybrook, where she spent a week in traction followed by surgery and then another week in recovery. She was upset to learn, upon looking at her own medical reports, that some of the nurses had characterized her as a difficult, uncooperative patient. She thought those accounts were unwarranted—she was in a great deal of pain at the time—and they made her feel angry and felt powerless.

When she called Trish to discuss her reports she received a quick response, resulting in a meeting for Celine and her mother to discuss her Sunnybrook stay and treatment. She was very satisfied with the outcome, which she hopes will help future patients. “We sorted things out and talked things out. It was really nice to know they are really working to change.”

The new Office of the Patient Experience focuses on the whole Sunnybrook experience, from a fresh new point of view.
**THE RIGHT PATH**

Sunnybrook experts to guide teens with mental illness through the health-care system

By Michael McKinnon

*THE FIRST SIGN CAME* when 13-year-old Mark’s lost interest in his beloved soccer. By age 14, his straight-A grades were a thing of the past and his attendance at school was sporadic. He had a new group of friends, and irrational arguments with his parents and siblings were the new norm. His parents tried to connect Mark with a psychiatrist after finding drug paraphernalia in his room, but Mark would refuse to follow through with appointments. Then one night, he just didn’t come home at all.

“The parents were in absolute panic,” says Dr. Anthony Levitt, Sunnybrook’s psychiatrist-in-chief. “Mark arrives home the next morning around 10 a.m., still inebriated and with scratches and bruises, and can’t recall the last 10 hours. The nature of both his mental illness and his drug addiction are now life threatening. The parents are in crisis and have no idea what to do.”

For families like Mark’s, sifting out Canada’s complicated mental health-care system is a struggle. Parents piece together information about resources and programs from hospitals, community agencies and social services but are ultimately left to make sense of the approximately 400 treatment programs throughout Canada and the U.S. And just getting a youth into the system isn’t enough; choosing the wrong plan means unnecessary financial strain on the family and, even more damaging, the wrong treatment for the patient. Too many false starts may make the teen give up on trying new treatment options altogether, and the entire family suffers. It’s a common situation. Statistics Canada points out that while up to 20 per cent of youths suffer mental health issues, only 20 per cent of those patients get the attention they need.

Dr. Levitt aims to ease the burden on these families with the Family Navigation Project, a Sunnybrook-based resource that would partner families with experts in the mental health-care system. “We’re trying to create a place where families in crisis can connect and find the right resources,” explains Dr. Levitt. “The mental health system is a bit of a black box for many people. The point of the Family Navigation Team is to shed light on what’s inside the black box, helping parents to access the information and resources that will best meet their needs and to stay engaged with the family so they know that care is effective.”

*“For many adolescents, if they had found the right person at the right time right at the beginning of their journey, years of struggling would have been resolved”*

Dr. Anthony Levitt
psychiatrist-in-chief Sunnybrook

These navigators will do the legwork families can’t possibly do themselves, such as physically visiting program sites to learn where services families won’t find by researching them online. Parents will no longer throw darts at a list of treatment options; they waste time for teens like Mark and their families. “For many adolescents, if they had found the right person at the right time right at the beginning of their journey, years of struggling would have been resolved,” says Dr. Levitt, adding that intangibly knows the approaches of individual therapists at clinics out-of-province—and details right down to, for instance, who is in the program at a given time and whether those individuals might enhance or interfere with Mark’s treatment. “There’s no clear path or place to go for the family Mark, really, and that’s what we’re trying to create: a place where families in crisis can connect and find the right resources.”

While new to Canada, the Family Navigation Project model is common in the U.S., where therapeutic placement specialists connect youths and their patients with the right treatment programs. Sarah Financey, a consultant with Salt Lake City’s Educational Consulting Services, says the model works because families simply cannot do everything themselves. The logework required is simply too extensive and family decisions are often clouded by emotion. Having an impartial guide goes a long way to find the right treatment at the right time. “What’s on the web is only what anyone wants to show, and it’s very difficult for families to distinguish what’s real and what’s not real about these programs,” she explains. “Also, it’s not the program’s job to say out of the hundreds out there whether they are the best program for you or not, because they don’t know. They may think they can do a great job with your child, but they don’t know that I know that five places can do better.”

And while Dr. Levitt will continue to benefit from consultants in the U.S., the Family Navigation Project will finally allow consultants to learn from our own knowledge at home. Sunnybrook, with the largest youth psychiatry division in Canada, is a natural location for the Family Navigation Project. Sunnybrook oversees North America’s largest mood and anxiety disorders clinic for adolescents, and its Centre for Youth Bipolar Disorder, the only program of its kind in Canada, provides comprehensive and highly specialized care for adolescents between 13 and 18 with bipolar disorder. Dr. Levitt expects the project will improve access to services and enhance resource-matching for youths with mental health issues across Canada and will be duplicated elsewhere.

