



PROGRESS AND PROFILES 2014-2015

Departmental Mission

We are a diverse group of highly trained professionals dedicated to improving health through education, research and providing exemplary clinical care to our community.

Integrated Academic Vision

To be leaders in academic medicine providing innovative, collaborative and appropriate care that is sustainable.

2014/15 Capital Health & Dalhousie University Department of Medicine

- Division of Cardiology
- Division of Clinical Dermatology & Cutaneous Science
- Division of Digestive Care & Endoscopy
- Division of Endocrinology & Metabolism
- Division of General Internal Medicine
- Division of Geriatric Medicine
- Division of Hematology
- Division of Infectious Diseases
- Division of Medical Oncology
- Division of Nephrology
- Division of Neurology
- Division of Palliative Medicine
- Division of Physical Medicine & Rehabilitation
- Division of Respiriology
- Division of Rheumatology
- Saint John New Brunswick Campus



*Drs. Alexandra Legge and Abdullah Al Saleh reviewing the technique for performing a bone marrow aspiration with hematologist, Dr. Darrell White. Dr. White was recognized with the **Department of Medicine Achievement Award** for 2015. The award recognizes sustained, exceptional commitment to the mission of the department. Dr. White has played a very prominent role as a clinician, teacher and education administrator since he joined the Department of Medicine in 1998. He was Program Director of the Hematology Training Program from 2000 – 2007, and assumed the role of Program Director for the Department of Medicine's Core Internal Medicine Residency Training Program from 2007 – 2013, where he played a significant role in establishing our training program affiliation with Saint John, New Brunswick. Most recently Dr. White was appointed Senior Associate Dean, Dalhousie University Faculty of Medicine.*

MESSAGE FROM THE DEPARTMENT HEAD

IN THE LAST YEAR, the Department of Medicine thrived amidst change internal and external to the Department, which affected its operations in numerous positive and challenging ways. From our perspective, to thrive is to deliver on an interrelated academic mandate of providing innovative, collaborative and appropriate care that is sustainable.

As accounted in this Progress & Profiles, the Department of Medicine successfully delivered on its mandate, guided by its strategic plan, now in year three of implementation. As a department of 15 divisions and more than 200 faculty and support staff, together with the Nova Scotia Health Authority and Dalhousie University's Faculty of Medicine, we realigned or reorganized clinical services and programs to better provide coordinated, timely, appropriate care; implemented quality improvement infrastructure and initiatives; coordinated our education portfolio across the continuum and launched sophisticated programs to maintain the department's position as a leader in medical education. We also recruited young, ambitious clinicians and scientists committed to advancing the diagnosis and treatment of diseases that affect Maritimers and people around the world.

A key aspect in making the above possible is the high degree of leadership demonstrated by Department of Medicine members. They are leaders in their respective fields and in academic medicine. They apply their inherent leadership skills and abilities to improve patient care and medical education, to advance health research, and to make our health system stronger and more sustainable. Department members have seized opportunities to influence systems at a larger level and to implement important changes in our clinical and academic environments. As a testament to this, many past and present Department of Medicine members are currently serving senior leadership positions in Dalhousie's Faculty of Medicine.

In early 2015, Dr. David Anderson, Head of the Department of Medicine (2011 – 2015), was named Dean of the Dalhousie Faculty of Medicine, and soon after Dr. Evelyn Sutton, Head of the Division of Rheumatology, was appointed Associate Dean of Undergraduate Medical Education. The two joined Department of Medicine members, Dr. Darrell White, Senior Associate Dean, and Dr. Geoff Williams, Assistant Dean of Postgraduate Medical Education.

I would like to applaud the leadership efforts of our department members. The Department of Medicine and each of its divisions appreciates and cultivates the growing interest among clinicians to be leaders within and beyond their fields; a mentorship program and succession planning are underway to identify future leaders within the department.

