Competence by Design: Towards the next generation of teaching excellence
Message from the Dean and Vice-President

McMaster University’s Faculty of Health Sciences has a long-standing tradition of ensuring its medical students have the abilities to effectively meet the health-care needs of the people they will one day serve.

Throughout our history, we have remained at the forefront of leading-edge medical education, including our renowned small-group, problem-based approach to learning and innovative curriculum that focuses on the mastery of fundamental concepts in medicine.

With the development of more effective treatments and cures for once life-threatening conditions and diseases, people are living longer, healthier lives. Yet, the resulting consequence is an increase of patients with multiple, chronic, complex conditions. Delivering care to these patients, especially with the emergence of new technologies, has led to a need to revise our approaches to team-based care and equip our health workforce with new skill sets.

To keep pace with this shift and revolution in health care, the Royal College of Physicians and Surgeons of Canada is rolling out a new paradigm in teaching our residents at medical schools across the country, including at McMaster University. Called competency-based medical education, this novel approach in postgraduate medical learning is transforming specialty medical education from a time-based to an outcome-based approach. You can read about our efforts to usher us into this next century of teaching and learning beginning on page 10.

It has been an exciting few months in the Faculty of Health Sciences, with new funding opportunities propelling our research efforts forward, prestigious awards and honours for our world-leading faculty and staff and touching stories of our alumni who are making considerable imprints in many facets of health and well-being.

As I enter my third year as dean and vice-president of McMaster University’s Faculty of Health Sciences I remain confident in our collective abilities to make the world a better place for all. Through our extraordinary efforts, innovations and steadfast dedication to excellence, we truly are making a significant impact on many people’s lives.

I hope you enjoy reading about our recent advances and achievements. For all of the latest news from the Faculty, I encourage you to visit our website at fhs.mcmaster.ca.

Paul O’Byrne, MB, FRCP(C), FRSC
Dean and Vice-President
Faculty of Health Sciences
Michael G. DeGroote School of Medicine
McMaster University

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On the cover

McMaster University’s Department of Anesthesia was one of the first McMaster medical residency programs to transition to Competence by Design. Mark Czuczman, right, an anesthesia resident, is supervised by Michael Parrish, associate clinical professor of the Department of Anesthesia, in the Centre for Simulation-Based Learning.
Kaushic named scientific director of CIHR institute

A McMaster University expert in women’s reproductive health has been named the scientific director of the Canadian Institutes of Health Research (CIHR) Institute of Infection and Immunity.

Charu Kaushic began the role on July 1, 2018. The institute’s administration office will soon move to McMaster from Laval University.

Kaushic is a professor of pathology and molecular medicine at McMaster University, where she is also the director of the university’s Biosafety Level 3 Lab, which supports researchers working on highly infectious human pathogens. She also has joint appointments to the departments of obstetrics and gynecology as well as biochemistry and biomedical sciences.

She is a mucosal immunologist by training and her personal program of research is focused on women’s susceptibility and immune response to HIV and the herpes virus, with the goal of developing new ways to protect women from infections using vaccines and immunotherapies.

“I am thrilled to be given this opportunity to represent and serve the infection and immunity research community,” said Kaushic.

“We will work collaboratively with our partners to address key health issues facing Canadians, such as chronic inflammatory conditions, global health issues of TB and HIV, and emerging threats such as antimicrobial resistance and pandemic flu. I also plan to promote STEM careers and leadership roles to young women.”

The CIHR Institute of Infection and Immunity supports research and helps to build research capacity in the areas of infectious disease and the body’s immune system. The institute is at the forefront of research into antimicrobial resistance, HIV, hepatitis C, Lyme disease, the microbiome, and organ transplantation.

It is also equipped to mobilize a rapid research response to emerging infectious diseases, as it has done with the Ebola and Zika viruses.

The institute will be located at McMaster for the next four years, with the prospective of an additional four-year renewal. Its office will be located on the fourth floor of the Michael G. DeGroote Centre for Learning and Discovery.

This is the first time a CIHR institute will be based at McMaster.

As scientific director, Kaushic will work with her community to identify research priorities, develop funding opportunities, build partnerships, and translate research evidence into policy and practice to improve the health of Canadians and people around the world. As a member of CIHR’s leadership team, she will participate in setting and implementing the organization’s strategic direction.

Funding propels development of promising cancer therapies

McMaster University hosted the announcement of a $24.5-million investment in genomic research being done across Canada, including in Hamilton.

Kate Young, parliamentary secretary for science, announced $8.1 million in federal funding for five new projects under Genome Canada’s Genomic Applications Partnership Program. The program works to translate Canadian knowledge and expertise in genomics into applications that support health and the economy.

An additional $16.4 million is being invested by provincial governments, businesses and research partners.

The announcement highlighted the work of McMaster researcher Jonathan Bramson who received a total of $2.3 million in funding for a project that will validate a new white blood cell therapy for cancer.

Bramson, associate dean of research for the Faculty of Health Sciences, is a professor of pathology and molecular medicine. He is also a Canada Research Chair in Translational Immunology.

The funding will assist Bramson and Triumvira in engineering and commercializing new immunotherapies based on T-cells, which are cells of the immune system, to treat terminal cancers.

“We are deeply grateful for this funding from Genome Canada,” said Bramson. “We will use these funds to generate key proof-of-concept data for our partner, Triumvira Immunologics, that will be key to their future as they grow their research and development program in Hamilton and, ultimately, deliver these promising agents to cancer patients.”

On behalf of the minister of science, Young said: “Our government is proud to support scientists whose hard work leads to new discoveries, technologies and services that support a stronger, healthier and more vibrant middle class.”
McMaster receives $19M in CIHR health research funding

When created in 2006, the program was funded to support approximately 600 learners on four- to six-week annual rotations. Today, that number has quadrupled. 

“Mac-CARE allows learners to live and learn in a community,” said Dorothy Bakker, who was recently named assistant dean of the program after serving as director since 2010. “These communities embrace our learners, and we are seeing more and more stay in these sites upon completion of their medical education.”

The Mac-CARE program is funded by the Ministry of Health and Long-Term Care and is one way that the Ontario government has been addressing provincial physician shortages. The program supports training residents in many specialties, as well as medical students in the clinical clerkship of their training.

The administrative team under Bakker’s leadership works behind the scenes in collaboration with undergraduate and postgraduate medical education programs to ensure the program is successful and that it results in a positive experience for all involved, from the clinical clerks and residents to hospital staff and physicians.

Mac-CARE’s regional sites include Burlington Clinical Education Campus, Grand Erie Six Nations Clinical Education Campus, Halton Clinical Education Campus, Niagara Regional Campus and Waterloo Regional Campus.

The Mac-CARE program, which recently expanded to include the William Osler Health System, Osler Clinical Education Campus, also works closely with the rural stream training program in the Department of Family Medicine.

“It has been tremendous to see the Mac-CARE program grow under Dr. Bakker’s leadership,” said Alan Neville, associate dean of health professional education of the Faculty of Health Sciences. “We are pleased with the success of this program that is helping teach and retain talented, McMaster-trained physicians and specialists to communities across southern Ontario.”
McMaster leads national plan on radiation safety

McMaster University is at the forefront of a campaign to develop a national strategy and action plan on radiation safety for medical imaging care in Canada. The initiative, Canada Safe Imaging, is focused on patient radiation safety. David Koff is a founding member and chair of the campaign, and its epicentre is the Medical Imaging Informatics Research Centre at McMaster. The McMaster professor is chair of the Department of Radiology for the Michael G. DeGroote School of Medicine.

“Canada Safe Imaging is part of an international movement to promote radiation safety in medicine,” said Koff, who is also director of the centre.