That will save a lot of heartache and wasted time for teens like Mark and their families. “For many adolescents, if families had found the right person at the right time right at the beginning of their journey, years of struggling would have been resolved,” says Dr. Levitt. “With the Family Navigation Project, we’re getting in the boat with the parents, families and youths. We’re helping to take them and lead them in the right direction—and we stay with the family until we find the right path.”

*Image changed to protect privacy*

A unique Sunnybrook school program is helping students with mental health issues by focusing on how they’re functioning, rather than their grades.

“There is quite a gap in how sick you need to be on the inpatient unit and how well you need to be to be functioning at school—and there isn’t a whole lot out there for teens who need to fill that gap,” explains Dr. David Kreindler, consulting psychiatrist with Sunnybrook’s Fresh Start program.

The program features the only Section 23 classroom in Toronto with a parallel focus on functioning and mental health. (Section 23 is the Toronto District School Board’s designation for any alternative classroom that includes a therapeutic component targeted at, for example, mental illness, teen pregnancy or a severe learning disability.) Through its multidisciplinary team (a teacher, a child youth worker, three social workers and a psychiatrist), Fresh Start creates a clearer picture of why these students are struggling. “Even though our students get a Grade 10 credit toward their high school diploma, the focus is not on getting homework done or doing essays,” says Linda Cory, Fresh Start’s coordinator. “All the work is done in the classroom because the teacher wants to determine what is getting in the way of students doing work.”

Enrolment is capped at eight students at a time (maximum age 20) and the program can last up to 12 weeks; students are transitioned back into regular or alternative schools early when appropriate. Students work with the Fresh Start teacher and a child youth worker in the morning, learn life skills in the afternoon and see Dr. Kreindler one-on-one once a week. If the student consents, there can also be a family therapy component that focuses on student-parent communication concerns.

“We work as a team, and we’re all able to share our professional expertise and perspectives to develop a really good idea as to how that student is functioning and how they’re interacting with their peers,” says Dr. Kreindler. “And that really sheds a lot of light on what it is that’s getting in the way of them functioning academically and socially.”

Dr. Anthony Levitt, left, and Dr. David Kreindler are part of Sunnybrook’s efforts to improve treatment for youths with mental health and their families.

*Fresh Start*

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*Fresh Start*
BLOOD RELATIONS

The first-ever Canadian registry and research project for myelodysplastic syndromes will study Canadians with the stem-cell disorders, leading to improved care By Dan Birch

TORONTO-AREA RESIDENTS Clara De Abreu and Albert Love are not related, but they share a tie through their blood. They are just two of the thousands of Canadians living with myelodysplastic syndromes (MDS), a collection of stem-cell disorders caused by poorly developing and dysfunctional blood cells. Each of them has decided not to let MDS get the better of them—no small feat considering the energy-sapping nature of this incurable disease. “I decided to turn my whole life around and just live for the day,” says Clara, 69, a North York resident diagnosed with MDS in 2004. With MDS, patients produce too little of one or more types of healthy blood cells in the bone marrow, requiring many to depend on regular blood transfusions to survive. MDS often becomes acute myeloid leukemia (AML), the most common type of acute leukemia in adults. “You live one day at a time,” says Albert, a 69-year-old North York resident diagnosed in 2010. “There is a lot of things that you have to give up,” says Albert’s wife, Katherine, who is deeply involved in her husband’s care. But there is one thing the couple will not pass up: travel. The two still regularly fly south for quick trips to Caribbean islands.

Clara and Albert each say they’re taking part in the project because they want to help improve care for future MDS patients. “It will give the research team a better idea of how patients fare,” Clara says, pointing to simple but very telling physical tests that participants complete. For some patients, participating in the project could also lead to improved care now, says Dr. Buckstein, as all participants will be connected to MDS centres of excellence that practice the best, most up-to-date care for the disease and offer clinical trials.

People should listen to their bodies, and for some reason if they feel something is wrong, do not hesitate and wait like I did.”

Already, Sunnybrook has enlisted more than 250 patients for the project, which has received seed funding from the Canadian Institutes of Health Research. The project, which could present results in about three years, will help medical professionals interpret the relevance of new clinical trial results. It will also lead insight into MDS disease burden in Canada and how management and outcomes may vary from province to province. This knowledge is essential to guide cost-effective care, Dr. Buckstein notes. For some patients, an MDS diagnosis is a death sentence carried out in just a few months. For others, the condition lingers for 10 years or more before another illness, or the burden of transfusions or transformation to AML, causes them to succumb. Knowing how to prognosticate between these extremes is crucial to patients, families and physicians, but remains a challenge, Dr. Buckstein says.

