

Dramatic Reductions in Wait Times for Hip and Knee Replacements

BY MARIE SANDERSON



Shahiroz Juma, an Advanced Practice Physiotherapist at the Holland Centre, discusses an X-ray with patient Jeanette Mercer. Advanced Practice Physiotherapists are specially trained to conduct comprehensive physical assessments, provide education and offer treatment options to patients. Photo credit: Geoff George.

Patients can expect to wait an average of about eight weeks for a total joint replacement procedure at Sunnybrook. This is down from an average of 30-40 weeks a few short years ago.

This reduction in wait time at Sunnybrook's Holland Orthopaedic and Arthritic Centre is a result of participation in the Ontario Ministry of Health and Long Term Care's Wait Time Strategy. The Holland Centre has created a new model of care that is being implemented across the Toronto Central Local Health Integration Network.

At the core of this success is the ability to provide streamlined access for patients and referring physicians through a team-based patient care model that includes an expanded role for specially trained physiotherapists and comprehensive patient assessment and education.

"Before I was referred to the Holland Centre, I was just waiting and suffering with terrible arthritis," says Veena Dutta, who had knee replacement surgery at Sunnybrook

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Scientists Stimulate Dreaming Sleep for the First Time

BY NADIA RADOVINI



Dr. Brian Murray and Dana Jewell from the Sunnybrook Sleep Lab.

Sunnybrook sleep researchers are the first in the world to nearly double dreaming sleep with brain stimulation.

"We were able to specifically stimulate an area of the brain responsible for rapid eye movement (REM) sleep, and therefore selectively increase the amount of dreaming sleep," says Dr. Brian Murray, senior author of a new study and sleep specialist and neurologist at Sunnybrook Health Sciences Centre. "This finding is significant for patients as it confirms, in principle, that we can selectively adjust different stages of sleep and this may make a big difference to sleep quality as well as other affected neurological functions and brain health."

This finding also has implication for further brain sciences research, providing tools to study learning and memory, and may be important for conditions such as stroke recovery and depression.

Previous research in this lab showed that PGO (Ponto-Geniculo-Occipital waves, or P waves) are the earliest sign of dreaming sleep in humans. The P waves are detected even before an electroencephalogram (EEG) test shows anything. These waveforms were recorded in patients who had electrodes in the brain during surgery for severe Parkinson's disease.

Recently published in *Annals of Neurology*, the journal of the American Neurological Association, the follow-up study allowed researchers to look at ways to increase the amount of dreaming sleep by stimulating the electrodes post-surgery, in order to potentially improve neurological function. "After surgery, the electrodes can be stimulated by a programmed device, like a pacemaker for the brain," says Dr. Murray.

The study involved five patients with severe Parkinson's disease, who were undergoing a neurosurgical procedure to help relieve symptoms of their disease. MRI scans helped sleep researchers determine the area they wanted to investigate. Electrodes were implanted 1.5 millimetres apart, into a specific area deep in the brain, localized as close as possible to the human P-wave source, within an incredible 3 millimetre area.

The dream waves were detected in a small area at the base of the centre of the brain called the pons, during REM sleep and just before it. "It's a difficult spot to reach," says Dr. Andrew Lim, lead author on the study, and a sleep fellow at Harvard, who did the work while at Sunnybrook and the University of Toronto.

"This is a particularly important finding for sleep researchers," adds Dr. Murray, who is also an assistant professor in the Division of Neurology at the University of Toronto. "We think this is the start of a stream of highly sophisticated work using deep brain recordings and stimulation to understand sleep, cognition, and various neurodegenerative disorders".

"This area of the brain is difficult to study, as a similar study in a healthy subject is ethically impossible. This was an excellent opportunity to investigate the area while a patient was undergoing a neurosurgical procedure for another reason," says Dr. Lim. "The fact that we not only found the fundamental waveforms of dreaming sleep but

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Volume 5 No. 9 September 30, 2009 Stem Cells May Hold Key to Stopping Spread of Leukemia



Dr. Yaacov Ben-David

Researchers have discovered that by enriching a class of blood stem cells they can inhibit the growth of a rare but aggressive form of leukemia.

Dr. Yaacov Ben-David, a senior scientist at Sunnybrook Research Institute (SRI), and colleagues found that the presence of leukemic inhibitory stem cells in the spleens of a mouse model slows the advance of erythroleukemia, a cancer in which a large number of abnormal red blood cells grow in the blood and bone marrow. Prognosis for patients with this type of leukemia is poor.

With this discovery, scientists have a new model for the development of a more efficient drug therapy for this and other forms of leukemia. It also suggests a route for a novel combination therapy, one that targets both genes and cells.

"Many scientists are using targeted therapy for genes that activate or control the growth of cancer cells," says Ben-David, who is also a professor at the University of Toronto. "But the cellular environment around the tumour, its microenvironment, is the body's first defence. If we can first strengthen it by the enrichment of inhibitory stem cells, then we may have a better treatment for patients than with targeted therapy alone." The research was pre-published online July 7 in the journal *Blood*.

For their study, the researchers turned to a mouse model of a noncancerous blood disorder, in which the bone marrow makes too many red blood cells. With this condition, despite having an abnormally high number of blood cells, these mice rarely develop erythroleukemia. The researchers thus hypothesized that the inhibitory stem cells have a protective effect.

To test their hypothesis, the scientists induced erythroleukemia in mouse models with this noncancerous blood disorder. Upon analysis, they found that the ability of the leukemic inhibitory stem cells to secrete nitric oxide was primarily responsible for the cells' anti-tumour properties. They also discovered that specific cytokines, signalling molecules that tell cells how to communicate with each other, enriched the stem cells, strengthening the anti-tumour effect.

"I'm very excited about this work," says Ben-David, whose lab was the first to show, in 2004, that two proteins in the microenvironment of the spleen hasten the growth of leukemic cells, and that removal of the spleen might therefore be a way to halt the spread of leukemia, an approach now being clinically tested at Sunnybrook.