The impetus for the formation of Canada Safe Imaging was the 2012 Bonn Call for Action, a white paper from a conference co-sponsored by the World Health Organization in Bonn, Germany. The document highlights 10 main actions and related sub-actions which are essential for strengthening radiation protection in medicine over the next decade. While health care is a provincial responsibility in Canada, the campaign stresses that a focused national strategy and unified effort is needed to ensure radiation safety in medical imaging for all Canadians.

Since its creation in November 2016, Canada Safe Imaging has evolved into a world leader in working towards building the pillars in the Bonn Call for Action. As a result of the research of McMaster faculty members and graduate students affiliated with the Centre, as well as participation of stakeholders across the country, a national strategy and action plan could be issued in the form of a nationally-focused white paper and conference as early as 2019. Although radiation is found naturally everywhere in the environment and is considered safe, high amounts of radiation have the potential to cause cancer. Nuclear medicine exams, CT scans and diagnostic X-rays are deemed to carry low risk, but some members of the public have raised questions about unintended side effects.

The team behind Canada Safe Imaging has partnered with the Radiation Safety Institute of Canada and Le Centre d’Expertise Clinique en Radioprotection to help expand an existing question and answer service available to health professionals and the general public. The service, called Questions About Radiation, launched to the public in 2017. It can be accessed by calling 1-800-263-5803. The English service is available weekdays from 9 a.m. to 5 p.m. The French service has a voicemail where callers can leave their questions and a contact number. The email address is info@radiationsafety.ca.

“We are the first campaign in the world to offer a toll-free resource to answer questions from the public on radiation safety from medical care,” Koff said. “It is something that had created a buzz internationally. In fact, Canada Safe Imaging is better known outside of Canada than here in our country.”

Koff and other members of Canada Safe Imaging are also working with other campaigns under the International Society of Radiology to create a universal document of frequently answered questions for usage by both the general public and health professionals. Also aligned with the Bonn recommendations to promote research in radiation protection in medicine, Koff is working on a number of related projects. One such initiative is an extensive data review of current medical radiation thresholds.

For more information on Canada Safe Imaging, visit http://canadasafeimaging.ca.

Nursing awards honour students and donors

Students from the collaborative nursing program of McMaster University, Mohawk College and Conestoga College were honoured at this spring’s annual awards ceremony.

This year, 102 students received more than 40 awards.

The ceremony included remarks by Sandra Carroll, interim associate dean and director of the School of Nursing at McMaster University; James Humphreys, executive dean of the School of Health and Life Sciences and Community Services at Conestoga College, and Paul Armstrong, vice-president, academic of Mohawk College.

“As award recipients, you have not only demonstrated academic excellence, you have made meaningful contributions to your school of nursing, university or college, and the community at large,” said Carroll.

“The awards presented recognize leadership, scholarship, contributions to the community and special achievements.”

Carroll also thanked the benefactors and donors who made the awards possible.

“I would like to take this opportunity to express our gratitude for the generous support for our outstanding student scholars,” she said.
International study suggests alternative treatment for mild asthma

A large international study led by a McMaster researcher has found a patient-centric treatment that works for people with mild asthma.

People with mild asthma are often prescribed a daily treatment regimen, but up to 80 per cent do not follow the routine, using inhalers only when they have an asthma attack. Now, researchers have found an as-needed combined-drug inhaler is a viable treatment option.

Paul O’Byrne is the principal investigator on the study that suggests an inhaler with a combination of budesonide, a steroid that controls inflammation, and formoterol, a beta2-agonist that helps to open airways and make breathing easier, may be an alternative to conventional treatment strategy.

O’Byrne is a respirologist, a professor of medicine at McMaster University’s Michael G. DeGroote School of Medicine and a clinician scientist at the Firestone Institute for Respiratory Health at St. Joseph’s Healthcare Hamilton. He is also the dean and vice-president of the Faculty of Health Sciences.

The results were published in the high-impact medical journal, The New England Journal of Medicine.

“Short-acting beta-agonists, also known as rescue inhalers, work quickly but they do not treat the underlying problem of inflammation,” said O’Byrne. “The secret in this new approach is that it not only relieves symptoms but at the same time delivers steroids required for overall control of asthma.”

The trial results showed budesonide-formoterol used as needed was superior to terbutaline alone as needed for improving asthma symptom control, as well as reducing the risk of an asthma attack by more than 60 per cent, but was inferior to the twice-daily budesonide maintenance therapy for symptom control.

“If patients could remember to take their maintenance budesonide treatment and follow it carefully, they would get the best day-to-day symptom control, but the risk of exacerbation was the same as if they used the combined budesonide and formoterol as needed,” said O’Byrne.

“In addition, the amount of steroids used was much less when the combined inhaler was used, because the patient did not need to take it every day.”

Study supports opioid dependence treatment in Ontario jails

A McMaster study suggests more can be done to improve access to and delivery of opioid dependence treatment in Ontario adult correctional facilities.

Researchers say collaboration between the health care and correctional systems is needed to close the gaps, and to benefit and improve the health of those in custody.

The recommendation is based on surveys completed by physicians working in more than half of Ontario’s provincial correctional facilities.

The study results were published in the journal PLOS ONE.

“In Canada, research has consistently identified high rates of substance use disorders among people in prison,” said Lori Regenstreif, study co-author and assistant clinical professor of family medicine at McMaster.

“Evidence from Ontario, in particular, reveals that the death rate due to overdose is high in this population compared to the general public, especially at the time of release from jail.”

The study included completion of an online survey by 27 physicians, who reported working in 15 of 26 provincial correctional facilities for adults in Ontario. This included 10 of the 13 facilities with a population of more than 200.

The study identified that about half of the physicians prescribed methadone and half prescribed buprenorphine/naloxone to treat opioid dependence.

Among physicians who reported prescribing methadone in custody, all 14 noted that they continued methadone treatment if it was initiated in the community but only five (36 per cent) reported they also started patients on this treatment in the correctional facility.

The most common reasons provided for not prescribing these treatments included not having an exemption to prescribe methadone; noting that other physicians were responsible for the service in the institution; not being interested in adding this treatment to clinical work; and, not having adequate knowledge about these treatments.
McMaster University researchers have discovered that a blood-thinning drug, dabigatran, significantly reduces the risk of death, heart attack, stroke, and other heart or blood-vessel complications in patients who have a heart injury following major, non-cardiac surgery.

Every year, approximately eight-million people worldwide develop a condition called myocardial injury after non-cardiac surgery (MINS), which refers to damage incurred to the tissue of the heart in response to the stress of surgery on the body.

In the first randomized controlled trial to evaluate a treatment for MINS, P.J. Devereaux, scientific lead for perioperative research at the Population Health Research Institute (PHRI) and principal investigator for the MANAGE trial (Management of Myocardial Injury After Noncardiac Surgery), found that patients who had myocardial injury after non-cardiac surgery and received dabigatran twice daily were 28 per cent less likely to suffer a major vascular complication during an average of 16 months of follow-up.

“We now have an option for improving outcomes for a large population of people who have a heart injury after surgery each year,” said Devereaux, a professor in both the Department of Health Research Methods, Evidence, and Impact and the Department of Medicine.

The study enrolled 1,754 patients in 19 countries, 51 per cent of whom were male, with an average age of 70 years. After an average follow-up of 16 months, 11 per cent of patients treated with dabigatran experienced a myocardial injury after non-cardiac surgery-related event, compared with 15 per cent of patients who received a placebo. This translates to a 28 per cent reduction in risk for patients receiving dabigatran.

The MANAGE study builds on the discovery made by Devereaux and his colleagues in 2017 which showed that a simple blood test could identify patients with myocardial injury after non-cardiac surgery following surgery and which alerts clinicians to intervene before complications occurred.

