



**Department of Medicine**

Nova Scotia Health Authority & Dalhousie University

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# A Message from the Department Head **Dr. Simon Jackson**

The Department of Medicine is proud to work in collaboration with the Nova Scotia Health Authority and Dalhousie University's Faculty of Medicine. Together we continue to provide high-quality patient care, and demonstrate excellence in teaching and research.

The Department's more than 250 faculty and support staff bring forward its absolute best in diagnosing and treating illness that affects those in Nova Scotia and Atlantic Canada. This past year, we have successfully recruited young, talented and ambitious clinicians and scientists to join our team and they have already made important contributions to our Department.

Nova Scotia's health-care system has been through a great deal of transformation over the past 18-months with the creation of the Nova Scotia Health Authority (NSHA). We are pleased to partner with the NSHA through this transition as we support important province-wide system planning, with many of our members acting as key advisors to the development of provincial care delivery models. Working with our partners, we have championed a provincial strategy in how we deliver care to our frail and elderly and are working to develop a collaborative provincial hepatitis C care network. These are two of many examples.

We also recognize the important role we have in creating a more sustainable health-care system. We are making important changes to our practice plan to help demonstrate our accountability to our patients and taxpayers alike.

I have watched my colleagues within this Department work with our partners in care and spearhead the creation of important new infrastructure that supports best-practice patient care, such the \$2.1 million rehabilitation pool and the new 48-patient dialysis unit at the Halifax Infirmary.

We continue to make excellent progress in helping to ensure the talent and expertise within the Department reaches as many Nova Scotians as possible. Various specialties within our Department—from oncology to hematology—continue to expand their focus beyond the borders of our local facilities. We are introducing new programs and growing existing programs that allow our subspecialists to provide advice and guide quality care remotely to regions across the province. This is a true demonstration of our commitment to improve both access and the patient-experience.

On the education front, 2015-16 marked a period of significant evolution in postgraduate education and faculty development. A new formalized program for continuing professional development (CPD) was created, and progress continues in developing our competence-based medical education program.

Our excellent education program is producing top-notch physicians. I'm impressed by the quality and character of medical students and residents who demonstrate such critical thinking and carry a passion to continually improve the standard of care; always questioning if there is a better way and good evidence to support new ways to deliver care.

I consider myself to be privileged to work among so many strong and influential health-care leaders. We are home to a high-caliber group of leaders, holding an impressive track record of leading health-care change far and near. Working in collaboration with local, national and international organizations we have had an impact across Canada, North America and around the world.

Under the leadership of Dr. John Hanly, this past year marked continued success in innovative and ground-breaking research; research that is translating into new ways to care for patients today and in the future.

From improving the treatment of ventricular tachycardia to gene transfer therapy, divisions across the Department make important discoveries that enhance patient care every year.

As Interim Department Head, it has been an honour to be part of this Department's collective success and lead this group of talented, highly-competent and dedicated professionals.



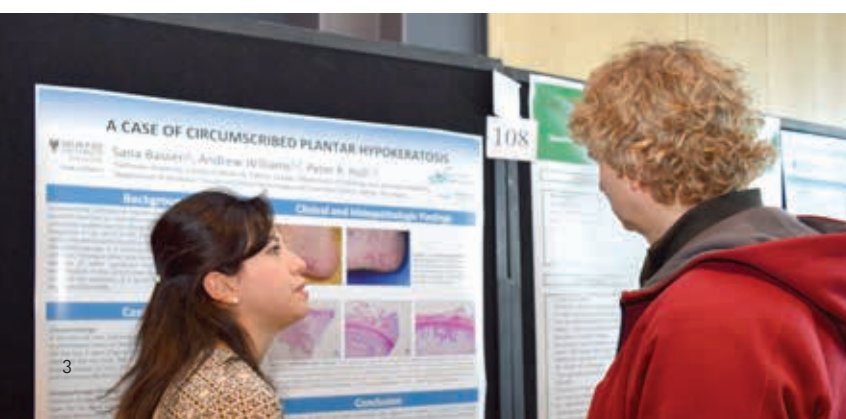
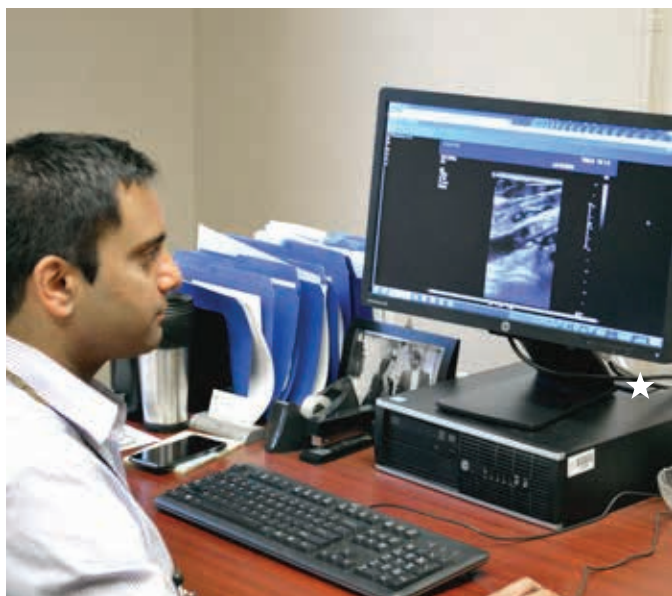
**SIMON JACKSON, MD, FRCPC(C), MMedEd**

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District Chief, Department of Medicine, Nova Scotia Health Authority  
Professor of Medicine, Dalhousie University

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## Who we are.

We are award-winning clinicians, teachers and researchers.

**VISION:** TO BE LEADERS IN ACADEMIC MEDICINE PROVIDING INNOVATIVE, COLLABORATIVE AND APPROPRIATE CARE THAT IS SUSTAINABLE.

**MISSION:** WE ARE A DIVERSE GROUP OF HIGHLY TRAINED PROFESSIONALS DEDICATED TO IMPROVING HEALTH THROUGH EDUCATION, RESEARCH AND THE PROVISION OF EXEMPLARY CLINICAL CARE TO OUR COMMUNITY.

The Department of Medicine is a clinical academic department within Dalhousie Medical School in Halifax, Nova Scotia. Its mission is to improve health through education, research and the provision of clinical care.

The Department serves the complex medical needs of adults in Halifax and the Atlantic region. The Nova Scotia Health Authority and family physicians across the region are partners in providing excellent patient care.

Divided into 15 clinical divisions, the Department is responsible for providing specialized care in all areas of internal medicine. Division members also conduct research and deliver education in their areas of expertise, such as cardiology, infectious diseases and rheumatology.

The Department is part of an academic health district that values patient care, health promotion, research, education and their interdependence. Because of this, patients benefit from the highest quality care that considers disease prevention and the latest medical evidence and knowledge.

The 180 faculty members are award-winning teachers, researchers and clinicians. The Department provides undergraduate education and residency training in internal medicine and 15 subspecialties. The residency program in Halifax and in Saint John, New Brunswick trains the next generation of internists and subspecialists. Medical students from Dalhousie and schools across Canada can choose from more than 20 electives in each year of medical school to build on their knowledge of internal medicine.

The Department boasts a growing, collaborative research program. It has strengths in geriatric medicine, neurology, cardiology and infectious diseases. The faculty members' research efforts attract more than \$13 million in funding annually. The Department's research infrastructure includes a research support office, advisory research committee and funding awards for new and established investigators.

This document reports on the Department's success in its third-year of a five-year strategic plan that focuses on attracting and growing the best talent, leading quality care through innovation and driving research excellence.

Photos (left to right from top): Drs. Melissa Andrew and John Hanly; Research Day 2016; Dr. Peter Hull; Dr. Sudeep Shivakumar (credit: QEII Foundation); Dr. Paul Hernandez demonstrating with Dr. Geoff Maksym and PhD candidate Ubong Peters (credit: QEII Foundation); Dr. Hanly with keynote speaker Dr. David Juurlink; Dr. Peter Green with medical student; Dr. John Hanly with Dr. Tom Marrie at Research Evening 2015.

**EXPERTS IN EDUCATION**

The Department of Medicine continues to be highly engaged in undergraduate medical education, with leadership from Dr. Nancy Morrison, Undergraduate Medical Education Chair. Department members offer lectures and tutor medical students, and are very involved with the clerkship and pre-clerkship program. In addition to individual electives in Medicine and its divisions, all Dalhousie Med 3 clerks rotate through Internal Medicine for 12 weeks.

Change is in the air in education—but while previous years saw transformation in the undergraduate milieu, 2015-16 marked a period of significant evolution in postgraduate education and faculty development.

The Department now has a formalized program for continuing professional development (CPD) and will soon name a CPD director. With support from a CPD

committee, the director will build faculty development opportunities and consolidate the Department’s existing CPD activities, including grand rounds and faculty development activities like Teach-the-Teachers and Medicine Matters.

(For more education, see page 7)

**EXPERTS IN RESEARCH**

The Department of Medicine is committed to excellence in research, recognizing that research is essential to improve patient care. The Department’s research program is thriving under the leadership of Dr. John Hanly, Research Director and Chair of the Department’s Research Committee. This past year the Department received more than \$13.6 million in funding, led ground-breaking research and published more than 200 peer-reviewed articles.



From left to right: Peter R. Hull, Division of Clinical Dermatology & Cutaneous Science Division Head; Paul Sohi, Saint John Department Head; Stephanie Kaiser, Division of Endocrinology & Metabolism Division Head; David Simpson, Division of General Internal Medicine Division Head; Paul Hernandez, Division of Respiriology Division Head; Shelly McNeil, Division of Infectious Diseases Division Head; Stephen Couban, Division of Hematology Division Head; Daniel Rayson, Division of Medical Oncology Division Head; Kenneth West, Division of Nephrology Division Head;



The Department’s commitment to research is demonstrated through its dedicated internal research funding (one of few clinical departments with such funding), its vibrant programs that encourage and support up-and-coming clinical scientists, and its success in producing important research findings that impacts how care is delivered today and into the future.

(For more research, see page 9)

**EXPERTS IN PATIENT CARE**

Improved patient-safety, increased access and creating a more sustainable system continue to be top priorities for the Department of Medicine. The Department’s Quality and Professional Appraisal Committee is focused on measuring and reporting on quality indicators with a goal to advance quality clinical care.

Joining the national Choosing Wisely movement with patient safety top of mind, the Department introduced its own study to bring awareness to and improve best practices in patient interventions in three key areas: indwelling urinary catheters, routine bloodwork and sedative hypnotics.

Department members continued to see success this past year as they work with their health-care partners to advocate, plan and implement important new infrastructure to support modern and quality care delivery.

(For more patient care, see page 11)



Virender Bhan, Division of Neurology Division Head; David Dupere, Division of Palliative Medicine Division Head; Catherine Kells, Division of Cardiology Division Head; Kevork Peltekian, Division of Digestive Care & Endoscopy Division Head; Evelyn Sutton, Division of Rheumatology Division Head; Chris MacKnight, Division of Geriatric Medicine Division Head; Christine Short, Division of Physical Medicine & Rehabilitation Division Head; Simon Jackson, Department of Medicine Head

# Experts in Education

The Department of Medicine’s simulation program is growing under the guidance of Dr. Babar Haroon (General Internal Medicine and Department of Critical Care). Simulation-based education allows learners to manage crisis situations and procedures in a controlled and simulated environment.

“We’re formalizing our program for residents and looking at faculty development initiatives using simulation techniques,” says Dr. Chris Gray, Director of Education for the Department of Medicine. “Dr. Haroon has done a lot of work for the core residency program, setting up simulation boot camps and procedure days.”

Dr. Haroon is also working with Department Head Dr. Simon Jackson to acquire point-of-care ultrasounds that can be used throughout the Department. A structured training program will teach residents and faculty how to use this technology as a valuable educational and clinical tool.