"Now that we've identified a molecular mechanism preclinically, we can look at performing a clinical trial in the near future," he says.

Erythroleukemia typically affects people aged over 50 years old, though it affects all age groups, including children, and more men than women get it. Risk factors include prior exposure to chemicals, including chemotherapy to treat cancer.

This research was supported by the Canadian Institutes of Health Research.

EVENTS

Sunnybrook's Odette Cancer Centre: Annual Cancer Information Series

Date: Wednesday, September 30, 2009

Time: 7:30 p.m.

Location: Toronto Botanical Garden at Edwards Gardens, 777 Lawrence Avenue East at Leslie Street
Admission is free with no reservations on seating.
For more information: please call (416) 480-5000 ext. 7988

I'm Still Here ... and so is my HAIR!

Presented by Marla Lukofsky

Marla's presentation entitled, "Life with Breast Cancer" offers insight into living with a diagnosis of cancer. Marla confronts her disease and approaches this tender subject with a unique brand of humour and sensitivity along with simple, tangible suggestions. This inspiring talk is about a brave and funny woman facing huge fears and challenges in her own special way.

This Annual Cancer Information Series is generously sponsored by Florence Winberg

Hospital-Wide Memorial Service

The Spiritual and Religious Care Team at Sunnybrook Health Sciences Centre invites the hospital community to the Hospital-wide Memorial Service.

Date: Thursday, October 1, 2009

Time: 7:00 - 8:00 p.m.

Location: McLaughlin Auditorium (EG18a)

The Memorial Service provides an opportunity for family members, partners and friends of those who died during the months of April through to July 2009, to celebrate the lives of their loved ones along with those who cared for them in this hospital community. Everyone is welcome to attend. For more information you may contact Alice Chiu at 416-480-6100 ext. 80962.

Continuing Education Support Fund (CESF) Online Application Tool Now Available

The Continuing Education Support Fund (CESF) application tool regarding degree, diploma, workshop, seminar and conference funding is now available online.

Deadline for application submission: Friday, October 30th, 2009 at midnight (12:00am)

- Courses taken between January 1, 2009 to December 31, 2009 that have supporting documentation and meet application criteria are eligible.
- CESF Scholarships and Awards will remain a separate process and staff will be updated on the timelines and application procedures through Sunnybrook's email and intranet system.
- Paper-based applications are no longer being accepted. Although the actual application form is online, you are still required to submit the paper-based documents as identified in the application process (see Step #3 below).

For more information about the Continuing Education Support Fund please visit the Continuing Education Support Fund webpage on Sunnynet for answers to some frequently asked questions. Questions can also be directed to Jennifer Ling, CESF Manager at jenn.ling@sunnybrook.ca or 416-480-5904.

SAVE THE DATE!

Centre for Health Services Sciences presents the 2nd Annual Sunnybrook Health Services Sciences Symposium

Date: Thursday October 22nd 2009

Time: 8:30am-1:30pm

Location: McLaughlin Auditorium

Check out our website for this year's exciting agenda! http://sunnybrook.ca/research/?page=sri_disc_chss_chss_symp09

Register today to ensure a spot! It's FREE!
Send an email with your name & department to genevien.simpson@sunnybrook.ca

Adults with Bipolar I Disorder at Increased Risk for Cardiovascular Disease and Hypertension

BY LAURIE LEGERE



Dr. Benjamin Goldstein

Led by Dr. Benjamin Goldstein, psychiatrist and academic lead in the youth division of Sunnybrook's department of psychiatry, a team of researchers examined data from the 2001-2002 National Epidemiologic Survey on Alcohol and Related Conditions, conducted in the United States. The results of the study were published August 11 online in the journal of *Bipolar Disorders*. The team found that adults with bipolar I disorder were almost five times more likely to have cardiovascular disease than those without the disorder. The bipolar I disorder patients were also more likely to have hypertension than those without the disorder.

"We know that adults with bipolar disorder have a markedly reduced life expectancy which is due primarily to a high prevalence of premature cardiovascular disease,"

A new study suggests that adults with bipolar I disorder are at increased risk of developing heart disease and hypertension than those without the disorder.

Led by Dr. Benjamin Goldstein, psychiatrist and academic lead in the youth division of Sunnybrook's department of psychiatry, a team of researchers examined data from the 2001-2002 National

Epidemiologic Survey on Alcohol and Related Conditions, conducted in the United States. The results of the study were published August 11 online in the journal of *Bipolar Disorders*. The team found that adults with bipolar I disorder were almost five times more likely to have cardiovascular disease than those without the disorder. The bipolar I disorder patients were also more likely to have hypertension than those without the disorder.

says Dr. Goldstein, who is also an assistant professor of psychiatry at the University of Toronto. "Our study took a closer look at the association between cardiovascular diseases and bipolar I disorder. We believe our findings have important implications for the way we assess and monitor youth with bipolar disorder."

Researchers also discovered that cardiovascular patients with bipolar I disorder were approximately 14 years younger than cardiovascular disease patient without the disorder. Hypertension patients with bipolar I disorder were approximately 13 years younger than hypertension patients without the disorder.

"Our findings underscore the need for a more integrated care intervention model - one in which the psychiatric and medical health of a patient are considered simultaneously," says Dr. Goldstein. "We should be monitoring youth with bi-polar disorders for cardiovascular disease so we can intervene before cardiovascular disease develops and treat conditions before they lead to more serious consequences. This may serve to increase life expectancy and improve quality of life for people with bipolar disorders."

The findings of the study will inspire Dr. Goldstein's ongoing work in youth psychiatry at Sunnybrook as he examines ways to prevent youth with bipolar disorder from developing the cardiac issues that so often lead to their decreased life expectancy.

Photo by Doug Nicholson

Canada's One-Day Blood Clot Prevention Audit

BY LAURA BRISTOW

In May, *Safer Healthcare Now!* (SHN) held the first National Venous Thromboembolism (VTE) Audit Day. The audit was a "snapshot" of thromboprophylaxis use (or preventative medicine) for major general surgery and hip fracture surgery patients on one day in a spectrum of Canadian hospitals. The purpose of the audit was to provide feedback to hospitals about how well they were providing thromboprophylaxis to these two groups of patients for whom thromboprophylaxis is an essential component of their care, as well as to engage hospitals in the process of doing a national, one-day survey.