“Patients with evidence of even mild damage to the heart after surgery are at high risk of adverse events in the long term,” said Salim Yusuf, chair of the MANAGE trial and executive director of PHRI. “It appears that this risk can be mitigated by antithrombotic therapy. Future studies can explore additional ways to reduce these risks.”

The study was funded by grants from Boehringer Ingelheim and the Canadian Institutes of Health Research.

A study led by researchers at McMaster University has pinpointed a gene that is linked to neurodevelopmental disorders, including autism.

Researchers found alterations of the gene thousand and one amino-acid kinase 2, known as TAOK2, plays a direct role in these disorders. This is the first comprehensive study that supports previous research suggesting the involvement of this gene.

The study was published in the journal Molecular Psychiatry.

“Our studies reveal that in complex brain disorders that have a loss of many genes, a single deleted gene is sufficient to cause symptoms for the patients,” said Karun Singh, study co-author and researcher with the McMaster Stem Cell and Cancer Research Institute.

“This is exciting because it focuses our research effort on the individual gene, saving us time and money as it will speed up the development of targeted therapeutics to this gene alone.”

Many neurodevelopmental disorders are caused by large missing pieces of genetic material in a person’s genome that contain several genes, termed a ‘microdeletion’. Accurately diagnosing a gene microdeletion helps doctors to predict patient outcome and to determine if a new treatment is available.

The researchers used genetically engineered models and computer algorithms to study a human genome, which allowed them to pinpoint the single gene in question.

“Our next step is to screen candidate drugs that correct the cognitive brain deficits cause by genetic mutations in TAOK2, and identify candidates for pilot clinical trials,” said Singh.

Funding for the research was provided by the Canadian Institutes of Health Research, Ontario Brain Institute, Autism Speaks, Brain and Behavioral Research Foundation and the Natural Sciences and Engineering Research Council of Canada.

Karun Singh is a researcher with the McMaster Stem Cell and Cancer Research Institute.
Researchers discover new way to predict early heart disease

A new genetic test developed by McMaster researchers is five times more accurate than the current standard method in predicting early coronary artery disease in young adults.

Until now, the only way to determine a person’s risk of developing early coronary artery disease is to test for a rare genetic defect that is known to be a factor in some cases. However, McMaster researcher Guillaume Paré and his team at McMaster’s Population Health Research Institute (PHRI) have discovered that, by testing for multiple genetic variations, they’re able to predict early coronary artery disease in five times as many patients than the current test.

Study results were published in the American Heart Association’s journal Circulation: Cardiovascular Genetics.

“This has the potential to save lives,” said Paré, principal author and associate professor of medicine. “The more we understand about a person’s risk for early coronary artery disease, the better we can help prevent complications – like heart attack – for these patients and their family members.”

Paré and his team at PHRI, along with researchers at Laval University in Quebec City, Quebec, developed the multi-gene – or “polygenic” - risk score based on 182 genetic differences related to coronary artery disease.

Study participants included 30 patients from the heart clinic at Hamilton General Hospital, and 96 patients with early-onset heart disease enrolled in the UK Biobank study, a large study in the United Kingdom looking at the relationship between genetics, the environment and disease. As controls, the study also included 111,283 UK Biobank participants without early-onset heart disease.

The study was funded by the Canadian Institutes of Health Research, a Canada Research Chair in Genetic and Molecular Epidemiology and a CISCO Professorship in Integrated Health Biosystems.

Being born during a flu pandemic may increase risk of death in another influenza pandemic

While past exposure to influenza A viruses often builds immunity to similar, and sometimes different, strains of the virus, Canadian researchers are calling for more attention to exceptions to that rule.

New data analysis suggests that people born at the time of the 1957 H2N2 or Asian Flu pandemic were at a higher risk of dying during the 2009 H1N1 Swine Flu pandemic as well as the resurgent H1N1 outbreak in 2013-2014. And it is not the first time this has happened.

Results of the study by researchers of McMaster University and the Université de Montréal were presented in the open access journal mBio, published by the American Society for Microbiology.

“Reported situations in which previous influenza virus exposures have enhanced susceptibility are rare and poorly understood,” said Matthew Miller, senior author of the paper, an assistant professor of biochemistry and biomedical sciences at McMaster, and a senior researcher with its Michael G. DeGroote Institute for Infectious Disease Research.

“This study’s results have important implications for pandemic risk assessment and should inform laboratory studies aimed at uncovering what’s responsible for this effect,” Miller said.

The influenza A virus continues to pose one of the most pressing threats to global public health due to its tendency to cause a pandemic. Over the last 100 years alone, at least five such pandemics have occurred, including the 1918 H1N1 Spanish Flu, the 1957 H2N2 Asian Flu, the 1968 H3N2 Hong Kong Flu, the 1977 Russian Flu and the 2009 H1N1 Swine Flu.

Miller and the teams from both universities reviewed monthly mortality and influenza circulation data from October 1997 to July 2014 in the United States and Mexico. They identified peaks in excess mortality during the 2009 H1N1 Swine Flu pandemic and during the resurgent 2013-2014 H1N1 outbreak among people born in 1957.

The results align with at least two previous influenza A virus pandemics, in 1918 and 1968, when there were higher death rates among those born during previous pandemic years in 1890 and 1918, respectively.

Miller suggested further research is needed so appropriate vaccines may be developed.

“Our research highlights the urgent need to develop more broadly-protective ‘universal’ influenza virus vaccines – capable of providing protection against both seasonal and pandemic influenza strains,” he said.

The study was supported in part by funding from the Canadian Institutes of Health Research.

Matthew Miller is an assistant professor of biochemistry and biomedical sciences.
McMaster University researchers have some good news for people who do high intensity interval training, commonly known by the acronym HIIT.

A team of scientists found that HIIT boosts both the number and activity of natural killer cells in overweight and obese women, along with obese mice with breast cancer.

These results come on the heels of previous research that reported similar results in normal weight female subjects.

Results of the study were published in the Journal of Cancer Prevention.

“While we knew the impact of HIIT on normal weight subjects, whether it had the same impact in overweight and obese women was not well established,” said Ali Ashkar, study author, professor in the Department of Pathology and Molecular Medicine at McMaster and researcher in the McMaster Immunology Research Centre.

Ashkar also holds the Tier 1 Canada Research Chair in Natural Immunity and Natural Killer Cell Function.

“Our results in obese mice challenged with breast cancer suggest that HIIT is a promising therapeutic option that may translate to normal, overweight, and obese human breast cancer patients.”

Obesity is a risk factor for many illnesses, including breast cancer in women. In pre- and post-menopausal breast cancer patients, obesity is associated with a noticeable reduction in survival compared to normal weight patients.

Research suggests that the increased risk of death is caused by impaired innate immunity, or a reduced natural ability for the body to fight off disease. An important part of this immunity is natural killer cells, which is a type of white blood cell that is important in eliminating tumour and virally infected cells.

Natural killer cells are responsive to exercise. HIIT, in particular, results in a greater increase in the number and function of natural killer cells than moderate intensity exercise.

McMaster researchers based their study on outcomes in mice, as well as in three overweight and obese women.

“The circulating natural killer cell number and activation markedly increased immediately after HIIT,” said Nicole Barra, first author and postdoctoral fellow at McMaster. “It also enhanced metabolic health and reduced tumour burden, which refers to the size of a tumour.”

The study was supported in part by funding from the Canadian Institutes of Health Research.

Margaret McKinnon, associate professor of the Department of Psychiatry and Behavioural Neurosciences, is the inaugural Homewood Chair in Mental Health and Trauma. This new position is the 86th research chair of the Faculty of Health Sciences.

“There is tremendous room for advancement in the area of trauma,” said McKinnon. “For example, traumatic responses are often thought to be fear-based, such as the fear of being blown up after return from the combat theatre. But responses to trauma are complex and also include such things as difficulty experiencing positive emotions or feeling numbed out or not present.