## MAJOR CHANGES FOR POSTGRADUATE EDUCATION

For the past few years, the Royal College of Physicians and Surgeons of Canada (RCPSC) has been working to adopt “Competence by Design,” a novel approach to training and evaluating postgraduate trainees. Dalhousie’s

specialty and subspecialty residency programs have been involved in developing the program, in collaboration with the Department of Medicine’s postgraduate education office and individual residency programs.

“We’ve been very engaged in creating the curriculum and learning objectives, or ‘entrustable professional activities,’ particularly in core internal medicine, gastroenterology, and medical oncology, which are among the first programs to start Competence by Design in 2018,” says Dr. Ian Epstein, Program Director of the Core Internal Medicine Program and Chair of Postgraduate Medical Education for the Department of Medicine. There has also been faculty development to prepare for the new system, including Teach-the-Teachers workshops.

While Competence by Design rolls out to all residency programs through to 2022, a resulting change that’s already in the works nationally is the shift of the Core Internal Medicine certification exam from PGY4 to PGY3. PGY1s starting in 2016 will be the first residents to write the RCPSC national certification exam in PGY3 in 2019.

Dr. Epstein says the Royal College has been considering this move for a long time. “This is a huge change to something that’s been in



Dr. Babar Haroon in the simulation lab (left); Dr. Ian Epstein presenting Chief Resident plaque to Drs. Marko Balan and Alison Rodger (right)

place for decades. The reasoning is that, with the move to a competency-based program, residents should be ready at the end of three years.”

To address this major shift, the PGY1 academic half day has been compressed into six months to accelerate residents’ education. Additional scheduling changes will also better prepare residents for the earlier exam.

### BIG-LEAGUE SCHEDULING

In 2016, the Department of Medicine radically changed the way residents are scheduled, adopting a sports-style draft system through which residents can self-schedule.

On a slightly smaller scale than the NHL or NFL drafts, senior residents met as a group with Dr. Epstein and postgraduate education coordinator Katie Barkhouse. A huge master schedule of available rotations was projected on the wall. As each resident’s name came up in the “draft,” their rotation choice was entered into the master schedule in real time.

“It’s very transparent and fair, and everybody gets their turn to pick; the resident who picks last in one draft round gets to pick first in the next,” says Dr. Epstein. “This system

has brought tremendous improvements both in scheduling efficiency and in resident satisfaction.”

Previously, residents submitted requests and each service submitted their availability. Then the education office spent more than a hundred hours piecing together the schedules. Now, the office spends about 20 hours preparing for the draft, and the actual scheduling only takes about five to six hours.

Scheduling of residents’ vacation and conference leave is also being overhauled. A new software program offers a streamlined, online system that saves hundreds of administrative hours, and drastically reduces errors and turn-around time.

“Scheduling is a big issue in postgraduate education because the learners are also service providers—we count on these residents to look after sick patients,” says Dr. Epstein. “Scheduling is also very specific for learning objectives and working on specific timelines. It’s really one of the biggest challenges we face and one of the most important things to get right to have a quality program. We’re very excited about these changes.”



Dr. Ken Rockwood at Medicine Matters Conference 2015 (top, left); Dr. Doug Hayami teaches resident (bottom, left), Dr. Cory Jubenville teaching a neuro exam (right)



# Experts in Research

The Department of Medicine’s research mandate is led by rheumatologist Dr. John Hanly, Research Director and Chair of the Department’s Research Committee; infectious disease specialist Dr. Lisa Barrett, Chair of the Department’s Resident Research Committee; and Ms. Kathryn Nelson, Research Administrative Coordinator.

The Department of Medicine is one of the few clinical departments with dedicated internal research funding. The Department’s University Internal Medicinal Research Foundation (UIMRF) was established to encourage and promote research throughout the Department of Medicine.

A portion of the UIMRF funding is used to provide grants to Department members. Through a competitive application process grants are awarded in a variety of categories, including: internal and external research fellowships; junior department member operating grants; bridge, pilot, or match funding; and Faculty of Medicine Research in Medicine (RIM) summer undergraduate studentships. A new summer studentship was created this year to honour Dr. Thomas J. Marrie, Division of Infectious Diseases and former Dalhousie Dean of Medicine.

The Department’s Research Day is always a strong demonstration of the talent and interest in research and the 2016 event did not disappoint. The event saw a record-breaking 116 abstract submissions and more than 160 people in attendance.

The Department’s research efforts are vast and wide. More than 108 Department members have protected research time, amounting to almost 17 full-time-equivalents. Twenty-two members dedicate more than 20 per cent of their time to research.

## DEVELOPING THE NEXT GENERATION OF CLINICIAN SCIENTISTS

Creating an environment that supports and fosters ongoing talent, interest and excellence in research is an ongoing priority for the Department.

Investing in Dalhousie Clinician Investigator Program (CIP) residents who want to acquire advanced research skills is one way the Department demonstrates its support for its up-and-coming researchers. CIP is an accredited postgraduate research training program of the Royal College of Physicians and Surgeons of Canada for specialty or subspecialty residents at Dalhousie Medical School. Prospective CIP trainees must secure funding support before they can apply to the program.

In 2016 the Department of Medicine was very pleased to be able to award a UIMRF Internal Fellowship to Dr. Caitlin Lees, PGY3, to support her CIP application. The Department also awarded Dr. Alexandra Legge, PGY2, a UIMRF Internal Fellowship for her CIP application; however, Dr. Legge subsequently received a full two-year sponsorship from the Nova Scotia Department of Health and

### DEPARTMENT OF MEDICINE RESEARCH REVENUE 2015-16

Cardiology.....	\$2,136,102
Clinical Dermatology & Cutaneous Science.....	\$79,425
Digestive Care & Endoscopy (GI).....	\$478,220
Endocrinology & Metabolism.....	\$640,767
General Internal Medicine .....	\$45,467
Geriatric Medicine.....	\$719,992
Hematology .....	\$3,422,154
Infectious Diseases.....	\$405,081
Infectious Diseases—Canadian Centre for Vaccinology.....	\$592,508
Medical Oncology .....	\$1,518,408
Nephrology.....	\$2,002,821
Neurology.....	\$536,364
Physical Medicine & Rehabilitation .....	\$58,790
Respirology .....	\$254,588
Rheumatology .....	\$472,358
Research Office .....	\$194,721
<b>Grand Total.....</b>	<b>\$13,557,766</b>





Wellness. This full scholarship is awarded to only one Dalhousie Medical School CIP candidate each year.

Department of Medicine resident, Dr. Bader Alamri, is in his second year of the program, with external financial support.

To have three residents in this program at one time is unprecedented for the DoM. "This level of interest in research is a great development for the Core Internal Medicine program and for the Department—it raises resident awareness of research opportunities, and raises the profile of research in our training program," says Dr. Ian Epstein, Program Director of the Core Internal Medicine Program and Chair of Postgraduate Medical Education for the Department of Medicine.

## RESEARCH METHODS COURSE

In 2015-16 the Department of Medicine UIMRF funded 19 PGY1 residents in a mandatory research methods course. This interactive course offers a research orientation and works through relevant examples of research questions from idea to completion to demonstrate how local research projects work.

## RESEARCH METHODS UNIT

The Department and the NSHA/IWK/ Dalhousie Research Methods Unit (RMU) collaborate to provide research methods consulting services. Two Department of Medicine consultants work within the RMU; in turn, the Department receives RMU credits for access to a broad range of consulting support from the RMU, such as quantitative and qualitative research design, research methods, data management and data analysis. Department researchers who use RMU consulting services can use these credits for eligible projects if they do not have external funding. In 2015-16, Department researchers used 1170 RMU credit hours funded (or provided) by the Department.



## ENDOWED AND CANADA RESEARCH CHAIRS

In 2015-16, the Department of Medicine had seven research chair holders:

**Anil Adisesh, PhD,**  
J.D. Irving Limited Research Chair in Occupational Medicine, Saint John, New Brunswick (inaugural)

**Chris Blanchard, PhD,**  
Canada Research Chair, Tier II, in Cardiovascular Disease and Physical Activity

**Leah Cahill, PhD,**  
Howard Webster Department of Medicine Research Chair

**Dr. Jafna Cox,**  
Heart and Stroke Foundation Endowed Chair in Cardiovascular Outcomes (inaugural)

**Dr. Sultan Darvesh,**  
Irene MacDonald Sobey Endowed Chair in Curative Approaches to Alzheimer's Disease

**Louise Parker, PhD,**  
Endowed Chair in Population Cancer Research for the Canadian Cancer Society, Nova Scotia Division

**Dr. Kenneth Rockwood,**  
Kathryn Allen Weldon Chair in Alzheimer Research (inaugural)

# Experts in Patient Care

Improved patient-safety, increased access and creating a more sustainable system continue to be top priorities for the Department of Medicine.

The Department’s Quality and Professional Appraisal Committee—chaired by Dr. Robbie Stewart—continued its important work in establishing and reporting on quality indicators that are instrumental in advancing quality clinical care. Divisions have begun to report on quality indicators.

## CHOOSING WISELY

This past year the Department also embraced the national Choosing Wisely movement. Choosing Wisely is a campaign that has physicians and patients thinking and talking about unnecessary tests, treatments and procedures.

The 2015 Medicine Matters Conference focused on Choosing Wisely. The conference hosted more than 100 participants interested in learning more about how Choosing Wisely could be applied to their areas of practice. Knowledge was shared on hospital medicine, nephrology, medical oncology and respiratory.

The conference also included a presentation by Internal Medicine Residency Training

program residents Drs. Allen Tran (PGY4), Paul Cameron (PGY2) and Harrison Petropolis (PGY1) along with nurse Jennifer Hyson. The group studied three Choosing Wisely Canada areas on the Medical Teaching Unit: indwelling urinary catheters, routine bloodwork and sedative hypnotics. The study aimed to assess the impact fewer interventions could have on patient care outcomes. It included educating nurses and patients, and embedding real-time prompts to remind care providers to question the necessity for the intervention.

Dr. Paul Cameron says the study has already created valuable learnings.

“We can see that by introducing simple tools like patient education and prompts for health-care providers we can bring issues forward and improve the decisions we are making for our patients,” said Dr. Cameron. “We also see in our inpatient medical units that assessments and measurement of quality metrics has an impact on patient care.”

Dr. Cameron is optimistic the study has laid the groundwork for long-term impact and changes in how care is delivered.



Dr. Neil Finkle with patient (left); Dr. Charles Maxner and residents (right)

"I can see it creating a culture change already. It's becoming part of our everyday language. We bring it up at rounds; clerks, residents and nurses are talking about the necessity of interventions."

Dr. Cameron says his involvement in the study has given him a new perspective.

"I better appreciate the need to evaluate how we provide care. Just because we do something 100 times a day, doesn't always mean it is necessary. We need to evaluate the impact our interventions have and constantly criticize ourselves."

Dr. Cameron also presented the group's findings at the inaugural Choosing Wisely Canada meeting in Toronto in March 2016.

Dr. Cameron and his colleagues are continuing their efforts, with a current focus on creating streamlined processes for data collection and presentation to support making better decisions with more 'real-time' data.

**NEW INFRASTRUCTURE**

All change in big systems such as health-care take a great deal of thought and planning. This past year various Department members have

been strong advocates for projects where lofty ideas for new or expanded infrastructure has become, or is nearing, reality.

Examples include:

- The opening of the new therapeutic pool. This is an integral facility to help the Division of Physical Medicine and Rehabilitation support their patients in pain management and re-mobilization.
- Significant progress in planning to build the first residential palliative care hospice in Halifax. This is an important advancement in patient-care where patients will be able to receive compassionate and specialized care in a home-like environment.
- The addition of the point-of-care mobile ultrasound to the GIM division at the Saint John site. This allows more immediate "bedside" clinical decision making, where a dedicated radiology exam is not required.
- Finalizing the creation of the new six-bed IMCU and renewing the Epilepsy Monitoring Unit (EMU).