We believe leadership enables us individually and collectively to seize opportunities in an environment that is continually changing. At present, the Department of Medicine is navigating the new Nova Scotia Health Authority within which we operate; a new academic funding plan due to be finalized in 2016, which governs clinical and academic deliverables and compensation; and a search for a new department head to be named in 2016. Amidst our changing environment and the uncertainty it creates, we are using every opportunity to deliver the highest quality patient care, medical education and health research.

I invite you to review the highlights of the last year and appreciate your interest in the Department of Medicine.

Sincerely,



Simon Jackson, MD, FRCP(C), MMedEd
Interim Head, Department of Medicine, Dalhousie University
District Chief, Department of Medicine, Central Zone,
Nova Scotia Health Authority
Professor of Medicine, Dalhousie University



EXCELLENCE IN CLINICAL CARE

Continuous Improvement: Quality Care

The Department of Medicine prioritized a department-wide approach to quality assurance and improvement in its strategic plan, and with that, revitalized the Quality and Professional Appraisal Committee, which holds responsibility for the department's quality performance. The committee is now chaired by cardiologist, Dr. Robbie Stewart, and includes representatives from all divisions.

"Our role is to support the divisions and service areas to deliver high quality, sustainable, interdisciplinary care through evidence based decision making. To do that, we are working to establish an interconnected quality structure wherein all divisions have quality processes in place," says Dr. Stewart. "We have an oversight and mediator role, working closely with the Nova Scotia Health Authority, namely Sandra Janes, health services director, whereas the hands-on quality work happens at the division and service level, supported by a newly acquired quality program leader, and involves many people across many disciplines."

Specifically, the committee's work includes reviewing Nova Scotia Health Authority and Canadian Institute for Health Information data and reports to identify challenges, opportunities and successes; initiating reviews as quality issues arise; supporting implementation of Choosing Wisely guidelines; and helping to establish division-specific quality processes. It has also facilitated specific quality projects such as establishing clinical pathways for heart failure and pneumonia.

"Our work has been gaining momentum over the last year and now with a new quality program leader in place, we expect that momentum to intensify to the point where all divisions will have identified indicators and established appropriate measures instrumental to quality improvement," says Dr. Stewart.

With the support of Kate MacWilliams, quality program leader, a number of quality improvement projects have been initiated and are gaining traction. These projects, which range in scope, complexity and outcome, are led by divisions of the Department of Medicine and clinical services in the Central Zone of the Nova Scotia Health Authority.

"We have a number of projects underway that aim to ensure we are providing timely, appropriate, high quality care. In some areas multiple projects are in progress whereas in others, we are working on establishing indicators and appropriate measures, which is a necessary step toward recognizing where improvements need to be made and initiating specific quality projects," says Ms. MacWilliams.

Sample projects include:

- Identification of clinical performance indicators by the Division of Rheumatology that range from smoking history to assessment for sleep apnea, and development of an electronic clinic assessment form that will allow the Division to easily track clinical performance on a number of evidence based indicators.
- A patient chart review of antibiotic administration to patients with febrile neutropenia who are receiving chemotherapy to determine whether patients are receiving antibiotics within guidelines (Division of Hematology).
- Development of a process to trigger handover, that is the formal transfer of care, between the internal medicine team that has admitted patients in the emergency department of the QEII Health Sciences Centre and the receiving medicine team that will be caring for patients once they are transferred to an inpatient unit. Implementation of a formal handover process is recommended by such organizations as Accreditation Canada, the Resident Doctors of Canada and the Canadian Medical Protective Association.

The Department of Medicine is recording early successes with its quality program, which we intend to expand upon by working with a growing number of divisions.



*Dr. Robbie Stewart, Chair DoM Quality Committee (left);
Kate MacWilliams, DoM Quality Coordinator (centre);
Sandra Janes, Health Services Director (right)*



Primary PCI Update

For people experiencing ST Elevation Myocardial Infarction (STEMI) – the most severe form of heart attack – time is of absolute essence. Primary PCI (opening the closed artery using a balloon and stents at the time of heart attack) is the treatment of choice provided it can be performed within 90 – 120 minutes. If primary PCI cannot be performed in the recommended timelines, clot-busting drugs should be administered immediately either in the field or at the nearest emergency centre.