“We also need to understand better how emotional trauma has a physical impact on the brain.”

McMaster University, St. Joseph’s Healthcare Hamilton, Homewood Health and Homewood Research Institute have partnered to establish the position, as well as to foster a network of researchers, evaluators and clinicians working to advance clinical practice and outcomes in the treatment of post-traumatic stress disorder (PTSD) and related illnesses. The collaborative network will have its foundations in Ontario and will expand across Canada and beyond in a multi-year process.

McKinnon will play a key role in building the national network – known as the Homewood-McMaster Trauma Research Network – and will lead the development of a Trauma Research Program at Homewood Research Institute (HRI).

McKinnon, a PTSD researcher, serves as a psychologist and the academic head of the mood disorders program at St. Joseph’s Healthcare Hamilton. She is also guiding the development of a clinical research and knowledge translation program at Homewood.

Ali Ashkar and Nicole Barra in Ashkar’s lab at McMaster University.
Competence by Design: Ushering in a new era of learning for residents

Lauren Cook-Chaimowitz, a third-year emergency medicine resident, practices applying a forearm splint on Rafal Tomczuk, resource coordinator at St. Joseph’s Healthcare Hamilton, under the watchful eye of Jonathan Sherbino, an emergency medicine doctor and associate professor in the Department of Medicine.
It is considered one of the biggest changes to Canada’s medical education in more than a century. Competency-based medical education (CBME) is being rolled out at McMaster University, and in residency programs across the country.

The new outcomes-based training model for residents in specialty programs is called Competence by Design (CBD). This is the tailored version of CBME from the Royal College of Physicians and Surgeons of Canada, transforming specialty medical education from a time-based to an outcome-based approach.

“At the end of the day, our responsibility is to the public,” says Parveen Wasi, assistant dean of the postgraduate medical education program and a professor in the Department of Medicine. “We want to ensure what we are teaching residents, and what they are learning, is appropriate and that at the end of residency training, we are confident that they have acquired all the necessary skills to look after patients. We already have an excellent system of postgraduate training but CBD is helping us make it even better.”

The Royal College developed CBD. The new system of resident learning and teaching was created in partnership with more than 50,000 Royal College fellows and medical school faculty members across the country.

There are four stages of residency under CBD, including transition to discipline, foundations of discipline, core of discipline and transition to practice. Each stage of CBD has what are called entrustable professional activities, or EPAs, and milestones.

“We already have an excellent system of postgraduate training but CBD is helping us make it even better.”

– Parveen Wasi
An EPA is a key task of a discipline that an individual can be trusted to perform once sufficient competence has been demonstrated. To progress, residents must demonstrate achievement of all competencies at each stage.

Milestones are the abilities expected of a resident in order to perform the EPA at a stage of competence. Feedback and coaching are part of each milestone that makes up an EPA. Supervisors will observe a resident’s progress on an EPA multiple times.

“We have graduated residents who had satisfactory evaluations,” says Sharon Cameron, project manager for CBME who has overseen McMaster’s postgraduate medical education for more than 25 years. “But are they competent? Would you want them to treat your family? That’s what CBME helps accomplish and puts further strength in our education.”

Technology is central to tracking residents’ progress in CBD. Faculty will more frequently assess EPAs and milestones on an electronic platform that will have the ability to collate each of those pixels of information, which will inform the larger picture of the residents’ development.

“Each EPA has around eight to 10 milestones, so this will make it much easier to help isolate the problem when residents are struggling, where we say, ‘You can do all this, but you are having difficulty with this one aspect, and this is what we can focus on,’” says Cameron. “It makes it more transparent and aware of where the problems are and identifying them early.”

A competence committee at each medical school reviews the EPA observations, along with other performance reports, to determine if the resident can move from one stage of the continuum to the next.

While CBD emphasizes competencies rather than time, the number of years needed to complete a residency program is not expected to change for the majority of residents.

CBD is being rolled out concurrently in medical residency programs across Canada. It is expected that by 2023 all residency training programs will have transitioned. Queen’s University is the exception, as it launched the transformation across all 29 of its specialty programs in the summer of 2017.

Anesthesia and otolaryngology were the first two programs nationwide, including McMaster, to recruit their first cohort of CBD residents for July 1, 2017.

“This is a dynamic process which will require ongoing surveillance, refinement and resolution of challenges. This will not be a linear course, but rather one that is quite dynamic.”

—Jonathan Sherbino

The second cohort of programs moves forward with CBD at McMaster on July 1, 2018. These are emergency medicine (adult), forensic pathology, medical oncology, nephrology, surgical foundations, and urology.

Wasi says feedback to date has been generally positive from the two McMaster programs that made the transition last year. She notes anesthesia and otolaryngology were ideally set up as the first specialties to transition to the new assessment system based on their pre-existing culture of direct observation and frequent feedback.

“The new system has led to increased feedback to residents as well as resident accountability to obtain feedback on a regular basis,” she says. “It has further cemented the partnership of the faculty and residents as they develop the required competencies. This has fostered more conversation around learning, which has been beneficial to everyone involved.”

Approximately 20 per cent of McMaster anesthesia residents are in the CBD hybrid, as the senior cohorts of residents are still in the traditional model.

Karen Raymer, program director of the anesthesia residency training program at McMaster’s Michael G. DeGroote School of Medicine, notes the extent of supervision and feedback for anesthesia residents is unchanged under the new system.

“In anesthesia, we already had constant 1:1 supervision of faculty and residents, and residents were already getting daily feedback, so this is not a new feature of CBD for us,” she says.

The Royal College works with the program directors from each specialty for tailored systems of EPAs and milestones. However, there is flexibility for each program to tweak CBD and make it their own. This has been the case for the residency program in anesthesia at McMaster.

Raymer notes the McMaster-specific model adopts the EPA and milestones from CBD, and maintains the previous global evaluation tool. The form used in the traditional stream assesses residents across the range of skills, from pre-op assessment and developing an aesthetic plan to technical abilities and patient communication skills.

“We want to make sure CBD is an improvement and enhances the educational experience by building on the solid foundation that has been built over decades,” says Raymer, who is also a clinical professor of anesthesia and an alumna of the anesthesia residency program at McMaster. “You don’t want to negate everything you know and understand about resident education and follow a new path without using all the experience and instincts that you have developed.”

Raymer says the transition for faculty has been relatively straightforward due to the focus on readying for the roll-out.

“It is important to note that the preparation was several years in the making,” she says.
“In particular, a lot of work and faculty development took place in the six months leading up to it, so I think all that work paid off in a relatively smooth transition. It’s also a gradual transition, which has been beneficial.”

There has been a significant amount of time and resources invested by McMaster faculty members and staff to ensure the conversion to CDB is as successful as possible. Preparation at the institution started years ago, with ongoing dialogue about the process with the Royal College and other residency programs.

Moyez Ladhani, McMaster’s director of CBD and a professor of pediatrics, is credited by his team members for serving as the university’s cheerleader and strongest advocate of the new system of learning for residents.

“Based on what I have seen, this is the right approach to usher us into the next century of teaching excellence,” he says. “We believe the tremendous work done by everyone involved, including faculty members and staff, is well-invested in this initiative that will change the face of how we optimally train medical residents in Canada.”

Jonathan Sherbino helped the Royal College develop CBD as a consultant during its early years. As chair of the emergency medicine specialty committee for the Royal College, he has done a soft roll-out of aspects of CBD in his division in preparation for the formal launch this July.