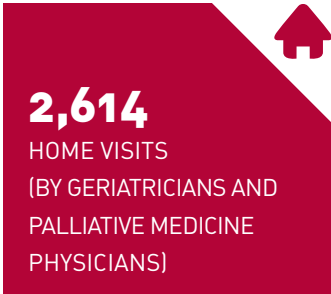
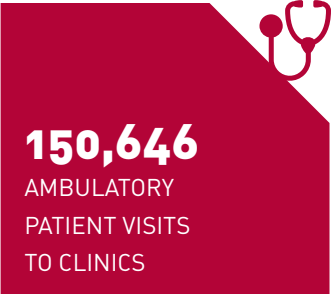
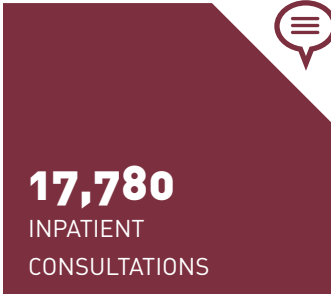
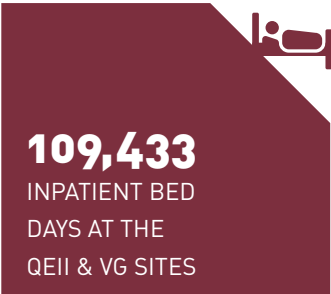
In 2016-17 the Department will continue to further its efforts in quality improvement, with a focus on improving access to appropriate care.



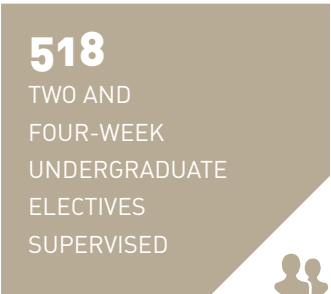
Dr. Barna Tugwell (left); TAVI team (top, right); Dr. Rosario Rebello (bottom, right)

# What we have done in 2015-16

## PATIENT CARE



## EDUCATION & RESEARCH





OTHER PATIENT CARE STATS

- 10,812 chemotherapy treatments (QEII and Cape Breton Regional Hospital)
- 95.5 per cent occupancy
- 2,277 cardiac catheterizations and 1,678 PCIs
- 86,625 ECGs
- 2,183 EMGs
- 1,381 EEGs
- 6,397 stress tests and 4,142 holter monitors and loops
- 600 pacemakers, AICDs and BIVs inserted
- 376 cardiac electrophysiology studies and ablations
- 12,778 cardiac echos
- 9,055 patients were treated in Dermatology Phototherapy Unit
- 6,142 endoscopies
- 10,474 hematology procedures in Medical Day Unit
- 41,170 hemodialysis procedures (at DGH & QEII)
- 1,176 acute in-patients hemodialysis procedures
- 1,679 telemedicine consultations by dermatologists and physiatrists

OTHER EDUCATION & RESEARCH STATS

RESIDENTS:

- 46 Core Internal Medicine (Halifax based)
- 10 Core Internal Medicine (Saint John, NB based)
- 60 subspecialty residents
- 3 Dalhousie Clinician Investigator Program (CIP) residents
- 11 core internal medicine residents completed PGY1 research rotations

TEACHING:

- 1,268 hours Med 2 cardiology, musculoskeletal, neurology, respirology and consolidated clinical skills
- 636 tutor hours for Med 1, 2 & 3 Case Based Learning
- 109 hours Med 3 Wednesday seminars
- 18 hours Med 2 to 3 IMU link
- 118 hours at Academic Half Day
- 178.5 hours acting as examiners for Med 2 & 3 student’s clinical exams (OSCE’s)

Our Divisions’ Progress & Profiles

Learn how each of the Department’s 15 divisions and Saint John, NB campus offers excellence in patient care, education and research.

2015-16 Nova Scotia Health Authority & Dalhousie University Department of Medicine

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DIVISION HIGHLIGHTS

IN PATIENT CARE

The division provides consultative care in the Central Zone and at the IWK Health Centre, and triages tertiary care for Nova Scotia and Prince Edward Island through its 24-hour transfer service. The past year’s major focus has been expanding our STEMI and rescue programs and moving towards a province-wide ‘drip & ship’ policy. Drip and ship will be piloted at Valley Regional Hospital and Cape Breton Regional Hospital. The Transcatheter Aortic Valve Implantation Program (TAVI) was expanded and has shown excellent outcomes.

IN RESEARCH

Dr. Chris Blanchard’s research on physical activity in people with and without chronic disease may lead to development of interventions that increase physical activity. Dr. Ratika Parkash continues to make progress in her studies of atrial fibrillation (AFib) and cardiac implantable electronic devices (CIEDs). Dr. Nicholas Giacomantonio leads the unique-to-Canada Community Cardiovascular Hearts in Motion Program (CCHIM), a cardiac rehabilitation program. Dr. Colin Yeung finished as the division’s first research fellow in cardiac rehabilitation; he is continuing his studies at the Mayo Clinic.

IN EDUCATION

The Adult Cardiology Residency Program is recognized as one of the best in the country, with nine residents this past year. Subspecialty fellowship training programs in Electrophysiology and Echocardiography are becoming Royal College Accredited Diploma Programs and Interventional Cardiology is the second program nationally to receive Royal College accreditation. The division’s electives are consistently ranked high by medical students.

**CATHERINE KELLS, DIVISION HEAD** — Amir AbdelWahab, Iqbal Bata, Hussein Beydoun, Helen Bishop (Curran), Brian Clarke, Jafna Cox, Richard Crowell, Martin Gardner, Nicholas Giacomantonio, Chris Gray, Ron Gregor, Doug Hayami, S. Gabrielle Horne, Simon Jackson, Bakhtiar Kidwai, Chris Koilpillai, Tony Lee, Richard Lodge, Michael Love, Nancy MacDonald, Paul Mears, Evan Merrick, Najaf Nadeem, Ratika Parkash, Ata Quraishi, Miroslaw Rajda, Sarah Ramer, John Sapp, William Sheridan, John Stewart, Robbie Stewart, Kim Styles, Lawrence Title, Jason Yung

DR. JOHN SAPP  
CARDIOLOGIST

Is there a better way? This simple but hard question has driven Dr. John Sapp’s research to improve the treatment of ventricular tachycardia (VT) for more than 15 years. VT affects about 50,000 Canadians. It is one of the most dangerous heart rhythm abnormalities and the most common cause of sudden cardiac death.

This year, the *New England Journal of Medicine* published the results of a clinical trial led by Dr. Sapp that found catheter ablation is a better treatment for recurrent VT than increased drug therapy.

The clinical trial included 22 medical centres and 259 patients from around the world who suffer from VT. All patients involved in the study had been on some sort of antiarrhythmic drug, but the arrhythmia returned.

VT is usually caused by a scar in the heart, and there are just two options when the condition reoccurs: catheter ablation, wherein wires are passed up through blood vessels into the heart

and directed to the areas of heart scar which cause arrhythmias, or increased amounts of antiarrhythmic drugs.

“Our study showed that catheter ablation is 28 per cent more likely to prevent VT from reoccurring than the second option of raising drug doses,” says Dr. Sapp. “The study results offer substantive evidence for the use of catheter ablation to treat recurrent VT so, we are now turning our attention to related areas such as quality of life and cost-effectiveness.”

Dr. Sapp’s career-long dedication to bettering VT treatment continues. He is currently leading a pilot study of patients with first-time VT to determine whether it’s possible to study the efficacy of catheter ablation for first-occurrence VT.

FOR ME, IT’S ABOUT...

ASKING HARD QUESTIONS

“With VT, as it is in many areas of study, the answers to one question often lead to asking many others. As a researcher, you have to be prepared to persevere. The work is much more a marathon of many milestones and steady achievements than it is a sprint.”





DIVISION HIGHLIGHTS

IN PATIENT CARE

Clinical staff offer consultations, day surgery and phototherapy treatment to approximately 16,000 patients a year. The Dermatology Outpatient Phototherapy and Skin Treatment Unit treats patients with severe skin disease while offering learners and researchers exposure to a unique patient population. The division also offers inpatient consultations via telemedicine to rural Nova Scotia, New Brunswick and Prince Edward Island.

IN RESEARCH

The division established a lab with pathology focused on genodermatoses, and a research project with partners from Europe and Africa investigating keratolytic winter erythema. Dr. Richard Langley, recipient of the American Academy of Dermatology Presidential Citation, recruited more than 80 patients for the Early Melanoma Detection Research Project, funded by a \$1 million gift from the Allan and Leslie Shaw Endowment (Dalhousie Medical Research Foundation).

IN EDUCATION

The Royal College survey rated the dermatology resident program as excellent, while its rotating house staff from the departments of internal medicine, family practice, pediatrics and plastic surgery consistently evaluate the teaching to be superb. Residents attend teaching clinics, academic half days and small group teaching sessions. Clinical clerks do two to four-week rotations and the division teaches in Dalhousie’s Musculoskeletal and Dermatology Unit. The Med 2 class named Dr. Peter Green Professor of the Year.

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**PETER R. HULL, DIVISION HEAD** — Mary Lou Baxter, Ariel Burns, Laura Finlayson, Christopher Gallant, Peter Green, Colleen Kelly, Richard Langley, Scott Murray, Catherine O’Blenes, Michael Reardon, M. Theresa Torok, Rob Tremaine

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**YOUSSEF ELHAJI, PhD**  
MOLECULAR GENETICIST

Dr. Youssef Elhaji is fascinated by skin genetics.

“Skin is by far the largest organ in our body and has many diverse functions, which means many genes are at work, switched on and off in a highly regulated manner,” says Dr. Elhaji, who runs the Clinical Dermatology and Cutaneous Science Genetics Lab with Division Head Dr. Peter Hull. “Of course, with so many genes involved, you would expect some problems might occur.

“Our job is to hunt down faulty genes in various skin diseases and identify new genes in rare diseases. This may eventually help us better counsel patients and families, or provide personalized medicine or therapeutics.”

Dr. Elhaji has brought some exciting new technologies to the lab. The CRISPR technique is a revolutionary gene editing technology that allows researchers to introduce specific modifications precisely where they want them in any kind of cell. For example, a mutation could be inserted into a normal cell to be studied. The team is also

establishing 3D cell cultures, which allows them to grow stratified skin tissue in a dish and see how cells interact.

With the two techniques combined, the team can introduce a mutation and then grow it in a 3D culture—an ideal approach because it mimics the natural environment for the mutation. This will be very helpful for drug development in the future, as researchers will be able to use a 3D model to screen candidate compounds before going to human trials.

“We’re really happy with the progress we’ve made just within the past year here, and over the next few years our productivity is going to increase—we now have all the connections we need, so we can build,” says Dr. Elhaji. “I love genetic research and can’t imagine myself doing anything else.”

FOR ME, IT’S ABOUT...

**SHARING EXPERIENCES**

“Dalhousie is an optimal research environment because it’s big enough to have all the expertise you need for a multidisciplinary approach, yet small enough to still have the personal interaction and the ease to get things going. With our colleagues at the Centre for Genomics Enhanced Medicine, we aim to conduct world-class translational research to develop new diagnostic tools and novel patient-oriented treatments.”





DIVISION HIGHLIGHTS

IN PATIENT CARE

Dr. Kevork Peltekian is providing input as Canadian Blood Services develops a national system for organ and tissue donation, and transplantation allocation and quality assurance. The division is trialing MyHealthNS, which provides patients access to their records. It developed the Fatty Liver Patient Forum, a multi-disciplinary educational program that is helping decrease wait times for this growing health issue. Dr. Stacey Williams and the Practice Affairs Group have worked to enhance quality, patient-centred care and

increase the number of patients they can see. Halifax will soon have a multidisciplinary program of excellence for clinical care, research and education in inflammatory bowel disease (IBD): Nova Scotia has the highest IBD rates in Canada.