"Unless you actually measure something, you can't be sure that you're doing it well," says Lynn Riley, Sunnybrook registered nurse and intervention coordinator for the SHN campaign's venous thromboembolism (VTE) intervention. "It is common to make assumptions, but the audit was a way for everybody to get a realistic look at how effectively they are administering thromboprophylaxis in their hospital."

Venous thromboembolism (VTE) is one of the most common, important complications of hospital care and the commonest preventable cause of hospital death. VTE is comprised of both deep vein thrombosis (DVT), which is a blood clot that develops in the calf, thigh or arm, and pulmonary embolism (PE), which is when a blood clot travels to the lung. The rate of hospital acquired DVT, if a thromboprophylaxis is not used is 10 to 40 per cent after general surgery and 40 to 60 per cent after hip surgery.

During the one-day audit, the rates of thromboprophylaxis were calculated as the proportion of patients for whom thromboprophylaxis was indicated who had an order for an appropriate thromboprophylaxis regimen on the day of the audit. The audits were completed by various multidisciplinary team members including nurses, pharmacists and quality improvement specialists in hospitals across the country.

Thromboprophylaxis data were submitted by 57 hospitals across every region of the country. Among the 543 major general surgery patients, 431 (79 per cent) received appropriate thromboprophylaxis. This means that 21 out of every 100 major general surgery patients did not receive appropriate thromboprophylaxis and were, therefore, at risk for VTE.

Among the 270 hip fracture surgery patients, 255 (94 per cent) received appropriate thromboprophylaxis. Based on this "snapshot", 6 out of every 100 patients who under-

went hip fracture surgery did NOT receive appropriate thromboprophylaxis and were at risk for VTE.

At Sunnybrook, one-day audits of various areas were conducted by the Department of Pharmacy with the support of the Thromboembolism Patient Safety Team. Sunnybrook's audits were not all conducted on the national VTE audit day, but the results were submitted to this pool of data.

"The single-day audits provided an overview of thromboprophylaxis use at Sunnybrook at one time point, provided baseline data for future comparison, and provide insight into the areas of high and suboptimal prophylaxis use," says Dr. Bill Geerts, Sunnybrook's Thromboembolism Specialist. "This information helps inform the organization about areas for further quality improvement strategies related to this key patient safety indicator."

"Overall, there was good representation from hospitals across the country and the feedback validated the value of doing the national audit," says Riley. "It is important to point out that although 94 per cent of the centres in the country who participated in the audit succeeded at hitting 100 per cent, anything short of all centres attaining 100 per cent thromboprophylaxis all of the time is just not good enough."

For both patient groups, the use of thromboprophylaxis in individual hospitals varied from 0 per cent to 100 per cent and there appear to be regional differences in thromboprophylaxis use, at least for major general surgery. This data only captured whether or not thromboprophylaxis was ordered. The audit did not assess whether thromboprophylaxis was started at the appropriate time, given for the appropriate duration, or whether it was actually administered. Furthermore, it is believed that centres that were already fully compliant with thromboprophylaxis use were more likely to have contributed to this audit than those that used thromboprophylaxis less reliably. For these reasons, the results are likely an overestimate of the proportion of patients receiving appropriate thromboprophylaxis.

"We hope that this experience will encourage the hospitals that participated to keep working to improve their results," says Lynn. "Hopefully, it will encourage other hospitals to join the *Safer Healthcare Now!* VTE prevention intervention."

Hospitals can join the intervention by going to www.saferhelathcarenow.ca

Awards

Brain Sciences

Youth Psychiatrist Receives Ministry Award



Dr. Amy Cheung

Dr. Amy Cheung, youth psychiatrist and researcher at Sunnybrook, and assistant professor in the Department of Psychiatry within the Faculty of Medicine at University of Toronto, recently received a Career Scientist Award, a five-year award given to junior faculty in health services research, from the Ministry of Health & Long-Term Care.

The Ministry's prestigious Career Scientist Award supports the development of the best and brightest health services researchers in the province of Ontario. Health services research examines the management, organization, and effectiveness of health services to inform decision-making in policy, development, planning and delivery of health services.

The award enables researchers to address important issues in health services research and contribute to an evidence-informed health care system that benefits all Ontarians.

The goal of the program is to ensure that researchers have the skills, training and experience to conduct health services research that can assist the Ministry in its role as steward of the health care system. Career Scientists have the opportunity to participate in a policy practicum that will enhance their ability to engage with policymakers.

The program is an integral part of the Ministry's efforts to build research capacity in the province. By investing in Ontario researchers, the Ministry is working to ensure that it develops the necessary human resources to address issues affecting the health care system, now and in the future.

Former Career Scientists include: Roberta Bondar, first female Canadian astronaut, David Naylor, President of the University of Toronto, Andreas Laupacis, Executive Director of the Li Ka Shing Knowledge Institute, and Jonathan Lomas, Founding CEO of the Canadian Health Services Research Foundation (CHSRF).

Thromboembolism

Sunnybrook Specialist Awarded

Dr. Bill Geerts, Head of Sunnybrook's Thromboembolism Team, and professor of medicine at the University of Toronto, has been recently awarded the prestigious Sol Sherry Award for the Advancement of Understanding and Treatment of Thrombosis. This award is given out every two years to individuals whose work in the fields of thrombosis and hemostasis has been recognized internationally as having a long-standing and significant impact in the prevention or treatment of thromboembolic or haemostatic disorders and has contributed to a deeper understanding of these diseases and disorders. It is presented by the International Society on Thrombosis and Haemostasis, an international organization of specialists in thrombosis and bleeding.

Dr. Geerts also delivered the Sol Sherry Memorial Lecture. His lecture was entitled "Thromboprophylaxis as a Key Patient Safety Priority: Current Approaches and Future Directions".