He acknowledges faculty members in his department have mixed reactions to the new system of postgraduate medical education. “For people who are educational nerds like myself, there is some excitement about CBD,” says Sherbino, assistant dean of education research and an associate professor in the Department of Medicine at McMaster. “This is the first big change in how we train emergency physicians since we became a specialty. Those people are the true believers. “At the other end of the spectrum are those who are asking why we are changing something when we have already been doing a fine job. That is a typical response of any type of change.”

Sherbino says in his division, elements of CBD have resulted in increased efficiency, as well as an improved educational environment based on feedback from both residents and faculty.

He notes that while a lot of intensive work has gone into creating and phasing in CBD, there’s a lot more yet to come. “This is a common problem in curriculum redesign, as what you intend, what you deliver and what you experience is not a 1:1 correlation,” he says. “Before we pat ourselves on the back and say we’ve got this figured out, it is important to remember this is a dynamic process which will require ongoing surveillance, refinement and resolution of challenges. This will not be a linear course, but rather one that is quite dynamic.”

Mark Czuczman, left, a first-year McMaster University anesthesia resident, and Michael Parrish, associate clinical professor of the Department of Anesthesia.
McMaster University’s Department of Family Medicine is well along its way on the implementation of a competency-based medical education curriculum for its postgraduate program.

The College of Family Physicians of Canada (CFPC) approved an enhanced approach to educating family medicine residents in Canada through the Triple C Competency-based Curriculum in 2011. The goal of Triple C, shared by CFPC and family medicine residency programs, is to ensure graduates are ready to begin the practice of comprehensive family medicine in any community in Canada.

The three C’s stand for: comprehensive education and patient care, continuity of education and patient care and centered in family medicine.

The new curriculum was developed since the document was approved in 2011. It continues to be gradually phased in at McMaster, which is one of the 17 family medicine residency programs across the country.

At McMaster, Triple C is considered a natural evolution of the pre-existing residency program, said Sarah Kinzie, postgraduate program director of the Department of Family Medicine and an alumna of McMaster’s medical program.

“The implementation of competency-based medical education has been an organic process in family medicine and many of the components existed here at McMaster long before they formally named the curriculum,” said Kinzie. “Direct observation and workplace-based assessment, for example, has always been a key component of our residency program.”

Kinzie said Triple C has been a positive experience for residents and faculty members, and has further strengthened family medicine’s training program at McMaster.

“What Triple C really did for us was articulate the framework, such as the learning context, the strategies and priorities that help us determine our strengths, as well as gaps where we could focus our attention,” she said. “It has also fostered a more formal system of assessment that builds on our tradition of field notes, with an active, rather than passive, review experience for the resident.”

A key change of the new curriculum was a concentrated effort on reinforcing the family medicine perspective.

A prime example of this is the maternity-child rotation for Hamilton-based residents, rather than spending two months on service with an obstetrician and gynecologist, residents instead follow a maternal-child curriculum led by family physicians who perform low-risk obstetrical care in their practice.

“There is really an emphasis on coming from the family medicine perspective as much as possible,” Kinzie said. “In relation to the mat-child curriculum, it focuses on the continuity of care that comes before and after, taking care of both mom and baby. Also, because residents have a primary preceptor throughout their residency, there is sometimes more hands-on opportunities with the patients.”

There are certain features of the Triple C curriculum that are similar to Competence by Design being rolled out in the remainder of McMaster’s residency programs, noted Elizabeth Shaw, education coordinator and professor in the Department of Family Medicine and a member of the CFPC working group who developed Triple C.

“We both have entrustable professional activities or EPAs, for example, but we do not have milestones, so there is a broader expectation that those EPAs will be realized over the two-year residency in a less linear timeline,” said Shaw, who is also a McMaster medicine alumna. “Among the variables for the timing of completion of the EPAs are resident’s interest and entry level skill set, the primary practice where they are placed, the order of their specialty experiences and the types of patients they see.”

One challenge has been adapting the curriculum across the board as McMaster’s family medicine residency program expands. As of spring 2018, there are 200 residents in six urban sites and six rural sites across Ontario.

“Some sites needed to be retrofitted and the curriculum tweaked based on such aspects as the availability of access to specialists in some areas,” Shaw said.

A competency committee is being implemented for the department’s July 1, 2018 cohort. This is considered to be the final major milestone in the phasing in of Triple C into family medicine residency training at McMaster.
Trailblazer retiring from lead of midwifery

Eileen Hutton’s career is one filled with firsts.
She was central to the lobbying efforts that resulted in midwifery legislation in Ontario.
She made recommendations for the development of a midwifery education program in Ontario which resulted in a midwifery program led by McMaster with Ryerson and Laurentian universities. The Ontario program provided the prototype for the University of British Columbia program where she was among the first midwifery faculty.
She established a body of midwifery research that has served as a platform for subsequent researchers.
And, she was the first midwife to be inducted as a Fellow into the Canadian Academy of Health Sciences.

These milestones have rightly earned Hutton the respect as a midwifery trailblazer not only in Canada, but around the world.
“We have seen tremendous growth in midwifery and we are at a real turning point,” she said. “We have gone from just over 50 midwives in Ontario to close to 1,000 in 25 years since regulation. I think midwives are finally taking their rightful place in the health-care system.”

Hutton is officially passing the midwifery education program torch to her successor, Liz Darling, on July 1, 2018. While Hutton will continue to oversee the development of research projects in midwifery, she will be a professor emerita.

The professor of obstetrics and gynecology has served as assistant dean of the midwifery education program at McMaster since 2007. She was an assistant clinical professor in the Department of Family Medicine at McMaster from 1993 to 2003.
Her career as a midwife, educator and clinical research scientist has been dedicated to improving outcomes during pregnancy, birth and the neonatal period.
“You would think we would have all the answers on how to do a normal, straightforward birth, but there is still so much we don’t know,” she says. “Why does labour start? Why does it start prematurely? How do you stop a labour that starts prematurely? How long before you clamp an umbilical cord? We don’t know the answers to all of these questions, along with many others.”

Hutton completed a BSc in nursing at Queen’s University, where she met and married her husband John, a civil engineer. She spent the next 10 years working in rural locations across the country, eventually moving back to Ontario. By that time she had three young children, and was craving more education.

She subsequently completed an MScN in parent child nursing at the University of Toronto, where her thesis research allowed her to meet some of Toronto’s midwives.

“I feel like I have had a very privileged career and it has all been very exciting.”

– Eileen Hutton

She subsequently completed an MScN in parent child nursing at the University of Toronto, where her thesis research allowed her to meet some of Toronto’s midwives.

“By then I had worked in labour and delivery nursing, post-partum nursing and public health and I wondered if there was a way to tie that together into a system of care,” she said. “As I did my master’s degree and encountered women working as midwives in the community, it was an aha moment for me.”

Hutton subsequently transitioned to practising as a midwife and completed a certificate in midwifery at the Michener Institute of Applied Health Sciences.
She was actively involved as the president of the Association of Ontario Midwives in the successful bid for legislative recognition of midwifery to bring it into the regulatory model in 1994.

She then turned her sights to research, acquiring a PhD in clinical epidemiology at the University of Toronto.

“When midwifery was legislated, and we had education programs in place, it became obvious to me that we now needed to focus on developing a research underpinning for the profession,” she said. “We didn’t have any real researchers in the field, so I had been drawn to that. It was a natural next step.”

While she was late to the research game, she was successful in obtaining both provincial and national funding to support her work. Hutton notes her first Canadian Institutes of Health Research (CIHR) grant was a highlight of her career.
She said she looks forward to retirement so she can spend more time on her hobbies, and with her husband, three adult children and five grandchildren.
“I feel like I have had a very privileged career and it has all been very exciting,” she said. “I know I made a difference and helped make McMaster midwifery the centre for Canadian midwifery research. Now it is time to spend time with my family.”
Alumni profile: Nurse scientist puts patients and caregivers first

Maureen Markle-Reid lovingly places her hand on a photo of a woman with curly hair and a beaming smile among the images of older adults that grace the walls of the Aging, Community and Health Research Unit at McMaster.