Drs. Laryea and Peltekian also provide hepatitis C care in a collaborative practice with nurse practitioners Carla Burgess and Geri Hirsch.

IN RESEARCH & EDUCATION

Dr. Jennifer Jones leads the research group and is building research capacity. The summer studentship now has a competitive application process; three highly qualified candidates worked on investigator-initiated protocols this summer.

Drs. Ian Epstein, Dana Farina, Steve Gruchy, Geoff Williams and Wendy Winsor have taken on significant educational leadership responsibilities within the Department of Medicine, Faculty of Medicine and Royal College of Physicians and Surgeons of Canada.

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**KEVORK PELTEKIAN, DIVISION HEAD** — Ian Epstein, Dana Farina, Steven Gruchy, John Iggoe, Jennifer Jones, Marie Laryea, Desmond Leddin, Donald MacIntosh, Sunil Patel, Geoffrey Turnbull, Malcolm Wells, Geoff Williams, Stacey Williams, Wendy Winsor

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**DR. DANA FARINA**  
**GASTROENTEROLOGIST**

Dr. Dana Farina likes to push his limits to improve care, not only for the patients he treats, but for patients everywhere.

Hailing from Moncton, Dr. Farina completed medical school and residency training in internal medicine and gastroenterology at Dalhousie, but his expertise is recognized throughout Canada thanks to his teaching efforts and use of advanced endoscopy.

Dr. Farina and division colleague Dr. Donald MacIntosh are certified faculty of the Skills Enhancement for Endoscopy (SEE) program, which was created by the Canadian Association of Gastroenterology to address gaps in endoscopy skills in Canada. Drs. Farina and MacIntosh provide training in centres across the country, including in Halifax, for SEE's two main programs: the Colonoscopy Skills Improvement (CSI) course for practising endoscopists (which received the 2016 Royal College Accredited CPD Provider Innovation Award), and Train-the-Endoscopy-Trainer (TET).

“Teaching endoscopy is not the same as giving a lecture,” says Dr. Kevork Peltekian, division head for Digestive Care & Endoscopy. “You’re teaching learners skills using their hands, and responding to problems like your scope not going forward: what steps do you need to take to get that scope turned so your patient is comfortable and you can reach what you want to reach? Our division is well positioned by having our own national experts in endoscopy training right here.”

Dr. Farina is also one of only four physicians in the Central Zone (including division members Dr. Geoff Williams and Dr. Steven Gruchy) who offer advanced therapy endoscopy.

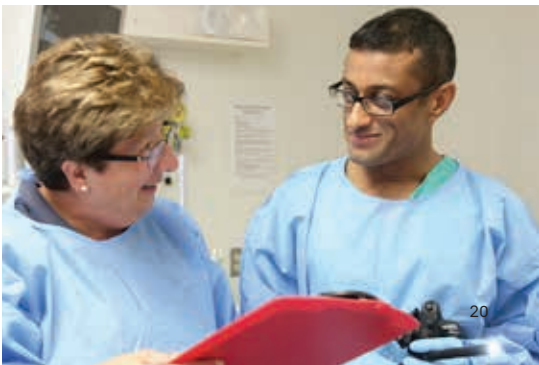
All gastroenterologists are trained in upper endoscopy and colonoscopy, but few provide ERCP (endoscopic retrograde cholangiopancreatography). This highly specialized scope addresses complicated cases that require interventions for bile and pancreatic ducts. With ERCP scopes, Dr. Farina and his colleagues offer options for patients who would otherwise have to undergo surgery.

FOR ME, IT'S ABOUT...

**PROVIDING THE BEST  
CARE TO EVERYONE**

“We want to enhance our delivery of care and ensure that all Nova Scotians are getting the same appropriate, high levels of service across the province.”

Dr. Farina, along with Dr. Paul Johnson and Heather Francis, co-lead the provincial endoscopy group that is working to improve endoscopic care delivery across the province.







DIVISION HIGHLIGHTS

IN PATIENT CARE

In addition to regular clinical, on-call and outreach activities, the division offers general endocrinology and diabetes clinics, subspecialty clinics (preconception and diabetes in pregnancy at the IWK Health Centre, osteoporosis, lipids) and multidisciplinary clinics (neuro-pituitary with Neurosurgery, thyroid biopsy with Pathology and oncology with Radiation Oncology). Dr. Barna Tugwell is an advisor to the Nova Scotia Insulin Pump Program (NSIPP) Evaluation Working Group, which funds insulin pumps for young people.

IN RESEARCH & EDUCATION

The Endocrine Research Group participates in several peer-reviewed, funded clinical trials and contract research. Dr. Stephanie Kaiser is active in osteoporosis research and the Canadian Multicentre Osteoporosis Study (CaMos). The division’s robust education program has three subspecialty residents. Dr. Shirl Gee serves as program director for the residency training program and Dr. Churn-Ern Yip is the undergraduate education coordinator.

IN LEADERSHIP & QUALITY

Dr. Stephanie Kaiser is the current President of the Canadian Society of Endocrinology & Metabolism. Dr. Barna Tugwell and Dr. Tom Ransom participate in an advisory capacity to the Diabetes Care Program of Nova Scotia (DCPNS) Advisory Council. Dr. Ferhan Siddiqi sits on the Department of Medicine Quality and Performance Appraisal Committee.

STEPHANIE KAISER, DIVISION HEAD — Shirl Gee, Janice Ho, Ali Imran, Thomas Ransom, Ferhan Siddiqi, Barna Tugwell, Churn-Ern Yip



**DR. JANICE HO**  
**ENDOCRINOLOGIST**

Dr. Janice Ho joined the Department of Medicine in 2015 following medical school in Ireland, residency in general internal medicine at Dalhousie, and subspecialty endocrinology training at the University of Manitoba. She then joined her husband in Nova Scotia and has established a thriving community endocrinology practice at the Woodlawn Medical Clinic in Dartmouth.

While she addresses general endocrine concerns like thyroid issues, calcium-related disorders and adrenal problems, diabetes makes up the largest portion of Dr. Ho’s growing practice.

“It’s a really exciting time to be working in diabetes as there are several new medications available or on the horizon, expanding our treatment options,” she says.

These newer drug classes offer more therapeutic choices but are also changing the approach to diabetes management.

“Some of these new medications are showing cardiovascular benefit, which is completely new to us,” explains Dr. Ho. “Before, our focus would have been on treating blood sugars and getting our patients to glycemic targets. But with these new medications we can manage patients from an overall cardiovascular risk standpoint. This really widens our scope and improves the overall management of diabetes patients and their vascular health.”

Expanding scope is a theme for Dr. Ho these days.

“At Woodlawn, we’re working together with the Dartmouth Diabetes Education Clinic and have established a joint, twice monthly diabetes clinic for our mutual patients. Rather than going to individual health-care providers for separate assessments, our patients can now have more global assessments and treatment. This allows us to really look at patients from a multi-health care perspective.”

FOR ME, IT’S ABOUT...

**RELATIONSHIPS LEAD  
TO IMPROVED CARE**

“Residency prepares you well but doesn’t capture the depth and breadth of chronic disease management we see in endocrinology. One of the most rewarding things now that I’m out in practice is developing those long-term patient-physician relationships and seeing meaningful changes and progress over time.

And Maritime people are very friendly, so it’s always nice to work in this environment.”





DIVISION HIGHLIGHTS

IN PATIENT CARE

The division did 67 per cent of senior internist rotations, 75 per cent of Medical Teaching Unit (MTU) rotations and 42 per cent of IMCU rotations. GIM has a growing presence at the Cobequid Community Health Centre. Dr. Jorin LindenSmith developed a physician evaluation process for internal medicine at Dartmouth General Hospital and advises a provincial committee on ICU services and needs. Dr. Magnus McLeod offers a half-day clinic in hepatology and attends on the hepatology service.

IN RESEARCH

Dr. Lori Connors supervises projects on feedback as a teaching tool, allergy and immunology curriculum for undergraduate medical education, and breastfeeding and residency issues. Dr. Babar Haroon supervises projects on simulation, including adherence to ACLS protocols, and the effect of simulation on trainee comfort and competence in end-of-life and critical illness communication. Dr. Colin Van Zoost's research involves improving adherence to cardiovascular disease guidelines, and pharmacy-initiated immunizations in the emergency department.

IN EDUCATION

The division now offers a PGY5 in General Internal Medicine with two residents completing their PGY5 this year. The two-year GIM program received accreditation in June 2016. Excellence in education was prevalent with Dr. Lori Connors receiving the 2015 Faculty Excellence in Medical Education Award and Dr. Babar Haroon selected as the 2015 Resident's Choice Award for Outstanding Faculty. Resident Dr. Magnus McLeod received the Dr. Elizabeth Mann Award of Excellence for high moral standards, clinical excellence and compassionate approach to patient care.

**DAVID SIMPSON, DIVISION HEAD** — Paul Charlebois, Lori Connors, W. Brent Culligan, Chris Gallivan, David Haase, Jennifer Hancock, Babar Haroon, Anne Marie Krueger-Naug, Jorin LindenSmith, David Manning, Magnus McLeod, Sarah McMullen, Rosario Rebello, Mahsa Rezaei Nejad, Raid Shaarbaf, Colin Van Zoost, Stephen Workman, Khawar-Uz Zaman

**DR. W. BRENT CULLIGAN**  
INTERNIST AND MILITARY PHYSICIAN

Before Dr. Brent Culligan became an internal medicine specialist, he was a family physician, flight surgeon, helicopter pilot, and a jet pilot in the Canadian military. And before becoming a member of the military, he was an electrical design engineer with General Motors.

In 2012, Dr. Culligan brought his wealth of life and professional experience to the Department of Medicine when he became a member of the Division of General Internal Medicine. He now splits his time between GIM and the Canadian Armed Forces, where he serves as a medical specialist in the 1 Canadian Field Hospital.

“It’s a partnership between the Canadian military, Dalhousie University and the Nova Scotia Health Authority that enables me to engage in all aspects of academic medicine while also bringing my military experience to the division and to patients,” says Dr. Culligan. “The Canadian Armed Forces, in turn, benefits from the experience I gain while working alongside my academic colleagues, and with residents and medical students.”

Dr. Culligan is one of 32 members of the 1 Canadian Field Hospital who are also part of medical faculties across Canada. He is an assistant professor and internal medicine specialist at the QEII Health Sciences Centre. As an academic physician, he is an active teacher, researcher and clinician.

Given his military experience, Dr. Culligan’s primary research and clinical interests are, fittingly, trauma and resuscitation. He currently has a study underway to improve treatment of non-compressible bleeding in the thorax area, which could have applications both in military and civilian medicine.

FOR ME, IT’S ABOUT...

**SUPPORTING EACH OTHER**

“To allow me to fulfill my military commitments, there really has to be—and is—a tremendous amount of understanding and accommodation by my colleagues, for which I am incredibly grateful.”

When Dr. Culligan was interviewed, he was in Petawawa, Ontario, preparing for deployment to Iraq then to Africa. He noted that one of the greatest challenges of being a military and academic physician is scheduling.





DIVISION HIGHLIGHTS

IN PATIENT CARE

The division plays an important role in supporting province-wide health-care planning. Dr. Paige Moorhouse co-chairs the Nova Scotia Health Authority Central Zone Frailty Strategy, working to improve appropriateness of care for frail older adults. Dr. Kenneth Rockwood advises the province on the Nova Scotia Dementia Strategy and geriatric human resource planning. Dr. Melissa Andrew co-chairs the province’s Dementia Strategy Research Working Group. The division also offers satellite clinics in Sydney and Middleton.