This year the conference was held in Boston, where Sunnybrook's Dr. Rita Selby gave an oral presentation entitled "Burden of illness of venous thromboembolism after total hip and knee replacement in Canada."

Neuroradiologist Awarded Brain Tumour Research Grant

Over the summer, Dr. Sean Symons, head of the Division of Neuroradiology at Sunnybrook and assistant professor in the Department of Medical Imaging at University of Toronto, was awarded \$25,000 toward research that aims to improve patient safety and outcomes.

His research involves an innovative method of locating the facial nerve prior to surgery. By understanding the location of the facial nerve before surgery, it is believed that post-operative complications will be reduced.

Brain Tumour Foundation of Canada is assisting Canadian research nationally in the mission to find a cause of and cure for brain tumours. The Foundation made its announcement of its annual grants-in-aid program recipients in June.

Cognitive Neurology Student Ranks High for Alzheimer's Research

Graeme Schwindt, PhD student in Cognitive Neurology at Sunnybrook, has earned high achievement and praise from both research funding bodies and colleagues alike.

The Canadian Institutes of Health Research (CIHR) Studentships were offered to graduate students who were undertaking full-time health research training leading to a Masters or PhD degree (or equivalent). Graeme was ranked top out of all the applications.

"Being top-ranked in 673 CIHR Studentship applicants is quite an achievement," says Dr. Sandra Black, Brain Sciences Research Director at Sunnybrook and Brill Chair in Neurology at Sunnybrook and University of Toronto.

An important goal in Alzheimer's Disease (AD) research is the identification of biological markers that can help identify the disease, monitor and even predict an individual patient's change over time and response to treatment.

Functional Magnetic Resonance Imaging (fMRI) has shown potential in identifying brain signals that are unique to AD patients and may track changes over time, but results to date have been inconsistent.

Schwindt's project brings a novel approach to fMRI studies in AD by focusing on a brain region that has not yet been well-studied, but is affected early in the course of AD and may predict a patient's change over time. The study addresses several issues, including the influence of structural changes and medication effects on fMRI activation. This multimodal MRI scan may provide a clinically useful future tool for diagnosis and monitoring.

Sunnybrook Research Institute

Imaging Researcher Wins Prestigious Provincial Award



Dr. Gregory Czarnota

Ontario's Ministry of Research and Innovation has granted Dr. Gregory Czarnota, a scientist in the discipline of imaging at Sunnybrook Research Institute, an Early Researcher Award. The grant is worth \$190,000 over five years.

Czarnota, also a radiation oncologist at the Odette Cancer Centre and a professor in the departments of radiation oncology and medical

biophysics at the University of Toronto, recently discovered that targeted ultrasound treatments can sensitize cancer cells to radiation therapy. Czarnota and his team will investigate the clinical potential of this combination therapy by using high-frequency ultrasound to monitor the molecular events that lead to apoptosis, a form of cancer-cell death.

The research will benefit people in Ontario by introducing a novel and more potent cancer treatment which, when commercialized, could replace standard radiation treatments.

The Early Researcher Award program is intended to help newly appointed researchers staff their laboratories and research teams. The program's overarching goal is to strengthen Ontario's ability to recruit and retain globally sought-after research talent. Czarnota will recruit two team members to his lab with the award.

Trauma, Emergency and Critical Care

Director Recognized by Trillium Gift of Life Network



Debra Carew

Debra Carew, Sunnybrook's director for the Trauma, Emergency and Critical Care Program and Patient Flow was recently recognized by Trillium Gift of Life Network (TGLN) for her tremendous work to increase organ and tissue donation. TGLN is honouring health care professionals from across Ontario for their ongoing efforts to increase organ and tissue donation

in the province. Carew is a devoted supporter of organ and tissue donation and she works to ensure that her colleagues can offer families who are facing end-of-life decisions the opportunity to donate.



Sunnybrook Speaker Series

New Horizons: Innovations in Breast Cancer Care

BY CHRISTINE HENRY

On May 26 hundreds of community members gathered to hear experts from Sunnybrook's Odette Cancer Centre speak about Innovations in Breast Cancer Care. Dr. Linda Rabeneck, chief of the Odette Cancer Centre, moderated the evening and talks were given by Drs. Frances Wright, Eileen Rakovitch and Sunil Verma. Mr. Carey Diamond from the Sunnybrook Board of Directors, introduced the evening.

Sunnybrook is a leader in the area of breast cancer screening, early detection and treatment that involves a multidisciplinary model of care including many highly skilled physicians, surgeons, nurses, scientists and other health care staff. The event addressed this disease that affects so many women.

Surgical oncologist Dr. Frances Wright discussed Sentinel Node biopsy. She explained if cancer spreads from the breast it usually goes to the axillary or armpit lymph nodes first. The first line of treatment for breast cancer is surgery with a lumpectomy or mastectomy and axillary staging. A newer technique to find out if the breast cancer has spread to the axillary lymph nodes is the sentinel node biopsy. The sentinel node is the first lymph node (s) that the breast drains. Radioactive colloid (technetium) and blue dye are injected into the breast to identify the sentinel lymph node(s). If there is no cancer in the sentinel lymph node, it is unlikely that the cancer has spread to other lymph nodes in the axilla. If there is cancer in the sentinel node then an axillary dissection when all the lymph nodes in the axilla are removed, is offered. The benefits of the sentinel node biopsy are more accurate staging i.e. a higher rate of detection of metastases compared to axillary dissection, and fewer side effects for patients.

Dr. Eileen Rakovitch, radiation oncologist and chair of the Breast Site Group at the Odette Cancer Centre, discussed advances in radiation treatment. Over the past few decades there has been a significant increase in the number of women diagnosed with breast cancer, but significant decreases in breast cancer mortality. This is due to improvements in screening which is detecting cancers at an earlier and more curable stage as well as improvements in surgical, radiation and medical treatments. There are two main types: external beam radiation delivered from outside the body for three to six weeks and Brachytherapy where seeds are inserted into the body. Dr. Rakovitch explained how radiation oncologists treat the whole breast, including lymph nodes.