The woman is her grandmother, Kathleen Marck, who had a battle with Alzheimer's that was devastating for the family.

Marck's daughter, Frances Markle – the beloved mother of Markle-Reid and a McMaster alumna – was diagnosed with the same disease a few years ago.

Markle-Reid quietly notes that as her mother's caregiver, it hasn't been easy navigating the health-care system to ensure her mother has access to the appropriate care.

"For years I've been studying and writing about family caregiving, but to be a caregiver myself is a whole different ball game," she says. "I have had to navigate the system on my own, and that has been the biggest eye-opener for me. This experience has helped to inform my research."

Markle-Reid's research focuses on developing and testing interventions to enhance the quality of life of older adults with multiple chronic conditions and of their family caregivers, while reducing demand for health services.

Markle-Reid, a registered nurse, joined McMaster as a full-time faculty member in 1987. The associate professor of the School of Nursing was promoted to professor in July 2018.

She is also the Canadian Institutes of Health Research (CIHR) Tier 2 Canada Research Chair in Person-Centred Interventions for Older Adults with Multimorbidity and their Caregivers.

Markle-Reid says she hopes her research will lead to improved practices and policy development to provide timely, appropriate and quality health care services for older adults that promote optimal aging at home.

“We have found over and over that there is a large gap between needs of older adults and the capacity of the system to meet those needs,” she says. “If people's needs are not met, they will often show up appropriately or inappropriately in the hospital emergency room.”

Central to Markle-Reid's studies is the creation of new and innovative 'interventions', which are co-designed by patients, caregivers, and providers, and have a heavy emphasis on system navigation. The identification of a gap in care through to the development of the intervention involves feedback from patients and caregivers, as well as health care providers and other stakeholders.

"System navigation is where we need to focus because the current health care system is not well designed to meet the needs of older adults with multimorbidity," she says. “This population has complex medical, social and psychological needs, and are using a patchwork of services and supports, that are not well coordinated.”

One intervention, which Markle-Reid co-developed with patients, caregivers and providers, is focused on improving the quality of life and care for community-living older adults with diabetes and multimorbidity. It involves a partnership between diabetes education programs and community centres.

The intervention is delivered by a team of certified diabetes educators, including registered nurses and registered dietitians, and community providers, like the YMCA. It involves regular in-home visits by a registered nurse or a registered dietician, and monthly diabetes wellness programs offered at a community centre, with transportation provided as needed.

This monthly event includes diabetes education from a registered dietician or registered nurse, group exercise, a meal and peer support. As well, each participant receives an in-home visit by the same dietician or nurse who was at the monthly session.

The six-month intervention has been tested in five regions in Ontario and three regions in Alberta. Markle-Reid's team has partnered with Diabetes Action Canada to scale up the intervention across Ontario, Quebec and P.E.I.

“Our trial showed that people who were part of the program had better health and quality of life, especially in the area of mental health, at the end of six months,” said Markle-Reid. “Even when you add the home visits and wellness session to the overall cost, it did not cost the system any more to provide this program, compared to usual diabetes care.”

Hamilton and McMaster University are near and dear to Markle-Reid, who was raised here. Her grandfather, Patrick Marck, lived on King Street West near the university and worked as a lawyer into his early 90s. His longevity and ability to age at home continues to serve as an inspiration to her.

She completed her BScN at McMaster in 1983, helping pay her way through school by working as a lifeguard and swimming instructor at the university pool. After working as a cardiac-care-unit and intensive-care-unit nurse at St. Joseph's Healthcare Hamilton and a cardiac-care-unit nurse at the Toronto Western Hospital, she completed an MScN from the University of Toronto while working at Saint Elizabeth Health Care, later returning to complete a PhD in nursing from McMaster in 2003.

She proudly notes husband, David, and their two adult sons, Matthew and Michael, are also McMaster alumni.

Among her many accomplishments, Markle-Reid is most proud of the
Waterloo medical campus puts older and younger together for learning

To build better relationships between future physicians and older adults, an elder care education program is being rolled out by the Waterloo Regional Campus of McMaster University’s Michael G. DeGroote School of Medicine.

The program, launched in January, intends to promote intergenerational learning through three main initiatives: MacPAGE, Make a New Old Friend and the Green Bench.

Cathy Morris, regional assistant dean of the Waterloo campus, said the learning is needed as by 2020 it is anticipated that 30 per cent of Canadian clinic patients, 60 per cent of hospitalized patients and as many as 95 per cent of continuing care patients will be aged 65 and older.

“We sat down a year ago to discuss where we can insert bits of geriatric competencies in every discipline,” she said. “Out of that discussion came the strategic plan for this program which will give students many more opportunities to have experiences that will help inform their care decision making.”

Formed by the Waterloo Regional Campus’ Big Data & Geriatric Models of Care research cluster, and supported by the McMaster Institute for Research on Aging (MIRA), MacPAGE is an online program designed for students who want to enhance their education in aging, care of the elderly and geriatrics.

The program is made up of six pillars of geriatric education including conferences and lectures; interprofessional events; clinical encounters; volunteered outreach; research and quality improvement; and online learning modules.

Waterloo campus students also have an opportunity to ‘Make a New Old Friend’ at Schlegel Villages University Gates and Winston Park, a retirement and assisted living facility in Kitchener-Waterloo. Learners will visit with their ‘old friends’ on a monthly basis during the 2018 academic term in order to facilitate experiential learning.

“This is a collaborative opportunity to learn from older adults that have been living and working a lot longer than we have, which is really important,” said Andrew Costa, research director at the Waterloo campus and the Schlegel Chair for Clinical Epidemiology and Aging.

The Green Bench program is exactly what it sounds like: a green bench, complete with an engraving of the hashtag #ElderWisdom, meant for students and older adults to sit and talk. The bench is a visual reminder meant to encourage people to talk in a casual setting, and to ultimately break down generational barriers. It will move from one location to another so that the experience can be shared broadly across the campus.

Ivan Samson, a retired pediatrician (centre) sits on the Green Bench and talks with Waterloo medical students Emily Allison (left) and Ellen Connelly.
A health sciences course at McMaster University is bringing generations of Hamiltonians together using the power of music. Music, Health and the Community is an interdisciplinary course that provides students with hands-on community experience through an intergenerational music program in Hamilton.

The course is offered through the Bachelor of Health Sciences program, and is also open to McMaster music students.

“One of the most compelling things written in a feedback form by students taking this class was that it was the best experience of their undergraduate degree,” said Chelsea Mackinnon, course founder and instructor who is also a McMaster BHSc ’15 alumna.

“In class, we talk about the scientific evidence behind the many benefits of music, then we go into the community and put it into practice. That is very powerful.”

The key themes of Music, Health and the Community are the aging population, intergenerational gaps, music and health sciences as an emerging field of study, as well as music education and community music. Students are also assigned a local elementary school class and a neighbouring retirement home.

“One of the most compelling things written in a feedback form by students taking this class was that it was the best experience of their undergraduate degree.”

– Chelsea Mackinnon

The university students help teach the young students new songs on the ukulele, work with seniors on an engagement program using music, then bring the two groups together for music making, conversation and friendship.

“The ability to go out into the community and work with students and seniors through music, and then see a tangible impact from that has been meaningful,” said Arbaaz Patel, a third-year BHSc student from Hamilton, who noted he now takes his ukulele everywhere he goes. “This experience has changed my life in a way that I never thought it would.”