IN RESEARCH

Dr. Kenneth Rockwood’s team researches frailty and cognitive impairment in an effort to provide quantitative understanding and clinical insight, such as how to approach delirium in older adults or how to facilitate a care plan. Funded by the Nova Scotia Health Research Foundation, the Canadian Institutes for Health Research, and the Canadian Frailty Network, the team produced 30 peer-reviewed research reports. Dr. Melissa Andrew earned the Department of Medicine’s Excellence in Research Award.

IN EDUCATION

Dr. Glen Ginther is the new program director for the geriatric medicine residency program. Several national and international experts visited the region to offer public lectures and grand rounds, or to work with and learn from the division’s own experts in geriatric medicine.

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**CHRIS MacKNIGHT, DIVISION HEAD** — Melissa Andrew, Constantine Apostolides, Daniel Carver, Susan Freter, Glen Ginther, Janet Gordon, Ellen Jost, Katalin Koller, Laurie Mallery (Division Head until July 31, 2015), Paige Moorhouse, Kenneth Rockwood



**ARNOLD MITNITSKI, PhD**  
**MATHEMATICAL MODELING RESEARCHER**

Dr. Arnold Mitnitski came to Dalhousie in 2002 to use his background in mathematical modeling in biomedicine to develop health assessment tools related to how people age.

“I am intrigued by aging,” says Dr. Mitnitski, a research professor of medicine in the Department of Medicine who works primarily in geriatric medicine and biogerontology. “We expect people will have health differences at different ages, but what about people who are the same age but are quite different from each other in health status? This heterogeneity of people of the same age was a key question I was interested in.”

After several years studying any data they could access, Dr. Mitnitski and Dr. Kenneth Rockwood developed the Frailty Index.

Frailty is essentially a vulnerability to adverse outcomes, such as heart failure, diabetes, cancer, or even changes in sleep pattern. The Frailty Index is a ratio that compares the number of health issues or adverse events a person actually has against the total possible number of adverse events they could

have. When someone has several health issues, they are considered more frail; greater frailty in turn increases risk of adverse outcomes.

“When part of an organism becomes damaged, it influences everything else,” says Dr. Mitnitski. “We are like networks, so when something happens with the kidneys, next it goes to the heart or lung, and so on. With a great deal of data, perhaps we can understand and predict how things will progress.

We are currently developing the network models of aging and frailty in collaboration with Dr. Andrew Rutenberg and his colleagues from the Department of Physics. Maybe we can then consider an intervention successful if it decreases frailty.”

Dr. Mitnitski notes that the availability of data is growing very quickly. “Today we can assess health on cellular, genetic and proteomic levels. Electronic health records will be a huge source of data, and even something like my Fitbit could connect with a health database. The challenge is figuring out how we organize this access and work.”

FOR ME, IT'S ABOUT...

**DECELERATING AGING**

“Health care advances have made us healthier than our grandparents. Today, we are better able to postpone death and treat things that might have killed us 40 years ago, like heart attacks or cancer.

If we can slow frailty, in a sense we can attenuate aging, which is our ultimate goal.”





DIVISION HIGHLIGHTS

IN PATIENT CARE

The division cares for inpatients and outpatients: 2,054 new and 9,433 return clinic patients, 10,474 hematology patients in the Medical Day Unit, 865 inpatient consultations, 754 admissions and 97 blood and marrow transplantations. The division ensures its expertise has broad reach with its monthly collaborative clinic in Moncton caring for 89 return patients and one new patient, and the weekly clinic in Sydney treating 733 return patients and 132 new patients.

IN RESEARCH & EDUCATION

The division is leading and participating in more than 50 peer-reviewed and industry-supported clinical trials, including playing an active role in co-operative group trials through the NCIC CTG (now known as the CCTG), MCRN and VECTOR. The division has a robust residency training program and welcomed numerous distinguished speakers this past year.

IN LEADERSHIP & QUALITY

Division members hold various leadership roles, within Dalhousie Faculty of Medicine; including Dr. David R. Anderson becoming the Dean of the Faculty

of Medicine and Dr. Darrell White is the Senior Associate Dean of Education. Dr. Sudeep Shivakumar chairs the Provincial Blood Coordinating Program and Dr. David Macdonald chairs the Hematology Site Group for Cancer Care NS. Dr. Wanda Hasegawa chairs the Hematology Quality Committee and is the medical lead responsible for maintaining the bone marrow transplant program's accreditation with Health Canada and working towards international accreditation with the Foundation for the Accreditation of Cellular Therapy.

STEPHEN COUBAN, DIVISION HEAD — David Anderson, Wanda Hasegawa, Ormille Hayne, Jonathan Hebb, Mary-Margaret Keating, Andrea Kew, David Macdonald, Sue Robinson, Ismail Sharif, Sudeep Shivakumar, Darrell White

DR. WANDA HASEGAWA  
HEMATOLOGIST

When Dr. Wanda Hasegawa joined the Division of Hematology a decade ago, bone marrow transplants were on the rise. Even though the number of transplants has evened out to around 100 annually for the past five years, things continue to change.

“With allogeneic bone marrow transplant, someone else donates their bone marrow; with autologous transplants, you donate your own stem cells to yourself,” explains Dr. Hasegawa. “We do all transplant types for Nova Scotia and PEI, but while St. John’s, NL, and Saint John, NB, send us their allogeneic cases, they now do most of their own autologous transplants. Our overall numbers remain steady because the procedures are more common and we’re also treating older people more than we used to.”

Dr. Hasegawa notes that much of the care for transplants happens after the procedure, meaning the team is now even busier with the higher ratio of allogeneic procedures.

“Autologous transplants are simpler: we follow up after three months, then send the patient back to their referring hematologist,” says Dr. Hasegawa. “Allogeneic transplants have ongoing complications like graft versus host disease. For allogeneic patients, we become their hematologists for life because we’re the only Atlantic centre with that expertise.”

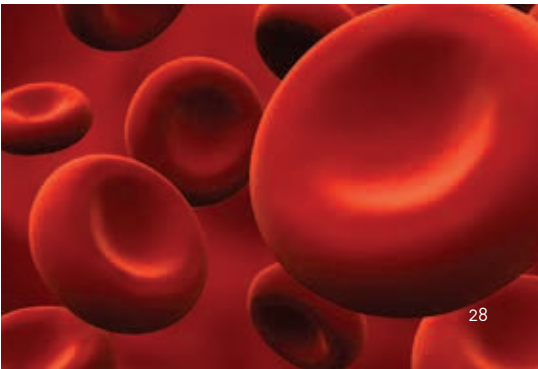
Dr. Hasegawa hopes to implement a new procedure here soon called haploidentical transplant, which essentially uses a donor who is only a “half match” to the patient. “I’m working to bring this protocol here within the next half year or so, which could really open doors for people who otherwise won’t find donors.”

While focused mainly on clinical hematology and transplants, Dr. Hasegawa is also involved with quality initiatives like maintaining the bone marrow transplant program’s Health Canada accreditation and working towards international accreditation with the Foundation for the Accreditation of Cellular Therapy (FACT).

FOR ME, IT’S ABOUT...

A STRONG MULTI-  
DISCIPLINARY TEAM

“I have a great team around me: along with hematologists we have a nurse practitioner, two transplant coordinators, a great clinical associate and wonderful nurses. I enjoy working in a multi-disciplinary environment and everything I do involves a team approach—we can’t do it alone. If I were working as a private hematologist, I wouldn’t have that.”





DIVISION HIGHLIGHTS

IN PATIENT CARE

Hospital epidemiologist, Dr. Ian Davis works with Infection Prevention and Control to prevent cross-transmission of infection in Nova Scotia Health Authority facilities and ensures effective management of nosocomial infection outbreaks (influenza, MRSA, and CDI). Dr. Lisa Barrett is spearheading efforts to form a collaborative provincial hepatitis C care network. Dr. Lynn Johnston served as an infection prevention and control consultant on the WHO Ebola Response Team. The division also implemented medication reconciliation for HIV clinic visits.

IN RESEARCH

Dr. Lisa Barrett’s Senescence Aging Infection & Immunity Lab (SAIL) focuses on translational research in HIV, hepatitis C, and cytomegalovirus. Dr. Shelly McNeil leads the Canadian Immunization Research Network’s Serious Outcomes Surveillance (SOS) Network and conducts new vaccine clinical trials. Dr. Nikhil Thomas, joint appointment, studies pathogenic E. coli and Vibrio species, and the microbiome associated with inflammatory bowel disease and Crohn’s. Dr. Jason LeBlanc, cross appointed, researches clinical diagnostics, emerging pathogens, public health, biomedical engineering, and molecular pathogenesis.

IN EDUCATION

The Infectious Diseases Resident Training Program remains active and is closely linked with the Medical Microbiology Training Program. Dr. Ian Davis is the new program director. There is one resident in each of Infectious Diseases (ID), Medical Microbiology (MM), and combined ID/MM training programs in 2015-16, as well as one fellow in Medical Microbiology.

**SHELLY McNEIL, DIVISION HEAD** — Lisa Barrett, Ian Davis, Lynn Johnston (Division Head until June 30, 2015), Walter Schlech



DR. LISA BARRETT  
INFECTIOUS DISEASE SPECIALIST

Your immune system can be much older or younger than your actual age. Dr. Lisa Barrett, infectious disease specialist, wants to see the immune system be at the “optimum age” to best ward off infectious diseases.

For Dr. Barrett, better understanding the immune system is critical to not only treat, but to eradicate, infectious diseases such as hepatitis C. While the eradication of disease may seem a lofty goal, Dr. Barrett isn’t afraid to aim high. Her optimism, determination and a great team of like-minded colleagues enabled her to launch and study a hepatitis C treatment program that involves the administration of new antivirals in a correctional facility. Through this study, Dr. Barrett is also exploring how the immune system ages over time and whether the aging process can be reversed.

“When you have an infectious disease such as hepatitis C, your immune system ages and can appear older than your actual age. The antivirals used in this study may reverse immune aging,” says Dr. Barrett. “In the lab, we’re examining individual cells from hepatitis C patients to see what might lead to this anti-aging effect. We may then have the key to rejuvenating the aging immune system and protecting people from infections as they get older.”

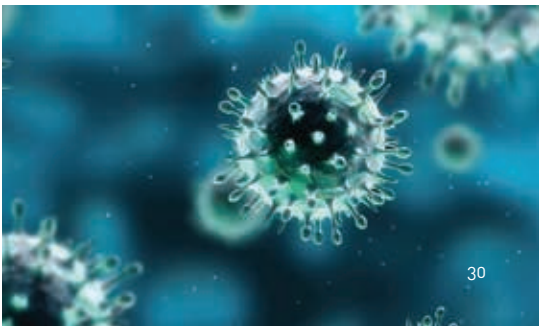
Dr. Barrett is essentially turning what she learns about hepatitis C cures into potential strategies for rejuvenating “worn out” immune systems. She is also, however, learning more about effective health service delivery – another area of interest for her.

“We want to create opportunities to learn how we can best deliver health services, particularly treatments for infectious diseases, to get us most effectively and efficiently to the point of cure,” she says.

FOR ME, IT’S ABOUT...

RESEARCHING IN  
‘REAL’ TIME

“There’s no point in looking at a test tube and saying ‘this is fascinating’ if we can’t then ensure the discovery gets to the patients I see in the clinic. Thankfully, by thinking a bit differently about how we do research and how we deliver patient care, full integration of the two is possible.”





DIVISION HIGHLIGHTS

IN PATIENT CARE

The division coordinates care throughout mainland Nova Scotia (except the Valley Regional catchment area) for patients with solid tumours and are focused on improving efficiencies and allowing more patients to receive excellent care closer to home. Work is underway to form a single program to deliver and coordinate cancer care throughout the province.