To improve care, experts are looking at using radiation to lower the risk of cancer coming back. The goal is to reduce the burden, deliver it over a shorter period of time with fewer side effects and make it better for those with a chance of recurrence.

Medical oncologist Dr. Sunil Verma addressed advances in medical treatment. He explained how medical treatment of breast cancer involves drug treatment including hormonal therapy, targeted treatment and chemotherapy.

Physicians want to identify what is driving the cancer cell – then hit the target and kill the cancerous cells. With early stage breast cancer, information from the breast surgery is used to make treatment decisions. Based on the pathology report, the clinicians determine the risk of breast cancer coming back and the best way to treat. Better supportive care is needed for patients too, he said. He also mentioned the need to focus on helping patients adjust back to life once all treatment is finished. There are supportive services available at the Odette Centre. Looking to the future, Dr. Verma outlined how physicians would like to focus on targeted treatment, continued research and clinical trials to better meet the needs of patients

Sunnybrook's Odette Cancer Centre is a large comprehensive cancer centre and is the sixth largest in North America. To more closely align research and patient care activities, a new Breast Centre is under construction at Sunnybrook.

Missed the talk? Check out the webcast at www.sunnybrook.ca under "Sunnybrook Connection".

(L to R): Dr. Sunil Verma, Dr. Eileen Rakovitch and Dr. Frances Wright at the May 26 Speaker Series talk on Breast Cancer. Dr. Linda Rabeneck, Chief, Odette Cancer Centre and Sunnybrook Board member Mr. Carey Diamond



Strengthening Sunnybrook's Commitment to Senior Friendly Care

The Inaugural Senior Friendly Hospital Forum

BY SALLY FUR

A senior-friendly hospital has these attributes: A physical environment which is conducive to the safety, comfort and ease of way finding for older individuals, and is accessible to all those with disabilities; knowledgeable staff who have the skills and positive attitudes to care for all seniors with health concerns; programs and services which have been clinically proven to improve outcomes in older people.

This past June, more than 60 Sunnybrook leaders and health professionals attended the inaugural Senior Friendly Hospital Forum, a day-long event held at the Vaughan Estate. The successful event set the groundwork for this exciting new direction. Over the next one to three years, health professionals at Sunnybrook will be inventing the future of health care through a new initiative and a commitment to incorporating senior friendly care, hospital wide. The event was hosted by Dr. Susan VanDeVelde-Coke, EVP, Chief Health Professionals & Chief Nursing Executive and the Senior Friendly Hospital Steering Committee: Dr. Barbara Liu, Betsy Jackson, Deborah Brown-Farrell, Dorothy Ferguson, Dr. Jocelyn Charles, Lois Fillion, and Dr. Rajin Mehta.

The objectives of the event were to define the culture of a senior friendly hospital; identify the current status of senior friendly care; develop and understand the provincial senior friendly framework; appreciate seniors' perceptions of their care; and identify patient-centred goals to improve senior friendly care at Sunnybrook over the next years.

"In order to meet the needs of this fast growing population and provide leading-edge patient care we must put seniors first and look closely at our practices to ensure that we are following a senior friendly approach across the entire hospital," says Dr. VanDeVelde-Coke. "From the development of our senior friendly philosophy, our methods of communication, admission and discharge planning procedures, our physical environment, and our research activities, Sunnybrook will be looking at new ways to incorporate senior friendly care."

Keynote speaker Dr. Christopher Patterson, professor of Medicine in the division of Geriatric Medicine at McMaster University and the Chief of Geriatric Services at Hamilton Health Sciences Centre, discussed the culture of a

hospital that practices senior friendly care and why it is important for Sunnybrook. He stressed the importance of identifying those at risk for adverse events and outlined two key areas, delirium and deconditioning. He referenced a study completed at Yale University and published in the *New England Journal of Medicine* that focused on the Hospital Elder Life Program (HELP) and included a quick screening test for identifying those at risk of delirium. Dr. Patterson also stressed that health professions must include exercise as part of a multidisciplinary intervention in order to preserve muscle strength.

Dr. Barbara Liu, executive director, Regional Geriatric Program of Toronto and Deborah Brown-Farrell, Nurse Practitioner in the Sunnybrook Veterans Centre, presented the results of Sunnybrook's Senior Friendly Survey that was completed last May. A number of former Sunnybrook patients as well as Veteran residents shared their experiences and provided their perspectives on senior friendly care.

"With more than 40 years of experience in providing long term care to older Veterans, the Veterans Centre has successfully implemented many senior friendly care strategies and continues to identify ways to further enhance life experiences for Veterans at Sunnybrook," says Dr. Jocelyn Charles, medical director of the Sunnybrook Veterans Centre. "The Veterans Centre hopes to share and work with other areas of the hospital to promote similar strategies to enhance care for all seniors at Sunnybrook."

For more information, or for a copy of the *Senior Friendly Hospital Forum Summary Report*, please contact Betsy Jackson at betsy.jackson@sunnybrook.ca or ext. 5812.



Above (L): Keynote speaker Dr. Christopher Patterson. The Senior Friendly Hospital Steering Committee (L to R): Dr. Barbara Liu, Lois Fillion, Dr. Susan VanDeVelde-Coke, Dorothy Ferguson, Dr. Jocelyn Charles, Betsy Jackson, Deborah Brown-Farrell and Dr. Rajin Mehta.

Dramatic Shift

Demographers are predicting a dramatic shift in the population. In the next 15 years about one in every five Canadians will be 65 years of age or older. Today, over 60 per cent of hospital patients are over age 65 and more than 40 per cent are over age 75. Two thirds of hospital days are occupied by those over age 65 and 42 per cent of those aged over 75 are readmitted. These forecasts will have a profound impact on our health care system and will also impact almost every aspect of our society.