In Nova Scotia, primary PCI is performed at the QEII Health Sciences Centre. The Primary PCI Program, which involves Emergency Health Services paramedics, emergency physicians and nurses, cardiac cath-lab nurses/technicians, radiology technicians, CCU and IMCU nurses, and the interventional cardiologist, was started in 2008.

Given the short window of opportunity for primary PCI to be performed, however, only those patients who are able to get to the QEII very quickly can receive the procedure. The majority of patients in the rest of the province are treated effectively with thrombolytic agents. These clot-busting drugs work well in 70-75% of patients but in 25-30% of cases, they are ineffective.

“For patients who fail to respond to thrombolytic therapy we now perform rescue PCI. Patients receive the clot-busting drugs at their nearest emergency department or in the field, and if the ECG shows less than expected improvement after 90 minutes, they are transferred urgently to the QEII for ‘rescue’ PCI,” says Dr. Quraishi, medical lead of the Primary PCI Program.

“We have made other improvements to the program as well, including acquisition of a new system (Lifenet) by EHS that enables paramedics to acquire and transmit ECGs from the field via email to the emergency room and to cell phones of the interventional cardiologists. The system has significantly reduced the total time from first medical contact to provision of primary PCI,” says Dr. Quraishi.

Dr. Quraishi and his colleagues have also begun to plan for further enhancements to the program. “The next step would be to implement immediate transfer of all patients following administration of thrombolytic therapy to the QEII for cardiac catheterization and PCI. This will help to salvage the heart muscle more effectively and significantly reduce lengths of hospital stay,” says Dr. Quraishi. “All the current guidelines recommend this strategy which most Canadian centers have adopted.” He notes that the PCI program has expanded gradually, utilizing available resources, and its success is due to regular monitoring and a strong commitment of all team members.



An Ebola virus disease epidemic in West Africa in 2014/15 required significant contingency planning on the part of some DoM physicians and hospital staff in the event that any infected patients entered our facilities. While no infected patients ultimately presented, we took the opportunity to practice necessary infection prevention and control measures for such an emergency. Pictured here is Infectious Diseases specialist, Dr. Lynn Johnston, supervising the donning of personal protective equipment.

EXCELLENCE IN EDUCATION

The Department of Medicine has always been a leader in medical education and is committed to preparing students and residents to become highly skilled and compassionate physicians.

In recent years, the Department has aligned its teaching and training with the growing trend toward evidence-based medical education. This includes adopting cutting-edge, high fidelity simulation technology, fostering educational scholarship for clinical educator career paths, and integrating research as an essential part of the curriculum.

These changes, at the undergraduate level, are part of the recent renewal of Dalhousie Medical School's undergraduate program to meet changes in medicine and inter-professional practice. The medical school now boasts one of the most up-to-date curriculums in Canada. They also reflect the transition of residency training at Dalhousie and across Canada toward competency-based medicine that relies on providing the skills and competencies physicians need.

"We're in a time of great transition in medical education," says Dr. Chris Gray, Director of Education for the Department of Medicine. "This is being driven, in part, by the Royal College with its continuing move toward competency-based medicine, but also by the overall recognition that we can do better than the historical teaching model of 'see one, do one, teach one'. It's an opportune time to be making changes in the Department."

Dr. Gray explains that the Department's strategic planning initiative served to sharpen its education focus on three key objectives aimed at fostering excellence and transformation in education: achieving a culture of excellence and innovation in education, integrating educational initiatives across the continuum, and creating the best internal medicine experience for learners.