IN RESEARCH

Dr. Daniel Rayson leads the Atlantic Clinical Cancer Research Unit (ACCRU), which coordinates cancer clinical trials across oncology disciplines. The Canadian Cancer Clinical Trial Network (CCCTN) named ACCRU a Network Regional Cancer Center (NRCC), the lead Atlantic site for this national effort. Dr. Tallal Younis is developing a pharmacoeconomic research platform regarding cancer therapies. Dr. Lori Wood is instrumental in the International Metastatic Renal Cell Database Consortium (IMDC).

IN EDUCATION

Dr. Alwin Jeyakumar, fellowship director, has taken a leadership role nationally in the Royal College’s competence-based education program. This division will be one of the first in Canada to adopt this program. Dr. Stephanie Snow, undergraduate medical education division program coordinator, is part of the Canadian Oncology Education Group, which aims to establish national learning objectives for oncology education.

**DANIEL RAYSON, DIVISION HEAD** — Bruce Colwell, Mark Dorreen, Arik Drucker, Alwin Jeyakumar, Cory Jubenville, Nathan Lamond, Robyn Macfarlane, Mary MacNeil, Wojciech Morzycki, Ravi Ramjeesingh, Stephanie Snow, Lori Wood, Tallal Younis

# DR. NATHAN LAMOND MEDICAL ONCOLOGIST

Dr. Nathan Lamond may be based at the VG site in Halifax, but this Cape Breton-born, Dalhousie-trained medical oncologist is always looking further afield to find ways to improve care for local cancer patients, whether through outreach clinics and Telehealth, or research.

While Dr. Lamond’s areas of expertise include head and neck cancer and colorectal cancer, he also travels monthly to Yarmouth to conduct general oncology clinics for local cancer patients.

“Chemotherapy can be given in regional hospitals throughout Nova Scotia, but in most cases there are no medical oncologists there to supervise the treatment,” he says. “The ability to receive treatment closer to home is less beneficial if patients still have to travel to Halifax to see their medical oncologist every few weeks. For this reason, the Division of Medical Oncology provides outreach clinics throughout the province to limit the impact of travel on patients.”

Patient care is Dr. Lamond’s primary focus, however, he is also involved in research. He is principal

investigator of a clinical trial investigating the role of novel immunotherapy in the treatment of metastatic head and neck cancer and is also researching human papilloma virus (HPV)-related head and neck cancer.

“Smoking-related and HPV-related cancers have many different characteristics, and we’re just learning when or how they should be treated differently,” says Dr. Lamond, who is working to accurately describe the local HPV-positive head and neck cancer population and how it may differ from the smoking-related cancer population.

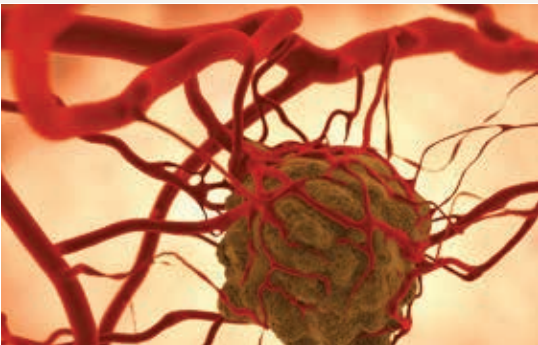
“HPV-positive cancers often have better responses to treatment and lower recurrence rates, yet we are currently treating them with aggressive therapies that have long-term side effects. Ultimately we want to be able to de-intensify treatment for some HPV-related head and neck cancer patients, lessening treatment side effects without worsening outcomes.”

In the meantime, Dr. Lamond will keep reaching out for answers and better care for his patients.

FOR ME, IT’S ABOUT...

## THE RIGHT CARE IN THE RIGHT PLACE

“Telehealth, or videoconferencing, allows more time with patients and less travel—for physicians and patients, alike. Frequent visits to Halifax pose barriers to care including finances, time, support, or pain or nausea from travel. A treatment goal for our patients with incurable cancer, for example, is to provide them with quality time they would not have had otherwise. Telehealth helps reduce their time spent travelling for appointments and increases the quality time they have to live.”





DIVISION HIGHLIGHTS

IN PATIENT CARE

The new 48-patient dialysis unit at the Halifax Infirmary (HI) provides better, safer access to dialysis. Planning is underway for a new dialysis unit in Kentville and expansion of the Dartmouth General unit. Dr. Steven Soroka resumed his role as Director of the QEII Renal Program and was appointed Senior Director for Provincial Renal Services. Quality leader Dr. Tabassum Ata Quraishi runs the Renal Program’s highly developed Quality Program.

IN RESEARCH

Dr. Karthik Tennankore secured \$100,000 in grant funding to examine frailty and its effect on waitlisted kidney transplant candidates; he also published a high-impact paper on warm ischemic time and transplantation in Kidney International. Dr. Bryce Kiberd published a paper in Clinical Transplantation on acute kidney injury in patients post transplant.

IN EDUCATION

The program received accreditation from the American Society of Transplantation and will be accredited as part of a new Royal College program for training of transplant fellows. Dr. Amanda Miller was accepted into the Harvard School of Public Health for a master’s degree sponsored by the division, after which she will return to Halifax for a Renal Transplant Fellowship.



## DR. MICHAEL WEST NEPHROLOGIST

Dr. Michael West is a foremost expert in Fabry disease and principal investigator for the Canadian Fabry Disease Initiative (CFDI), a 10-year-old multicentre study based in Halifax.

Fabry disease is an inborn error of metabolism caused by an enzyme deficiency that can lead to severe pain, kidney failure, heart failure, stroke and early death. While considered rare in most places (1 in 40,000 or more), it's relatively common in Nova Scotia, where 1 in 8,000 live with the disease.

The CFDI has made great strides. "Before enzyme replacement, Fabry patients did not receive any therapy," says Dr. West. "I started a clinic here in 2004 and now follow about 80 adults. Our CFDI patients have benefited from being in trials—they had earlier access to drug therapy and we've been able to achieve provincial coverage for these drugs."

The CFDI team is also undertaking biomarker studies and continues enrolling patients for trials. Dr. West notes there are still a lot of unanswered

questions. "We'll continue to study the patient population to maximize the benefits they are getting from therapy."

In addition, Dr. West and Dr. Stephen Couban (Hematology) are participating in an exciting phase one pilot involving gene transfer therapy.

"We put a normal copy of the gene affected in Fabry disease into a harmless viral vector, then give that back to the patient via a transplant of their own stem cells," says Dr. West. "Viral vectors are an efficient way to deliver a normal gene so the patient can start making sufficient amounts of enzymes themselves."

The first patient will soon start the trial in Calgary; Dr. West hopes one will begin in Halifax in 2017. Five patients will participate in total.

FOR ME, IT'S ABOUT...

## TURNING RESEARCH INTO TREATMENTS

"If gene replacement therapy works, it will be a first in the world. Patients on enzyme replacement feel better, but it's not a cure. Gene replacement therapy has the potential to be a cure."

In addition to his clinical and research roles, Dr. West is also Assistant Dean of Research for clinical trials at the Dalhousie Medical School.





## DIVISION HIGHLIGHTS

### IN PATIENT CARE

The Neuroscience Alliance (Brain. Spine. Spirit) commissioned the IMCU expansion and the renewal of the Epilepsy Monitoring Unit (EMU). An enhanced clinical assessment for multiple sclerosis (MS) was introduced, and MS nurses offer monthly education and support teleconferences for patients and family members. Dr. Virender Bhan was nominated President-Elect of the Canadian Multiple Sclerosis Clinics Network. Dr. Allan Purdy received a Canadian Medical Association Honorary Membership Award and was named President-Elect of the American Headache Society.

### IN RESEARCH

Dr. Stephen Phillips' team won a silver Nova Scotia Health Authority Provincial Quality Award for its Acute Stroke Protocol: "Time is brain and the clock is ticking..." Dr. Sultan Darvesh's company, Treventis Group, was named first in the health science's sector at the Innovacorp Technology Start-Up Competition. Dr. Darvesh also received the Department of Medicine Research Lifetime Achievement Award. The neuromuscular group conducts ALS research, participating in clinical trials of experimental drugs for ALS.

### IN EDUCATION

Dr. Ian Grant is Unit Head for the Neuroscience and Special Senses Unit in undergraduate medical education, and is responsible for the Clinical Skills Program in Bedside Neurology Teaching. The postgraduate program, led by Dr. Gord Gubitz, conducts numerous education sessions for the residents and provides superb clinical training. Trudy L. Campbell, nurse practitioner, with Drs. Virender Bhan and Roger McKelvey, developed the first of four educational brochures for those newly diagnosed with MS.

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**VIRENDER BHAN, DIVISION HEAD** — Timothy Benstead, Sultan Darvesh, Ian Grant, Laine Green, Gordon Gubitz, Cory Jubenville, David King, Richard Leckey, Alexander MacDougall, Charles Maxner, Roger McKelvey, Stephen Phillips, Bernhard Pohlmann-Eden, Allan Purdy, Heather Rigby, Mark Sadler, Kerrie Schoffer, Stephanie Woodroffe

# ACUTE STROKE PROGRAM

## NEUROLOGY

The Acute Stroke Program is an award-winning multidisciplinary network of professionals who provide emergent, rehabilitative, preventative and outpatient care. The program also conducts research and educates learners from several disciplines. Neurology faculty Drs. Stephen Phillips, Gord Gubitz and Laine Green work closely with Dr. Anita Mountain and colleagues at the Nova Scotia Rehabilitation Centre, the Division of Neuroradiology, Emergency Medical Services and the Emergency Department. Ms. Wendy Simpkin coordinates the program, including collecting data for research and quality monitoring.

“There’s a lot of collaboration involved, so we’re big on teamwork,” says Dr. Phillips. “We’re also the largest of seven programs within the Nova Scotia Stroke System, which is overseen by Cardiovascular Health Nova Scotia, and provide support and guidance for stroke care across the province.”

Incorporating national, evidence-based best practice recommendations that Drs. Phillips and Gubitz helped establish, the stroke team has worked diligently to set up care pathways to expedite assessment and treatment of suspected strokes, because timely

treatment is critical. The clot-busting drug tPA, for example, is highly effective, but only if administered within 4.5 hours of stroke onset. Endovascular thrombectomy, a mechanical blood clot extraction, is similarly time sensitive, and a more complicated treatment. The team recently earned a quality award for its ongoing efforts to treat more stroke patients sooner with its Acute Stroke Protocol.

Following acute assessment, diagnosis, and decisions on recanalization treatment, a team of neurologists, rehabilitation specialists, nurses, nurse practitioners, dietitians, speech-language pathologists, physiotherapists, occupational therapists and social workers provide extensive rehabilitation and after care, investigate why the stroke occurred, and work to reduce the risk of recurrence and complications.

“It’s not just about saving lives,” says Dr. Phillips. “Stroke causes brain damage, and our brains make us human, so it’s mainly about saving and restoring as much of the person as we can.”

Along with 24/7 emergency coverage, the stroke team provides a rapid-access Neurovascular Clinic for patients referred by family and emergency physicians.

FOR ME, IT’S ABOUT...

## AN EXCELLENT TEAM, WORKING TOGETHER TO HAVE THE GREATEST IMPACT

“We get together regularly to figure out how we can do things better. Based on a need our team identified, we recently introduced a screening tool for depression, which is common after stroke but difficult to diagnose. There are some fancy, high-tech treatments for stroke, but they touch a relatively small part of the problem. The biggest impact comes from organized, interprofessional stroke unit care. The non-sexy, low-tech stuff reaches the most people.” Dr. Stephen Phillips.