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The two are participating in a first-ever Canadian MDS registry and research project spearheaded by Sunnybrook. Drs. Rena Buckstein and Richard Wells, co-directors of the hospital’s MDS Research Program. Because MDS is a disease that typically strikes older Canadians, Sunnybrook has partnered with geriatric specialists Dr. Ken Rockwood from Dalhousie University and Dr. Shabbar Abhbash from the University of Toronto, who have provided key input into the study’s design.

In addition to more traditional disease-specific characteristics and prognostic factors, the national project is studying factors such as quality of life, frailty and concurrent illness among MDS patients. The objective is to develop a much better understanding of disease burden and prognosis in relation to overall and leukaemia-specific characteristics and prognosis.

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HAIR AND NOW

After his own close call with cancer, Michael Suba brought his family’s wig salon assets into the Sunnybrook fold—first as a patient service and now as a donor By Alison Dunfield

Two decades in the medical wig industry along with his personal experience with cancer have given Michael perspective on the emotional upheaval that hair loss can cause (although, ironically, he didn’t lose any hair himself during chemotherapy). He is enthusiastic about his line of work, despite the fact that many clients are going through a traumatic time. “They feel really comfortable coming here because they know that all the women around them are going through some sort of hair loss. They are not in a regular salon—everybody is in the same boat and we are very sensitive to that.”

At times, there is a festive atmosphere. Women bring husbands, wives, sisters and friends and try on different colours and styles. “They see that they’re not going to look foolish, they’re going to look good. All of a sudden their shoulders get more square and they breathe easier.”

He is now looking forward to a new Continental Hair salon location at Sunnybrook: it’s moving from the Odette Cancer Centre to the new breast cancer centre, opening this year. Michael has a special connection to the new cancer facility, since Continental Hair has donated $75,000. “They’ve done so much for my family,” explains Michael.

Besides his own cancer treatments at Sunnybrook, his mother, Emma, has had a doctor at Sunnybrook for years and his father, Peter, had quadruple bypass surgery at the hospital and later passed away there, following an aneurysm. “It was very emotional and the medical teams were so professional and caring that it made.”

It was then that Michael, who had a degree in politics from Brock University, decided he needed to take on a larger role in the family business. Being a patient spurred the opening of another Continental Hair salon location. One Sunnybrook staffer overheard that Michael worked in wigs and noted that someone had donated a box of them. He cleaned and washed the wigs for the cancer centre and began sending more used, donated wigs from Continental Hair to Sunnybrook.

Once he completed treatment, he put in a bid to open a second Continental Hair in the hospital. That location has now been at Sunnybrook for 15 years, and Michael says he was honoured to have been able to open a business at the facility that provided him with superior care. “They were so professional and caring that it was calming,” he recalls.

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For Jon Dellandrea, there are 1.2 million reasons why Sunnybrook needs investment from our community. They are the patients who count on Sunnybrook each year, and their stories will help Sunnybrook Foundation’s new president and CEO make a world-renowned hospital even better.

“Sunnybrook is already a first-rate institute, and I’m inspired by its commitment to doing great things even better,” says Jon. “What we do—our bench-to-bedside care, our incredible research and innovations—ultimately reaches every patient who walks through our doors.”

Jon’s commitment to Sunnybrook is as personal as it is professional. “My wife was once one of those patients, and so was my brother. They received excellent care here, like countless others do each and every day. We need to do everything we can for our patients; the foundation’s role is to provide the resources to make this possible.

“Sunnybrook’s clinical and research achievements are extraordinary, and I look forward to putting all I have to offer behind our pursuit of world-leading healthcare innovation. Because, in the end, it’s not about the money we raise, but what the money can do.”

Jon is recognized as a pioneer in Canadian philanthropy, having been named to the Order of Canada in 2006 for his efforts. He led the University of Toronto’s $1-billion campaign, the largest in the history of Canadian universities, completing it a year ahead of schedule. He followed this success by leading the University of Oxford’s unprecedented $2.5-billion campaign.

“Sunnybrook’s aim is to invent new ways to care for the people who count on us at the most critical times in their lives,” says Perry Dellelce, chair of Sunnybrook Foundation’s board. “We can only do this with investment from our community, and there is no other person in the country more qualified than Jon to build that investment in Sunnybrook.”

Sunnybrook president and CEO Dr. Barry McLellan agrees. “We need a strong base of philanthropic support to deliver the innovative care our community needs. Jon has successfully tackled this challenge at other complex, internationally renowned organizations, and there’s no question he will succeed at Sunnybrook.”
INNOVATION

WRITING ON THE WALL

Sunnybrook’s acute medical-surgical ingpatient units are tackling occupancy challenges with electronic whiteboards, which provide a modern approach to care planning. “With this technology we’re developing an excellent visual cue for the care team, which will help identify barriers to discharge earlier, and allow for better planning,” says Bev Wade, manager of patient flow. “We think this new system will improve patient care and help the care team communicate.”