To advance these objectives, the Department established an Education Committee and a Director of Education position. The Education Committee serves to connect the continuum of education within the Department and oversees undergraduate, postgraduate and continuing medical education. The Director's role is to recognize and minimize duplication within the education portfolio, identify and harness opportunities for collaboration, and enhance the education programs and services the Department offers.

Dr. Gray, the Education Committee and the Department's Education Working Group have identified several short and long-term objectives that are being undertaken. They include a faculty orientation package to promote medical education opportunities; better preparing learners for transitioning from medical student to resident and from resident to physician; medical education research workshops; better use of technology to deliver medical education; and medical education research and training grants.

For example, the Department has introduced a medical education fund that supports excellence and innovation in medical education. As part of a larger postgraduate education vision, the Department has implemented changes to the Academic Half Day curriculum, including stronger use of technology, in order to better prepare residents for the Royal College's competency-based education requirements. Also, the Department continues its strong commitment to participating in the Faculty of Medicine's Research in Medicine (RIM) program that introduces medical students to research from the start of their medical education.

"All of these measures represent a more focused, comprehensive and coordinated approach to education," says Dr. Gray. "Our intent is to provide the very best education and residency training program in Canada and to establish the Department as the authority for medical education across the continuum."



Dr. Chris Gray, DoM Education Director (left), Dr. Nancy Morrison, DoM Undergraduate Education Chair (centre) and Dr. Ian Epstein, Core Internal Medicine Residency Program Director.

Dr. Evelyn Sutton appointed Associate Dean, Undergraduate Medical Education

Congratulations to Dr. Evelyn Sutton, Head and Chief of the Division of Rheumatology, on her appointment as Associate Dean of Undergraduate Medical Education with the Dalhousie University Faculty of Medicine, effective July 1, 2015. Dr. Sutton is a professor of medicine, a nationally recognized leader in medical education, and the recipient of many teaching awards.

She is cross appointed in the Division of Medical Education, is a member of the Canadian Association of Medical Education, and is Director of the Arthritis Centre of Nova Scotia. Dr. Sutton also chairs both the Medical Advisory Committee to the National Arthritis Society and the Canadian Rheumatology's Annual Scientific Meeting Committee. Prior to her appointment as Associate Dean, she was Assistant Dean, Admissions & Student Affairs in the Faculty of Medicine.

Dr. Sutton has made extensive contributions to the department and the medical school in various education, clinical and research capacities. She is an expert in scleroderma, an autoimmune disease that causes hardening of the skin and internal organs, and with her colleagues in respirology and cardiology, formed a collaborative care clinic for patients with pulmonary artery hypertension. Her research interests focus on improving clinical outcomes in inflammatory arthritis and in scleroderma. She is a founding member of the Canadian Scleroderma Research Group which, since its inception 10 years ago, has published over 100 papers advancing the understanding of the natural history of the disease.

As Associate Dean, Dr. Sutton will focus on ensuring successful operations, accreditation and evaluation of the medical school's undergraduate curriculum. In her role, she also assists and advises medical students on their academic careers.



Senior Internal Medicine resident, Alison Rodger (right), oversees PGY2 resident Aimee Noel learning to perform a lumbar puncture on a simulation model, while PGY2 resident, Heather MacKenzie (left) looks on.

The Department of Medicine's 2015 Annual Spring Party was held on June 18th at the Prince George Hotel.

Awards were presented to the following faculty and residents:

2015 Department of Medicine Achievement Award:

Dr. Darrell White, Hematologist

Brian M Chandler Lifetime Achievement Award in

Medical Education: Dr. Martin Gardner, Cardiology

Outstanding Faculty – Resident's Choice Award:

Dr. Babar Haroon, General Internist, and Critical Care Intensivist

Faculty Excellence in Medical Education Awards:

- Dr. Ian Epstein, Program Director, Core Internal Medicine Program;
- Dr. Alwin Jeyakumar, Program Director, Medical Oncology Training Program;
- Dr. Lori Connors, Program Director Pediatric Allergy and Clinical Immunology;
- Dr. Debra Morrison, Clinical Director, Sleep Disorders Clinic;
- Dr. Andrea Kew, Program Director, Hematology Training Program.