Bill Norton, 94, lives in Abington Court Retirement Residence and is one of the Hamilton seniors who participated in the program led by Patel and his fellow McMaster students. Norton said it is exciting to have the opportunity to make music and visit with students from A.M. Cunningham Elementary School.

“My favorite part is seeing the young people,” Norton said. “I love the kids. They are just great.”

The course, which started in fall 2016, has its roots in a fourth-year BHSc project that served as a prototype, of which Mackinnon was a member.

Mackinnon, a Hamilton native and trained musician, later pitched the idea of making the initiative a course in the BHSc program.

“Our goal in the Bachelor of Health Sciences (Honours) program is to give students opportunities to develop a multifaceted, interdisciplinary perspective on health,” she said.

“This course has been a ‘win-win-win’ for everyone concerned, developing intergenerational connections in the community, while also deepening BHSc students’ knowledge of important social and biological determinants of health while also giving them experiential opportunities for community engagement,” said Stacey Ritz, assistant dean of the McMaster BHSc (Hons) program.

For more information about the program visit https://bhsc.mcmaster.ca/music-health-community/.
Faculty and students create emergency medicine board game

McMaster University emergency medicine faculty and medical students have designed a unique new board game.

The game, called GridlockED, is an educational tool to help future doctors and doctors training to be specialists in emergency medicine learn system approaches to multi-patient management in a safe, low-stakes environment.

“A lot of learning happens by doing, but other opportunities like simulations take a tremendous amount of resources,” said Teresa Chan, co-creator of the game and an assistant professor of medicine at McMaster’s Michael G. DeGroote School of Medicine. “We wanted to find another way to teach what happens in the emergency department in a fun, approachable manner.”

In GridlockED, players work together to treat and prioritize patients with a variety of medical conditions. The goal is to take care of as many patients as possible, manage an eight-hour shift and maximize points.

Additional faculty on the project included Matthew Mercuri and Alim Pardhan, both assistant professors of medicine at McMaster.

“It is our hope this game will be a tool to help us teach the management of the emergency department to our learners, whether they are students or residents,” said Pardhan, who is also the program director of the emergency medicine program.

Key students involved in the initiative hail from the Niagara Regional Campus of McMaster's Michael G. DeGroote School of Medicine. They include Josh Rempel, Daniel Tsoy and Paula Sneath. They also had help from other students, including Rebecca Dang from McMaster, Simon Huang from the University of Saskatchewan and Eric Jeong from Western University.

All of the proceeds from sales of the game will support research initiatives in emergency medicine at McMaster.

The game is rated 18+ due to its medical scenarios.

GridlockED is priced at US$89.99 plus shipping and is available for purchase online at www.gridlockedgame.com.
Top award lauds faculty development

Allyn Walsh, centre, received the AFMC Award from Genevieve Moineau, CEO and President of the AFMC, and Mike Strong, Chair of the AFMC Board of Directors.

Allyn Walsh, professor of family medicine, has been recognized by the Association of Faculties of Medicine of Canada (AFMC). The association named Walsh as a co-recipient of the 2018 AFMC Award for Outstanding Contribution to Faculty Development in Canada. She shares the honour with Karen Leslie of the University of Toronto.

Walsh is currently president of the Canadian Association of Medical Education. Until recently, she chaired the Faculty Development Education Committee for the College of Family Physicians of Canada, and led the development of the Fundamental Teaching Activities Framework, used to prepare and coach teachers for their roles.

Walsh joined McMaster in 1988 and has held many educational portfolios, including assistant dean of the Faculty of Health Sciences’ Program for Faculty Development.

MacMillan and Brown named Distinguished University Professors

Two professors of the Faculty of Health Sciences have been recognized for their outstanding leadership with the title of Distinguished University Professor. Harriet MacMillan and Eric Brown were conferred the lifelong title at the Faculty’s convocation in May.

MacMillan is a professor in the Department of Psychiatry and Behavioural Neurosciences and holds the Chedoke Health Chair in Child Psychiatry.

Her work has led to a better understanding of the impact of exposure to violence and its link to mental health outcomes and has spurred international prevention efforts, which she has helped to evaluate.

Brown is a professor in the Department of Biochemistry and Biomedical Sciences and a member of the Michael G. DeGroote Institute for Infectious Disease Research.

His research program in antimicrobial drug discovery, and innovative leadership in education, culminated in the establishment of the hybrid undergraduate and graduate program in Biomedical Discovery and Commercialization.

The title of Distinguished University Professor, created in 1996, is conferred only on faculty members who have demonstrated distinction and impact well beyond McMaster.

Those awarded the title must have demonstrated an outstanding and sustained research record that demonstrates international impact and recognition. Honourees should also be able to demonstrate excellence in teaching and learning, as well as a history of service that has had an impact on the community. No more than two per cent of all full-time faculty members may hold the title.

Bowdish and Paré awarded University Scholar Prize

Two researchers of the Department of Pathology and Molecular Medicine who are making a mark globally have been named University Scholars. Dawn Bowdish and Guillaume Paré are among four McMaster University faculty appointed with the honour intended to recognize those in mid-career who have already distinguished themselves as international scholars.

Bowdish is an associate professor of pathology and molecular medicine and holds a Canada Research Chair in Aging and Immunity. Paré, also an associate professor of pathology and molecular medicine, holds a Canada Research Chair in Genetic and Molecular Epidemiology.

Recipients of the University Scholar Prize are considered global leaders in a number of diverse research areas and academic disciplines. The award is also meant to recognize the complete scholar who has demonstrated excellence in teaching and learning as well as a demonstrated history of community service.

Each scholar will receive $15,000 each year of the four-year award, provided by McMaster Provost and Vice-President (Academic) David Farrar and the Faculty’s Dean and Vice-President.
Former nursing faculty member honoured

Marilyn A. Ray, a former faculty member of McMaster University’s School of Nursing, was recently inducted as a Distinguished Fellow of the National Academies of Practice, based in the United States. The honour emphasizes inter-professional collaborative health-care research, education and practice.

Ray, a registered nurse, has a special connection with Hamilton through her time at McMaster as an assistant professor in nursing from 1973 to 1976, and as a graduate from the former St. Joseph School of Nursing.

She holds an MA in anthropology, and a PhD in transcultural nursing.

Ray is a professor emeritus at Florida Atlantic University. Her research focus has been on the study of caring in complex health-care cultures.

A retired colonel in the United States Air Force (USAF) Reserve Nurse Corps, her theory of bureaucratic caring is used as a guide for the new USAF Inter-Professional Caring Practice Model.

Ray has authored many publications, including the books, Nursing, Caring and Complexity Science and Transcultural Caring Dynamics in Nursing and Healthcare.

Last year, she established an endowed award at McMaster called the Dr. Marilyn A. Ray Award for Excellence in Nurse Practitioner Education and Practice.

Impact through a lens of health and well-being

While training as a family doctor in a downtown Toronto homeless shelter, McMaster alumnus Naheed Dosani met a man named Terry who would unknowingly shape his career path.

Terry was in his early thirties and suffering from head and neck cancer, while also dealing with mental health issues, addiction and homelessness. After working to gain his trust, Dosani developed a pain management plan that Terry was willing to accept - care that offered hope for comfort in the final stages of his disease.

Dosani returned to the shelter one morning to learn that Terry was found dead on the street having overdosed the night before. Terry’s death had a profound impact on Dosani. He was disappointed in medicine, health care and society.

“Life was waiting to give me that moment with Terry to actually realize what a life was worth,” he said.

Disillusionment turned to empowerment, and the experience with Terry motivated Dosani to find ways to bridge the gap from the policy level to the individual level.

As a result of his actions, the now assistant clinical professor with the Department of Family Medicine was presented with a Meritorious Service Cross in the civil division from Governor General Julie Payette. The award honours his work in providing mobile end-of-life care for the homeless and for those with unreliable housing.