Sunnybrook is at the Forefront of Care

Sunnybrook has a distinguished history of caring for the elderly and is at the forefront of providing a number of specialized programs to meet the needs of our senior population. There are facilities such as the **Veterans Centre**, and the **W.P. Scott Geriatric Day Hospital**, along with programs that focus on: falls prevention, dementia care, reduction of chronic pain, prevention of delirium and specialized diabetes education for seniors.

Sunnybrook's Department of Family and Community Medicine has created a program called the Interprofessional Model of Practice for Aging and Complex Treatments (**IMPACT**) Clinic. The research focus of this initiative is to better understand the experience of seniors and improve care for those seniors with multiple chronic illnesses. A screening tool for patients over age 70, called **SPPICES** (stability/falls, polypharmacy, pain, incontinence, confusion, eating/nutrition, skin) is currently being used in four acute-care units in General Medicine at Sunnybrook. "These initiatives and all the other senior-friendly practices in place at Sunnybrook along with a breadth of new practices need to be shared and woven into the entire tapestry of Sunnybrook," says Dr. VanDeVelde-Coke, EVP, Chief Health Professionals & Chief Nursing Executive.

Health for Peace Initiative: Sunnybrook Life Support Program Presented to International Students

This is the third year of the International Pediatric Emergency Medicine Elective (IPEME), and the Sunnybrook Life Support Program has been a proud sponsor of the program since the beginning. Each year, the program brings together students from Canada and the Middle East with the aim of fostering cross-cultural dialogue, networking, and cooperation through a focus on pediatric emergency medicine, international health, and research methodology. Lectures, seminars, and case-based group discussions introduce participants to the subject matter while practical workshops and preceptored clinical observations ensured hands-on experience and encouraged student interaction.

The IPEME is a four-week elective, held in the summer in Toronto, that brings together eight Canadian, Israeli, Jordanian, and Palestinian medical students (two each). Courses are taught by faculty members with an interest in the field and/or cross-cultural and international experience; they included physicians, nurses, members of non-governmental organizations, hospital administrators, and allied health care workers. Follow-up seminars provide a venue for further discussion. Presenters offer their expertise in both clinical and non-clinical sessions and give students a valuable insight into inter-professional education.

The Sunnybrook Life Support Program has been supporting the program since the beginning. Students come to Sunnybrook to learn about life support where practical

sessions related to cardiopulmonary resuscitation, airway management skills, and management of specific conditions are taught. The students also get a session on the ethics of resuscitation, which provides insight into cultural differences related to termination of resuscitation, the role of a do not resuscitate (DNR) order, and physician obligations to the patient and family. Each year, the program gets great reviews from the students, and this year was no exception.

Dr. Paul Hawkins, Director of the Sunnybrook Life Support program, has been instrumental in his support for the program. His group of instructors and staff have been generous to donate their time and resources in making this happen. Dr. Rahim Valani is Co-Director of IPEME and an Emergency Department staff member at Sunnybrook who works with Dr. Hawkins. "The role played by Dr. Hawkins and his team is highly appreciated. It is through such supporters that we are able to continue this program and have alliances to sustain the program," says Dr. Valani. "The faculty and support staff led by Dr. Hawkins are nothing but exceptional, and this is reflected in the student evaluations."

Other organizations involved in the program include the Canadian International Scientific Exchange Program (CISEPO), Peter A. Silverman Centre for International Health (PACIH) based out of Mt. Sinai Hospital, The Hospital for Sick Children, and Toronto East General Hospital.

Qualified

Care researcher journeys into the cancer experience

BY JIM OLDFIELD



Dr. Margaret Fitch

... in the support groups, women would say they were tired from their radiation. They'd go home and nap. And I'm thinking, you know, it's just not an option for a Mum, a Mum with young children. You have to be up! You have to be on!

—Young breast cancer survivor

Support services designed exclusively for older patients. Fear of treatment-induced menopause. A sense of loss as responsibilities are taken over by others. These are just a few of the concerns Dr. Margaret Fitch, Head, Oncology Nursing and co-director, Integrated Psychosocial, Supportive and Palliative Care Program, Odette Cancer Centre and Sunnybrook Research Institute (SRI) associate scientist and her colleagues uncovered in their examination of young women's experiences with breast cancer.

The study, based on in-depth interviews with 28 breast cancer survivors aged under 45 years, and published in the *Canadian Oncology Nursing Journal* in 2008, illustrates the nature of an underappreciated but powerful research method: qualitative analysis. The method doesn't involve numbers and measurements, but rather narrative data collected from study participants through interviews, focus groups and other subjective interactions. Able to produce starkly clear and actionable results—identifying, for example, the need to offer young women cancer services at hours compatible with their work and family schedules—qualitative studies can also capture something intangible: individual experience.

"Partly," said Fitch, while leading a recent seminar on qualitative analysis for nurses and health professionals in Sunnybrook's practice-based research seminar series, "this research is about entering [another person's] space without saying, 'You're different from me,' or 'I don't like the way you're doing that,' but rather, 'I want to learn, engage fully and understand why your experience is as it is.'"

The interpretation of the young women's breast cancer study—based on hours of conversations meticulously transcribed verbatim, then coded, classified and distilled

to singular ideas—produced three overarching themes: "everything depends on acting now;" "everything is out of sync;" and "cancer invaded my whole life."

"The emotion generated through those conversations," said Fitch to the group, many of who were there to gain research-oriented knowledge or learn techniques to study care improvements, "was qualitatively different than some of the interviews we'd done with older women. The passion that emerged was palpable, and we subsequently incorporated that into our interpretation."

The main challenge in qualitative approaches, as Fitch outlined in an interview, is remaining impartial. "As the investigator I want to be the tool to bring forth a story, but I want that story to be true to the teller. So I have to be careful I don't presuppose, prejudge or 'know' what I'm going to hear ahead of time." Otherwise, said Fitch, the result may be a skewed reflection of the researcher's perspective rather than an accurate rendering of what the participant said and experienced.