Photo: Darren Hubley





DIVISION HIGHLIGHTS

IN PATIENT CARE

The Palliative Care Service underwent a major reorganization to address the need for care close to home and to improve continuity of care from clinic team to home team. Urgent requests are accommodated more efficiently with community clinics operated by six nurse/physician combinations. Wait times for non-urgent new appointments have been reduced and after-hours community calls for new, unanticipated events have decreased significantly. Clinics are held at the Nova Scotia Cancer Centre, Cobequid

Community Health Centre, Dartmouth General Hospital and Spryfield Wellness Centre. Palliative service is also offered bi-weekly to patients in West Hants. Establishing Nova Scotia’s first residential hospice, in partnership with Hospice Halifax, the Nova Scotia Health Authority, the Department of Health and Wellness and Metro Rotary clubs, is a cornerstone of the strategy to build capacity for quality end-of-life care. The division also initiated a daily electronic handover summary tool that summarizes key aspects of each inpatient’s care.

IN RESEARCH & EDUCATION

Dr. Robert Horton supervised the Research in Medicine (RIM) project HOspice MEdical MObile VIdeo Encounter (Home Movie), a feasibility study of home-based palliative care telemedicine in rural Nova Scotia. In 2015-16, 41 learners rotated through the Palliative Medicine service. Dr. Erin Gorman Corsten, Program Director for the Palliative Medicine Residency Program, is working to develop an online palliative care resource for learners.

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DAVID DUPERE, DIVISION HEAD — Jeffrey Dempster, Erin Gorman Corsten, Robert Horton, Danielle Kain, Anne Marie Krueger-Naug, Paul McIntyre



**DR. ANNE MARIE KRUEGER-NAUG**  
PALLIATIVE CARE PHYSICIAN  
AND GENERAL INTERNIST

As the population lives longer, the number of people who are frail and can no longer leave their home for medical appointments grows. These patients may be at the end stages of various illnesses but not die for weeks or months, yet they still need comprehensive care. That’s difficult for family doctors and specialists because the patients can’t come in to the hospital or office. Palliative Care Community Service often provides end-of life support at home, but since these patients are relatively stable and not ‘actively’ dying—their death course trajectory is unpredictable—it’s challenging for Palliative Medicine to remain involved with this patient population over months to years due to limited clinical resources.

Dr. Anne Marie Krueger-Naug recognizes the importance of offering comprehensive care to frail patients in their homes. She works with Palliative Medicine, GIM’s Heart Failure Clinic, and provides support to the INSPIRED program developed by Dr. Graeme Rocker for advanced COPD. She also supports the Palliative and Therapeutic

Harmonization (PATH) clinic developed by Dr. Paige Moorhouse and Dr. Laurie Mallery.

“Due to the changing demographics and increasing frailty of our patient population, we changed our GIM Heart Failure Clinic practice from seeing patients primarily in clinic, to seeing them primarily at home for management of their heart failure,” says Dr. Krueger-Naug. (The GIM “at-home” Heart Failure Clinic is currently on hiatus as we await the return of our nurse practitioner from maternity leave.)

“Now what we need is a general ‘frailty-at-home clinic’ that supports and cares for patients in their homes—much like the Palliative Care Community Service—but over a longer life trajectory of many months to possibly years. This clinic would follow and support patients with advanced disease including dementia, heart failure, COPD, cirrhosis and kidney disease.”

FOR ME, IT’S ABOUT...

**WORKING TOGETHER AS A  
DEPARTMENT TO PROVIDE  
COMPREHENSIVE CARE**

“Development and sustainability of a general frailty-at-home-clinic is a challenge for the Department of Medicine. If we bend and blend our divisional silos, as a Department we can share our expertise and limited resources to meet the needs and provide comprehensive care in the home for this important patient population.”





DIVISION HIGHLIGHTS

IN PATIENT CARE

The division runs several clinics and a 66-bed inpatient rehabilitation hospital that comprises 25 per cent of Department of Medicine’s inpatient beds. A revitalization project saw the construction of a new therapeutic pool and two new activity of daily living (ADL) suites to help patients with physical impairments learn to interact with and control their environments more independently.

IN RESEARCH

Dr. Lee Kirby, certified in Physical Medicine and Rehabilitation (PM&R) since 1975, continues his world-renowned research into the safety and performance of wheelchairs. The division collects data for the Canadian Institute for Health Information (CIHI) rehabilitation database, which Drs. Christine Short, Sonja McVeigh and Ammar Al Khudairy (PGY1) use to research the effects of pressure ulcers on patient lengths of stay. Dr. Zainab Al Lawati (PGY2) won the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) Student Scientific Paper Competition for his paper *Manual Wheelchair Over a Threshold: A Descriptive Study*.

IN EDUCATION

The division provides undergraduate and graduate teaching at Dalhousie Medical School and in health sciences. It had a favourable internal review of the residency training program in preparation for the 2018 Royal College review. The division hosted 14 undergraduate students for clinical electives and 11 residents from internal medicine, psychiatry, neurology and neurosurgery. Dr. Saric serves on the Royal College Subspecialty PM&R Committee; Dr. Monique Taillon joined the Royal College Exam Committee for PM&R.

**CHRISTINE SHORT, DIVISION HEAD** — Ed Hanada, Brenda Joyce, Lee Kirby, Monique MacFarlane Conrad, George Majaess, Sonja McVeigh, Julie Millard, Anita Mountain, Amra Saric

DR. CHRISTINE SHORT  
PHYSIATRIST

When Dr. Christine Short says her “rehab brain” is switching on, she’s really talking about finding the best way to solve problems for her patients.

Like the Northwood nursing home patient who told her he was spending \$150 to take an ambulance to the Rehabilitation Centre for treatment. After some thought, Dr. Short simply asked, “What if we came to you instead?”—and the travelling nursing home clinic was born.

In the four years since, Dr. Short and Ms. Roberta Maclean, a rehabilitation clinic nurse, have provided afternoon clinics at participating Halifax-area nursing homes, alternating months so each home gets three visits per year.

“The nursing home team will have patients all ready for our visit, facilitating whatever treatment we have planned; they are also there to give us valuable information on active rehabilitation issues,” says Dr. Short. “We’re not bringing someone into the Rehab in a wheelchair, getting them in a lift, onto an examination table, delivering treatment, then getting them back in the lift, back into their chair, back

out to their transportation vehicle and then back to their nursing home, making these clinics very time efficient for us and the patients.”

Another problem that desperately needed solving was the 40-year-old Rehabilitation Centre pool.

“Evidence shows hydrotherapy is excellent for rehabilitation—a pool is a really great body support device, making early mobilization safe, and its heat can decrease pain and improve tissue mobility,” says Dr. Short. “When our pool had to close in 2011 because it was unsafe, there was an outcry from team members and from the community using it after hours.”

The rehab team brains kicked into gear and, with the amazing support from the QEII Foundation, the “Revitalizing Rehab” campaign quickly raised enough money to build The Grace Hansen Therapeutic Pool. This state-of-the-art facility is now used for inpatient and outpatient sessions during the day, and for community members in the evening through a community partnership run by the YMCA.

FOR ME, IT’S ABOUT...

ACCESSIBLE CARE

“Whether it’s Telehealth, nursing home visits, or community access to our pool or gym, we have to look at what we have and what we do, and use things more efficiently to benefit people. Thinking outside the usual clinical box—it’s a lot easier for some patients to be seen in their own bed for a treatment visit, rather than the inordinate time and cost that can be involved to make it all the way into the hospital.”

Photo: Darren Hubley







INSPIRED Team from left to right: Dr. Graeme Rocker, Wendy Conrad, Jane Purcell, Darcy Gillis, Jillian Demmons, John Cushing, Andrea Dale, Holly Kennedy. Missing: Dr. Cathy Simpson and Dr. Jill Lawless

DIVISION HIGHLIGHTS

IN PATIENT CARE

Progress was made in addressing wait times in the sleep disorders laboratory. The Lung Transplantation Clinic, led by Dr. Meredith Chiasson with Dr. Nancy Morrison, Erin McAndrew (RRT) and Fran Gosse (RN), assesses and provides care pre- and post-transplant to patients with advanced lung disease. Dr. Chiasson is Director of a Satellite Lung Transplant Program that collaborates with Toronto, Alberta and Quebec. The division is also implementing a strategic plan for recruitment, retention, education and quality of care.

IN RESEARCH

The division participates in a number of grant-funded research projects focused on obstructive lung diseases (COPD, asthma) as well as industry-sponsored clinical trials in COPD, IPF and CF. The research team includes division members, an affiliated scientist (Dr. Gail Dechman) and research coordinators/assistants (Scott Fulton, Andrea Dale, Denise Wigerius, Kathy Spurr), with active collaboration with other Dalhousie faculty.

IN EDUCATION

Drs. Paul Hernandez, Gail Dechman, Alex Nelson and Colm McParland helped organize the successful Annual Canadian Respiratory Conference held in Halifax. Dr. Debra Morrison, recipient of a Department of Medicine Excellence in Education Award, was Unit Head for the Metabolism II Course and Dr. Nancy Morrison was Director of Undergraduate Education for the Department. Dr. Colm McParland, Program Director for our Respiriology Residency Training Program, led us through a Royal College accreditation visit and review process.

PAUL HERNANDEZ, DIVISION HEAD — Dennis Bowie, Meredith Chiasson, Mohammad Fahim, Colm McParland, Debra Morrison, Nancy Morrison, Gosia Phillips, Graeme Rocker



# INSPIRED PROGRAM

## RESPIROLOGY

When research and experience indicated that standard approaches to advanced chronic obstructive pulmonary disease (COPD) weren't meeting patients' needs, Dr. Graeme Rocker and colleagues created **INSPIRED: Implementing a Novel and Supportive Program of Individualized care for patients and families living with REspiratory Disease.**

Since 2010, the INSPIRED team provides patients and families with education and support, helps them navigate health-care systems, facilitates communication among care professionals, and builds personalized COPD action plans. Patients with advanced COPD enroll in the 18-week program and typically receive one to two home visits from the COPD coordinator (a respiratory therapy certified educator), one to two visits from the spiritual care and/or advanced care planning facilitator, and follow-up care.

"The entire program is essentially based on the concept of providing what a patient needs, recognizing that not everybody is the same," says Dr. Rocker, who is the program's Medical Director.

INSPIRED has grown into a part-time, ten-person team and served over 500 participants in the Halifax area. It has also expanded into a national collaborative with over 1,000 participants in 19 centres, and has generated interest internationally.

"There's been a lot of enthusiasm from the US Institute of Health Care Improvement, who have talked about a possible cross-border collaboration," says Dr. Rocker. "I've also met with interested people from Melbourne, Australia, and a team in Oregon."

Consistently earning positive feedback from patients, INSPIRED greatly benefits participants and the health-care system by significantly reducing reliance on emergency and formal facility care. Only 26 patients need to complete the program to avert roughly \$100,000 in related health-care costs. The program approach may also translate to other health-care issues.

"Next, we're looking at extending the program more widely throughout Nova Scotia, and as a new initiative addressing caregiver needs," says Dr. Rocker.

FOR ME, IT'S ABOUT...

## PATIENT-FOCUSED CARE

"INSPIRED offers a different way of doing things—it puts patients' needs at the forefront and that's not traditionally what we've done in medicine. We have been physician-focused or facility-focused for far too long. Most people don't spend their entire lives in a facility or with physicians—they live in a community, and that's where the focus of support should be."





DIVISION HIGHLIGHTS

IN PATIENT CARE

Ambulatory care visits continue to increase; referrals are preferentially biased to those patients with inflammatory arthritis and autoimmune rheumatic diseases. The division runs over 20 half-day clinics a week and a multidisciplinary clinic on two mornings. Our part-time medication resource specialist assists patients in obtaining pharmaceutical coverage for Rituximab.