“From the most superficial level, to the deepest roots in society, we can have impact through the lens of health and well-being,” said Dosani. “To what degree we make that change is up to each one of us.”
National honour for breaking new ground

May Cohen, a professor emerita of the Department of Family Medicine for McMaster’s Michael G. DeGroote School of Medicine and Mary Law, a professor emerita and former associate dean, health sciences (rehabilitation), were two of 35 new officers and a total of 125 appointments of the Order of Canada announced by Julie Payette, Governor General of Canada. The Order of Canada is the nation’s highest civilian honour, recognizing outstanding achievement, dedication to community and service to the nation.

Cohen was appointed for “her exemplary leadership on the establishment and growth of the field of women’s health in Canada.”

“Two of the nation’s highest civilian honours, recognizing outstanding achievement, dedication to community and service to the nation,” said Paul O’Byrne, dean and vice-president of McMaster’s Faculty of Health Sciences. “We’re proud of our well-deserved recognition as Officers of the Order of Canada.”

‘Champion of palliative care’ receives honour

A physician, educator and researcher highly regarded as an advocate for change has been awarded the 2018 Elizabeth J. Latimer Prize in Palliative Care.

Samantha Winemaker is an associate clinical professor in the Department of Family Medicine in the division of palliative care at McMaster University’s Michael G. DeGroote School of Medicine.

“I am privileged to follow in Dr. Latimer’s footsteps,” said Winemaker. “I see this award as a message from her to ‘stay the course’.”

Winemaker is a multiple alumna of McMaster, with her medical degree in 2001 followed by a residency in family medicine and a fellowship in palliative care.

A palliative care consultant with the Greater Hamilton Palliative Care Outreach Team, Winemaker has been a long-time promoter of integrated collaborative models of palliative care delivery. She is most passionate about exposing learners to the unique and challenging aspects of home-based care.

Additionally, as an active educator and researcher focused on examining the interface between primary care and palliative care, she examines the care processes upstream in the illness journey to help illuminate the early care needs of people facing progressive life-limiting illness.

The Elizabeth J. Latimer prize recognizes excellence and innovation in palliative care. It is named in memory of McMaster’s internationally renowned and pioneering palliative care physician and educator.

The award is for a clinician, teacher, researcher or administrator whose work continues to pave the way for continued growth and improvement of end-of-life care in the region.

Mary Catherine Rilett, a nurse-clinician with the Niagara West Palliative Care Team, nominated Winemaker for the award. She said Winemaker, a former student of Latimer’s, is carrying the torch as a devoted, passionate and persistent champion of palliative care.

“I am privileged to follow in Dr. Latimer’s footsteps. I see this award as a message from her to ‘stay the course’.”

– Samantha Winemaker

“Dr. Winemaker shares Dr. Latimer’s commitment to advancing palliative care, labours to create a sustainable system that enables access to palliative care for all our citizens, and supports fellow care providers as they grow their capacity for the palliative approach to care,” said Rilett.

“Dr. Winemaker’s research initiatives advance the techniques for education of primary care providers, underscoring the principle that ‘palliative care is everyone’s business’.”
FHS alumni: Where are they now?

1970s

BOBBI LANCASTER  
BSc ‘73, MD ‘78

Bobbi Lancaster has been a family physician in Arizona, champion golfer, human rights activist and author. She is also a transgender woman, having transitioned from life as Robert to Bobbi after undergoing gender confirmation surgery in 2010. Lancaster is McMaster University’s 2018 Alumni Award recipient for the Faculty of Health Sciences, an award which recognizes the achievements of outstanding alumni. She gives educational and motivational speeches, and recently published her memoir, The Red Light Runner. She is rejoining McMaster as an assistant clinical professor of family medicine in the summer of 2018.

1980s

KAREN (PARKES) SMITH  
BScN ’84

Karen Smith is the Patient Care Manager at the Ross Tilley Burn Centre at Sunnybrook Health Sciences Centre in Toronto, where she has spent 28 years of her 34-year career. The facility provides tertiary care for the majority of burn injury patients in the province. Smith also sits on a number of committees, co-leads the hospital’s Rapid Response Team, manages responsibility for 100 reports annually, and is the Patient Care Manager for Respiratory Therapy in adults. Smith received an honourable mention for this year’s Toronto Star Nightingale Award, which is presented to an Ontario nurse nominated by his or her peers or patients.

1980s & 2010s

CAROLYN VANDYKEN  
BHSc ’87

BRITTANY VANDYKEN  
MSc ’17

Carolyn and Brittany Vandyken are a mother-daughter duo who graduated 30 years apart with majors in physiotherapy from McMaster University. They own and operate a pelvic-focused physiotherapy clinic called Physio Works Muskoka which opened this spring in Huntsville.

Carolyn is a registered physiotherapist, pelvic health educator, researcher and author. She is co-owner of Pelvic Health Solutions, a Canadian-based international teaching company that educates health-care professionals on pelvic floor health.

Brittany is a registered physiotherapist who conducts clinical research on lumbo-pelvic pain and pelvic floor dysfunction. Carolyn and Brittany say opening a business together is a lifelong dream.

1990s

DAVID McLINDEN  
MD ‘91

David McLinden has enjoyed practising rural medicine for over 25 years. After graduating from McMaster, McLinden completed his training in rural family medicine in northern Ontario. He started his family practice in Sioux Lookout and has continued in Huntsville since 2000. He has practised emergency medicine for over 23 years and continues with his obstetrics practice. McLinden is an associate professor of the Northern Ontario School of Medicine (NOSM), and an assistant clinical professor at McMaster’s Department of Family Medicine. He was recently honoured with awards from the Northern Ontario School of Medicine and the Physician Clinical Teachers’ Association for his leadership of medical learner programs in Huntsville and NOSM.

2010s

CHELSEA MACKINNON  
BHSc (HONS.) ’15

Chelsea Mackinnon received a Hamilton YWCA Young Women of Distinction Award for her advocacy of music in health care, and her commitment to reducing isolation and loneliness in seniors through her research and volunteerism. Mackinnon is the course founder and instructor of two Music, Health and the Community courses at McMaster. She also runs an intergenerational music program in Hamilton. Since graduating from McMaster, Mackinnon has completed a master’s degree in music and health sciences at the University of Toronto and most recently, a master’s degree in management innovation and entrepreneurship from Queen’s University.
FHS Reunions

A large contingent from the MD Class of 1978 attended the MD reunion soirée at the David Braley Health Sciences Centre on Saturday, May 12. Attendees celebrated alongside members of the MD Classes of ’73, ’78, ’83, ’88, ’93 and 2008. This event coincided with the Department of Family Medicine’s 50th Anniversary Celebrations.

The McMaster University medical school’s MD and post graduate programs will celebrate 50th anniversaries in 2019. Stay tuned for more information about upcoming events and activities and how to participate in the celebrations.

Members of the MD class of ’78 posed for a photo at the MD reunion.

Obituary

Remembering Margaret Black

Margaret Black, a renowned educator, researcher and specialist in geriatric nursing, passed away Feb. 15, 2018.

Black retired from McMaster University in 2011 after 26 years of service. During her time in the School of Nursing, she served as an associate professor of nursing and assistant dean of the graduate nursing program.

“Dr. Black was a valued, highly respected member of the school,” said Sandra Carroll, interim associate dean and director of the School of Nursing. “She was also a treasured friend and colleague to many.”

Black was engaged in the Hamilton community as a public health consultant. She also served on numerous committees and task forces.

Black’s research interests included immigrant women’s health, seniors’ health promotion and community/public health.

Her commitment to students continued after she retired, when she endowed the Dr. Margaret Black Ontario Graduate Scholarship in the Faculty of Health Sciences at McMaster.