A further challenge lies in achieving acceptance for qualitative studies in the "numbers-heavy" world of medical science. Qualitative research, said Fitch, also an associate professor at the University of Toronto who teaches and practises a variety of research methods, hasn't had the same exposure as quantitative or measurement-based studies—largely because the roots of medical science are hypotheses and numbers. While qualitative methods have been accepted for years in anthropology and sociology, medical researchers in health services, said Fitch, "haven't been asking the questions that would demand qualitative work as long as we've been asking some of the [quantitative] questions."

That appears to be changing, however. At Sunnybrook, growing interest in the practice-based research series, together with support for it from SRI's Centre for Health Services Sciences, suggest both paradigms are seen as important. Fitch is ambivalent but optimistic. "There are still some challenges in sharing this type of research, in having it accepted, but if I look back 15 years, there's a remarkable difference now. I'm encouraged by the growing openness."

For more information on the PBR seminar series, visit sunnybrook.ca/research and go to the research groups section.

Photo by Doug Nicholson

Drug Combo May Improve Symptoms for Bell Palsy Patients

BY NADIA RADOVINI

New evidence suggests that treatment with a combination of medications may best improve symptoms of facial paralysis in patients who have Bell Palsy.

"Our results suggest a possible incremental benefit of prescribing antiviral medications in addition to the standard treatment of corticosteroids," says Dr. John de Almeida, principal investigator of a new report about to be published, and resident in the Department of Otolaryngology - Head and Neck Surgery at Sunnybrook Health Sciences Centre. "The combination appears to improve recovery by five percent more than the use of corticosteroids alone."

Bell Palsy is a paralysis or weakness of the facial nerve and has an annual incidence of 20 to 30 per 100,000 population. While 71 per cent of untreated patients will completely recover and 84 per cent will have complete or near normal recovery, the remainder will have persistent to moderate to severe weakness, facial contracture, or involuntary movement. The researchers indicate a herpes infection is likely the cause of the disorder.

The report, published in the September 2nd issue of the *Journal of the American Medical Association (JAMA)*, is a review and analysis of literature and research comparing treatment with either corticosteroids or antiviral agents measuring levels of satisfaction in the facial recovery of patients treated for different amounts of time and with varying levels of adverse effects. The authors identified 854 studies, of which 18 were eligible for inclusion for evaluation. The 18 studies included 2,786 patients and were conducted in 12 countries and five continents.

The authors say the results are not definitive and did not quite reach statistical significance. "Further primary studies are needed to definitely establish - or refute - an incremental benefit of combined therapy compared with corticosteroid mono therapy," says Dr. Joseph Chen, also an author of the report and otolaryngologist at Sunnybrook Health Sciences Centre.

"The question this research poses is whether the addition of antiviral drugs to treatment would significantly improve recovery and therefore the quality of life for our patients, safely," says Dr. Chen, also an associate professor of Otolaryngology at the University of Toronto.

Sunnybrook News Travels!



Christine Ichim, a PhD student with Dr. Richard Wells in Molecular and Cell Biology, is seen here on the summit of Mont Blanc, 4810m, reading Sunnybrook News, with the Italian Alps in the background.

Thanks to Christine for sharing her travel photo with us!

Submissions for Sunnybrook News Travels are still welcome. Send your vacation photos to News.Articles@sunnybrook.ca

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Visit us online at: www.sunnybrook.ca

About Sunnybrook:

Sunnybrook Health Sciences Centre is transforming healthcare through the dedication of its 10,000 staff members, physicians and volunteers. An internationally recognized leader in research and education and full affiliation with the University of Toronto, distinguishes Sunnybrook as one of Canada's premier health sciences centres. Sunnybrook specializes in caring for critically-ill newborns, adults and the elderly, treating and preventing cancer, cardiovascular disease, orthopaedic and arthritic conditions and traumatic injuries.



Wait Times Reduced

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in March 2009. "In less than a month after my family doctor faxed in the referral, I had my knee replaced and couldn't be happier. Patients do not have the patience to endure long waits so I hope that others can benefit like I did."

Sunnybrook's Holland Centre is one of six hospitals in the Toronto Central Local Health Integration Network that is working to improve access to care and reduce wait times for hip and knee replacement surgery. In a recent update from the Ontario Wait Times Strategy, it was noted that wait times for hip and knee replacement surgeries throughout the province have finally reached their access targets. From August/September 2005 to February 2009, there was a 56 per cent improvement in wait times for hip replacement surgery and a 58 per cent improvement in wait times for knee replacement surgery.

"There is a misconception that our wait lists are still incredibly long. The reality is that you don't have to wait as long as you might think for a hip or knee replacement and you can plan your surgery around your life, not the other way around," says Dr. John Murnaghan, orthopaedic surgeon, Holland Orthopaedic and Arthritic Centre. "You also have choice as a patient, you can request a particular surgeon or ask to have an appointment with the surgeon with the next available appointment, which includes senior surgeons."

A highlight of the system is using Advanced Practice Physiotherapists who are specially trained to conduct comprehensive physical assessments, provide education and offer treatment options to patients. If it appears that patients require a hip or knee replacement, a consultation with an orthopaedic surgeon is arranged. The goal is to ensure that each patient is assessed promptly after referral and provided with the information they need to maximize their function, whether they are going on to see the surgeon or not. Advanced Practice Physiotherapists also see patients for long term follow-up after surgery in a team approach with the orthopaedic surgeons.

"The Holland Centre coordinates the entire care experience for hip and knee patients from assessment through to surgery and post-operative follow-up," says Matthew Anderson, CEO, Toronto Central Local Health Integration Network. "Tens of thousands of people from Toronto and across Ontario have been able to recover faster and better as a result of the Holland Centre's approach to hip and knee replacement surgery."