IN RESEARCH

Dr. John Hanly, director of our Arthritis Research Centre and of Research for the Department of Medicine at Dalhousie and NSHA, is the principal investigator for numerous projects researching lupus, rheumatoid arthritis and inflammation in chronic disease. A new study is underway that will compare care in a collaborative clinic versus a standard rheumatology clinic. Drs. Evelyn Sutton, Volodko Bakowsky and Trudy Taylor participate in national research groups in scleroderma, vasculitis and spondyloarthropathies. Dr. Elana Murphy now has protected research time.

IN EDUCATION

Dr. Evelyn Sutton was named Dalhousie’s associate dean of Undergraduate Medical Education and Dr. Trudy Taylor was appointed chair of the Royal College Specialty Committee in Rheumatology. All division members contribute to medical education; Dr. Volodko Bakowsky is unit head for the MSK/Dermatology block, while he and Dr. Jill Wong are case-based tutors. Several members contributed to sessions at the American and Canadian Colleges of Rheumatology, and Society of Atlantic Rheumatologists.

EVELYN SUTTON, DIVISION HEAD — Volodko Bakowsky, John Hanly, Juris Lazovskis, Elana Murphy, Souad Shatshat, Emily Shaw, Trudy Taylor, Jill Wong

**DR. VOLODKO BAKOWSKY**  
**RHEUMATOLOGIST**

Dr. Volodko Bakowsky leads a team of rheumatologists who deliver quality care, top-notch education and leading clinical research into rheumatic diseases. Dr. Bakowsky took on the role of interim division head in 2016 after Dr. Evelyn Sutton stepped down as division head to devote more time to pursue her interests in medical education in her role as Associate Dean, Undergraduate Medical Education, Dalhousie University.

“Now is a time of reflection and planning for the division, a time to consider and decide upon our future direction so that we can best deliver on our mandate to strive for excellence in patient care, education and research,” says Dr. Bakowsky. “To be successful as a group, each division member’s contributions must collectively fit together to maximize our effectiveness and productivity.”

Demand for health-care services in rheumatology is increasing and resources are, of course, limited.

Dr. Bakowsky and his colleagues are focused on determining what they do well and where their gaps are. An upcoming division retreat will help guide planning and priority setting for the division as a whole over the next few years.

With respect to its academic mandate, the division has committed to moving forward with establishing a research chair in rheumatology. In collaboration with the QEII Foundation, this effort is being led by Dr. John Hanly, a senior member of the division and the Department of Medicine’s research director.

“The best clinical care takes place in centres where research and other academic activities are also outstanding. Attracting an outstanding researcher through a research chair position will strengthen our ability to deliver on our full mandate,” says Dr. Bakowsky.

FOR ME, IT’S ABOUT...

**A COHESIVE TEAM, DEDICATED  
TO THE SAME GOAL**

“We are a small group of compassionate, highly skilled physicians who care a lot about improving the care of people living with rheumatic diseases. We strive to find how we can best work together to maximally benefit our patients.”





DIVISION HIGHLIGHTS

SAINT JOHN CAMPUS

The Saint John Department of Medicine had a great year for recruiting new talent. Joining the team:

- Dr. Amy Groom – Medicine – Saint John (academic), Medical Oncology (clinical)
- Dr. James Michael – Medicine – Saint John (academic), Medical Oncology (clinical)
- Dr. Ross Morton – long-term locum (retired nephrologist and professor of Medicine with a particular interest in resident teaching)

Four additional members were recruited and are awaiting Department of Medicine appointment.

“New physicians bring new approaches and new ways of thinking about patient care,” says Department Head Dr. Paul Sohi. “This is critical to providing the very best care to patients who are increasingly medically complex, within an increasingly complex health-care system. More doctors also help us care for more patients, and teach more students and residents.”

The Department is also recruiting a general cardiologist and an electrophysiologist.

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**PAUL SOHI, SAINT JOHN DEPARTMENT HEAD** — Anil Adisesh (J.D. Irving Limited Research Chair in Occupational Medicine), Oriano Andreani, Amelia Barry, Colin Barry, Kathy Baxter, Ricardo Bessoudo, David Bewick, Graham Bishop, Dylan Blacquiere, Margot Burnell, Tania Chandler, Alan Cockeram, Terrance Comeau, Gary Costain, Sean Dolan, John Dornan, Geoffrey Douglas, Peter Fong, Patricia Forgeron, Cory Gillis, Nessa Gogan, Eric Grant, Samantha Gray, Robert Hayes, Cynthia Hobbs, Jaroslav Hubacek, Stephen Hull, Pamela Jarrett, Douglas Keeling, Renju Kuriakose, Sohrab Lutchmedial, Elizabeth MacDonald, Martin MacKinnon, Gregg MacLean, Donna MacNeil, David Marr, Lisa McKnight, Vernon Paddock, Christine Pippy, Mahesh Raju, Philip Reid, Anthony Reiman, Elizabeth Rhynold, Ewa Sadowska, Joanne Salmon, Gregory Searles, Alexa Smith, Robert Stevenson, Robert Teskey, Satish Toal, Mark Tutschka, Duncan Webster, Chadwick Williams, Elizabeth Zed



# DIVISION OF GENERAL INTERNAL MEDICINE

## SAINT JOHN CAMPUS

The Division of General Internal Medicine (GIM) experienced a population explosion this year, more than doubling its size with two internists dedicated full-time to GIM. Dr. Jeffrey Marr and Dr. Joffre Munro (awaiting Department of Medicine appointment) joined internists Dr. Stephen Hull, who shares his time with Endocrinology and is the GIM Division Head, and Dr. Mark Tutschka, who also works in the ICU.

The four internists now offer a GIM consult service during regular business hours. The departments of emergency, family medicine and surgery are the main beneficiaries.

“We saw a great need for support on the surgical floors, for example,” says Dr. Hull. “It also relieves some pressure on the internal medicine subspecialists who would do 24-hour call duty while doing their normal, daily work. With the consult service during the day, now on-call duty only really starts after hours.”

Along with seeing general undifferentiated medical cases, Drs. Marr and Munro have started to expand

into more outpatient arenas, such as the diabetes pregnancy clinic and peri-operative management.

Dr. Hull says there’s a big ethos of teaching and learning in the division. “Our new staff enhance our ability to train and supervise good learning experiences for residents, clerks and others passing through.” Quality is also an ongoing focus; Dr. Hull hopes to obtain funding in the coming year for research under the quality program.

“When you take on new people, you tend to get quite ambitious,” says Dr. Hull. “We have to be careful to not try to do too much, or we’ll end up oversubscribed. We also have to manage the workload of our very busy internal medicine unit, with ever-increasing admissions, ever-increasing numbers of elderly people, ever-increasing technologies and drugs—all multiplying our workload beyond our resources.

“Welcoming Dr. Marr and Dr. Munro on board helps and is a significant improvement for our division—we’re very excited to have them.”

## MOBILE ULTRASOUND IMPROVES PATIENT CARE AND TEACHING

Another exciting addition to GIM is a point-of-care ultrasound—a mobile ultrasound that can travel to any bedside in the hospital. When critical care specialist and internist Dr. Mark Tutschka joined the division in 2014, he requested this versatile equipment.

“It’s an area of interest of mine,” says Dr. Tutschka, who had two years of point-of-care ultrasound and supervised clinical practice as part of his ICU training. “We use it for diagnostics and care management on the inpatient service, and for patients who are in shock or having difficulty breathing in an acute care application.

“It’s an extension of our physical exam—we’re able to interpret the images we take with the ultrasound at the bedside, allowing us to make clinical decisions immediately in cases where a dedicated radiology exam is not required.”

The point-of-care ultrasound is an excellent teaching tool, as residents learn how to use the machine and properly interpret the images they’re acquiring. It also allows learners to take an actual look inside a person at the bedside during an acute illness, providing an invaluable demonstration of human physiology in action. Dr. Tutschka notes there could be research potential for the ultrasound as well, particularly in the emergency department.



# Our People

Congratulations to the many department members whose service and excellence was hounoured in 2015-16



## LONG SERVICE ACKNOWLEDGEMENTS

### 25 Year Service

- Dr. Douglas Keeling, Clinical Dermatology & Cutaneous Science
- Dr. Bianca Lang, Rheumatology
- Dr. Gregg MacLean, Neurology
- Dr. Laurie Mallery, Geriatric Medicine
- Dr. J. David Manning, General Internal Medicine
- Dr. Debra Morrison, Respiriology
- Dr. Kenneth Rockwood, Geriatric Medicine
- Dr. Robert Teskey, Cardiology
- Dr. Lawrence Title, Cardiology

### 30 Year Service

- Dr. Timothy Benstead, Neurology
- Dr. William Sheridan, Cardiology

### 35 Year Service

- Dr. Martin Gardner, Cardiology

### 40 Year Service

- Dr. R. Lee Kirby, Physical Medicine & Rehabilitation

## EXCELLENCE IN EDUCATION

### Faculty Excellence in Medical Education

- Dr. Stephanie Snow, Medical Oncology
- Dr. Babar Haroon, General Internal Medicine and Department of Critical Care

### Outstanding Faculty – Residents’ Choice Award

- Dr. Stephen Couban, Hematology

### Brian M. Chandler Lifetime Achievement Award in Medical Education

- Dr. Geoffrey Turnbull,  
Digestive Care & Endoscopy

### Department of Medicine Achievement Award

- Dr. Evelyn Sutton, Rheumatology &  
Faculty of Medicine Associate Dean of  
Undergraduate Medical Education

### Outstanding Resident Awards

- Dr. Leah Nemiroff, PGY3
- Dr. Andrew Caddell, PGY2
- Dr. Mark Robbins, PGY1

### Outstanding Academic Performance Award

- Dr. Kevin Klassen, PGY3
- Dr. Alexandra Legge, PGY2
- Dr. Mark Robbins, PGY1

### Excellence in Undergraduate Teaching Award

- Dr. Stephen Walsh, PGY2

### Excellence in Summer Grand Rounds Award

- Dr. Alison Dixon, PGY2



## EXCELLENCE IN RESEARCH

### 2015-2016 Excellence in Resident Research Award

Dr. Alexandra Legge, PGY2

### DoM Research Lifetime Achievement Award

Dr. Sultan Darvesh, Neurology

## DEPARTMENT OF MEDICINE 2016 RESEARCH DAY AWARDS

### Best Undergraduate Student Presentation

Mr. Thomas Brothers

### Best Core Resident Presentation

Dr. Mathew Miles, PGY2

### Best Subspecialty Resident Presentation

Dr. A. J. Howes, PGY5 Cardiology

Dr. Howes went on to receive the Dalhousie Faculty of Medicine Resident Research Award for Best Work in Clinical Research, sponsored by the Dalhousie Medical Alumni Association.

### Best Graduate Student/Research Fellow Presentation

Dr. Michaela Nichols-Evans, Graduate Student, Infectious Diseases

### Best Overall Poster Presentation

Dr. Kaitlyn Keller

## PROMOTIONS

### ASSOCIATE PROFESSORS

#### As of July 1, 2015

Dr. Arik Drucker, Medical Oncology  
 Dr. Masis Perk, General Internal Medicine  
 Dr. Sonja McVeigh, Physical Medicine & Rehabilitation  
 Dr. Ed Hanada, Physical Medicine & Rehabilitation

#### As of July 1, 2016

Dr. Chris Gray, Cardiology  
 Dr. Marie Laryea, Digestive Care & Endoscopy

### PROFESSORS

#### As of July 1, 2015

Dr. Janet Gordon, Geriatric Medicine  
 Dr. Peter Green, Clinical Dermatology & Cutaneous Science  
 Dr. Michael Love, Cardiology  
 Dr. Ratika Parkash, Cardiology

#### As of July 1, 2016

Dr. Kevork Peltekian, Digestive Care & Endoscopy  
 Dr. Tallal Younis, Medical Oncology

## RETIREMENT

### ACKNOWLEDGEMENT

Dr. Janet Gordon, Geriatric Medicine