Part of the hospital’s Bed Management System (BMS), the boards replace the dry-erase whiteboards on each unit. Information is fed from the BMS and includes patient-specific information (such as allergies and risk of falls), nursing assignments and a memo board. The new boards also show upcoming events, including tests the patients must go to, and the unit’s pending admissions. Milestones the patients must meet before discharge are also visible to the care team.

SMALL TOOL, BIG SENSITIVITY

Dr. Robert Nam is always thinking of the next best thing. “Men deserve better than the PSA test to predict prostate cancer,” says Dr. Nam, a Sunnybrook Odette Cancer Centre urological oncologist and Sunnybrook Research Institute scientist. He has already developed the Sunnybrook Prostate Cancer Risk Calculator, a checklist to more accurately determine in minutes a man’s risk for the aggressive disease. He is now applying his expertise of prostate cancer biomarkers to a microchip tool (developed by University of Toronto scientist Dr. Shana O. Kelley) that promises to detect very low levels of circulating tumour cells in the blood. The tool promises to help identify early stage and aggressive forms of the disease. Dr. Nam led studies showing several prostate-specific genes strongly associated with the disease, and the hybrid gene TMPRSS2:ERG is a strong predictor of disease relapse.

TIMELY ACCESS IN A TIME OF NEED

A Sunnybrook program is being praised for pairing newly diagnosed colorectal cancer patients with a friendly resource to ease them through a difficult time. “I have to tell you, your role is an absolute gift—the term ‘navigator’ is perfect,” wrote one patient to Barbara-Anne Maier, a specialized oncology nurse with the Colorectal Diagnostic Assessment Program, who has more than 25 years of experience in colorectal cancer care. “Knowing there is someone there with a ‘map’ to help guide me through all of this makes me feel safe. I feel confident I can focus on other things and not get lost.”

The Odette Cancer Centre program reduces anxiety by providing patients with access to a nurse right after diagnosis and before meeting with the oncologist. The nurse offers emotional support and symptom management, books appointments, orders the needed imaging and acts as a general navigator for patients who often feel overwhelmed. “It really helped my father that things were streamlined and so patient friendly,” Bill Panagopoulous says. Bill’s father received the unfortunate diagnosis in early January. “But Barbara-Anne helped put us at ease and told us more about what to expect,” says Bill. The program is a collaboration with North York General Hospital.

MOVE ON

A Sunnybrook project is making sure seniors “use it” and don’t “lose it” during hospital stays—“X” being their precious mobility. “The ability of seniors to be mobile is tied to their independence, and that can greatly suffer during a hospital stay,” says Dr. Barbara Liu, a Sunnybrook geriatrician and executive director of the Regional Geriatric Program of Toronto. “Resting in bed isn’t the best medicine for these patients.”

Move On (short for Mobilization of Vulnerable Elders in Ontario) aims to make sure seniors are urged, helped and allowed to get out of their hospital beds to stay as active as possible. Too often these patients have one condition treated in hospital, only to find lying in bed for days has severely hurt their mobility. With Move On, staff and family members become partners in getting the patients mobile. “The ability of seniors to be mobile is tied to their independence, and that can greatly suffer during a hospital stay,” says Dr. Barbara Liu, a Sunnybrook geriatrician and executive director of the Regional Geriatric Program of Toronto. “Resting in bed isn’t the best medicine for these patients.”

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WAITING ON THE O.R.: THERE’S AN APP FOR THAT

A revolutionary, free Sunnybrook operating-room app allows loved ones to track a patient’s surgical process in real time. Peace of mind: priceless.

IF YOU’VE EVER BEEN STUCK in a waiting room while a loved one undergoes surgery, you know updates can’t come quickly enough.

To alleviate the stress, Sunnybrook staff developed an online tool to keep family and friends in the loop electronically. It’s called OR Status.

Each patient gets a booking number upon registering for surgery which can be shared with family and friends. With this number, the patient’s progress can be tracked in real time.

Debra Anger, who registers patients for surgery, says the tool makes for a more caring environment for family members at the hospital. “It eases their anxiety because once the patient is behind closed doors, their anxiety starts,” she says.

Cynthia Holm, Ms. Anger’s teammate, can testify to the impact the tool has had for families. She says, “They can share this number with other members of the family who may not be present. Because it’s hard for everyone to take a day off, to wait for four hours or a full day in a waiting room.”

Families who have used OR Status are happy to have the new technology. Christine Andrews, who tracked her mother during a knee surgery, says, “You don’t feel like you don’t know what’s going on until the surgeon comes out for you hours later. We knew that things were progressing and going fine, so that was nice.”

Sunnybrook’s OR Status tool can be found at sunnybrook.ca/orstatus