How the New System Works

Step 1: Make an appointment with your family doctor to discuss your hip or knee arthritis

Step 2: Ask your doctor to fax a referral to 1-877-411-4577 or 416-599-4577

Step 3: Receive a call for an appointment at the Assessment Centre

Step 4: Visit the Assessment Centre for a physical assessment and to discuss treatment options and whether you need surgery

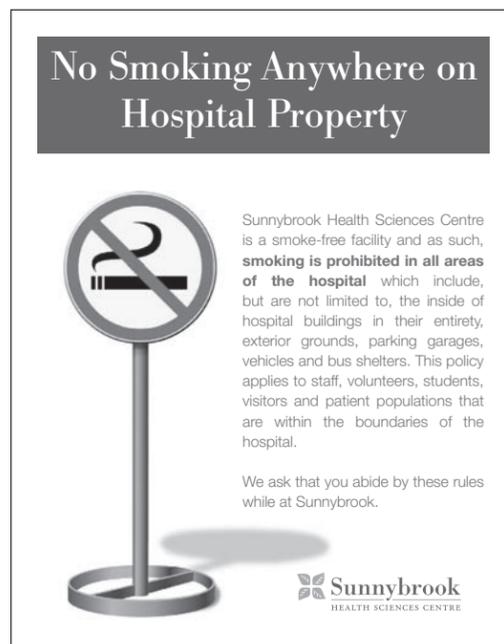
Step 5: If you do require hip or knee surgery, a consultation will be scheduled with an orthopaedic surgeon – you may ask for the first available appointment or choose to wait for a specific surgeon

Step 6: Meet the orthopaedic surgeon and book the date of your surgery

Step 7: Hip or knee replacement surgery

Sunnybrook: A Smoke-Free Facility

BY MICHAEL YOUNG



Sunnybrook's smoke-free policy has been in effect for two years. It applies to everyone on the Sunnybrook grounds (Bayview and Holland Campuses), with some smoking provisions for veterans as required by legislation. Smoking is prohibited in all areas of the hospital including, but not be limited to, the inside of the building in its entirety, exterior grounds, parking garages, vehicles located on our grounds, and bus shelters. We recognize that this initiative has been a significant change and adjustment for many staff and I would like to take this opportunity to thank the many staff that have respected this policy.

Unfortunately we have not achieved anywhere near acceptable compliance with this policy, and in fact we have found violations in areas that are explicitly prohibited by provincial law under the Smoke-Free Ontario Act. Some instances of these infractions have led to Public Health Officers imposing fines of \$300+ for each observed smoking by-law violation.

At the beginning of September, we implemented a plan to increase the frequency of patrols and deliberate surveillance of our properties for non-compliant smokers. Fire & Security Officers have agreed to follow up on and report incidences of policy and/or by-law violations to the appropriate authorities, including hospital managers and Toronto Public Health officials as applicable. Security Officers will approach smokers on the property with information about our smoking policy and Ontario's law. Those in violation of the policy will be asked to stop smoking on the property. In the case of staff and contractors, reports will be made to appropriate managers and other authorities for follow up.

Regretfully, these increased enforcement measures have become necessary, but we see no other alternative. To avoid any embarrassment related to the increased enforcement, I strongly urge and request everyone's cooperation in complying with our smoke free policy and the provincial law. We would much rather count on your cooperation and support than have to engage in what is inherently a more assertive approach. Thank you in advance for your anticipated co-operation.

To help with smoking cessation, Canadian Cancer Society offers a free and confidential Smokers' Helpline at 1.877.513.5333 or online at www.smokershelpline.ca

Michael Young is the Executive Vice President/Chief Administrative Executive at Sunnybrook

Dreaming

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also managed to adjust REM sleep means we can look at how this affects many brain conditions and processes."

Sleep is known to be important for cognition, brain functioning, and overall health. The amount and quality of dreaming sleep is associated with mood disorders such as depression, and neurological conditions such as dementia. "With this research, we have envisioned a futuristic prosthesis where we can improve sleep and other neurological functions," says Dr. Murray.

This University of Toronto Division of Neurology collaboration included Movement Disorder Scientists at Toronto Western Hospital. Dr. Andres Lozano, a neurosurgeon internationally known for his deep brain stimulation work, performed the surgical procedure to treat the patient's symptoms of Parkinson's Disease, and Sunnybrook's sleep experts conducted the sleep research work. Other collaborators include Drs. Moro, Hamani, Hutchison, Dostrovsky, Lang and Wennberg.

Sunnybrook sleep technologists James Sayegh and Dana Jewell were instrumental in accomplishing this project.

A New Home for Sunnybrook's Dosimetrists

BY NATALIE CHUNG-SAYERS

The Dosimetry team of Sunnybrook's Odette Cancer Centre recently moved into new ergonomically-designed offices. Dosimetrists collaborate with radiation oncologists to plan individual radiation therapy treatments for cancer patients. These radiation therapists who specialize in Dosimetry spend several hours per patient computing complex calculations on how best to deliver therapy given the three-dimensional shape of the body and using different treatment technologies. Sunnybrook's dosimetrists compute one to two treatment plans per patient for about 4,900 patients annually. The role and work of dosimetrists has become more complex as radiation treatments are better tailored for the individual cancer patient using newer treatment techniques such as intensity modulated radiation therapy (IMRT), rapid arc therapy and tomotherapy.

*Sunnybrook Speaker Series
SUNDEC/Division of Endocrinology*

Living Well with Diabetes

*Join us for an evening talk on Diabetes
TUESDAY, OCTOBER 27, 2009 6:30 – 8:30 P.M.*

Sunnybrook experts will discuss:

- Healthy Tips for Managing Diabetes – Nancy Teskey, RN, Certified Diabetes Educator
- The Reality of Healthy Eating and Diabetes – Jill Zweig, RD, Certified Diabetes Educator
- What's New in Diabetes Care – Dr. Jeremy Gilbert, Endocrinologist

Moderator: Dr. Ivy Fettes, Director of Endocrinology and Metabolism

*Please RSVP your attendance by October 24, 2009
Phone: 416.480.4117 e-mail: speaker.series@sunnybrook.ca*

Free Admission Free Parking, Garage One

*Tuesday, October 27, 2009 6:30 – 8:30 p.m.
McLaughlin Auditorium, Bayview Campus
E Wing Ground Floor, 2075 Bayview Avenue*