2015 Outstanding Resident Awards:

- PGY3 Dr. Coleman Black
- PGY2 Dr. Marko Balan
- PGY1 Dr. Alexandra Legge

2015 Outstanding Academic Performance Award:

- PGY3 Dr. Allen Tran
- PGY2 Dr. Alison Dixon
- PGY1 Dr. Alexandra Legge

2015 Excellence in Undergraduate Teaching Award:

Dr. Aaron LeBlanc

Excellence in Summer Grand Rounds Award:

Dr. Nick Forward

RESEARCH EXCELLENCE

Excellence in research is central to the mission of the Department of Medicine. This year the Department has advanced research on a number of fronts, including securing key faculty recruitments, recruiting the Howard Webster Department of Medicine Research Chair, and developing guidelines for protected time for research activities.

"We have outstanding research being done in the Department of Medicine. Through the implementation of our strategic planning initiative, we are ensuring that research remains a priority," says Dr. John Hanly, Department of Medicine Research Director.

The Department has a well-established infrastructure that supports the research agenda, including a Research Committee, Resident Research Committee, Research Office and the creation this past year of a defined Research Director role. Under the direction of the Research Director and Research Committee, activities over the past year have included research productivity reviews, research awards for faculty, residents and students and additional emphasis on mentoring of junior faculty.

Research highlights this year include the appointment of Dr. Leah Cahill as the new Howard Webster Department of Medicine Research Chair. Through the Chair, Dr. Cahill will advance her research focus on the nutritional and genetic epidemiology of cardio-metabolic diseases and facilitate overall research activities by faculty, residents and students within the Department of Medicine. Dr. Peter Hull was recruited to the Headship of the Division of Clinical Dermatology and Cutaneous Science and Dr. Jennifer Jones, was recruited to the Division of Digestive Care and Endoscopy.

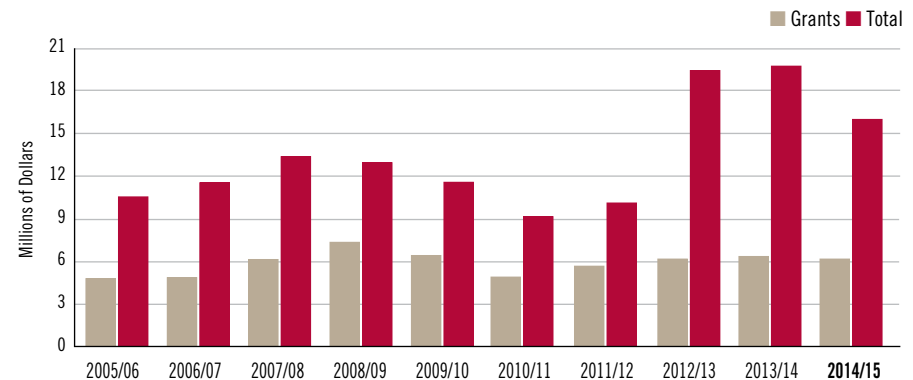
A major research study led by Dr. Lisa Barrett, Division of Infectious Diseases, will provide inmates at a regional correctional facility with an effective new hepatitis C drug. The study's goal is to eradicate the virus among this population and to provide a template for future therapeutic trials of hepatitis C in high risk groups.

The announcement of a \$1 million donation to the Dalhousie Medical Research Foundation by local philanthropists Leslie and Allan Shaw to support melanoma research includes funding a five-year clinical study of the Verisante Auro hand-held scanner. The study is led by Dr. Richard Langley and Dr. Peter Hull, Division of Clinical Dermatology and Cutaneous Science.

"Altogether it's been a stellar year for research in the Department of Medicine," says Dr. Hanly, adding that this was reflected in the attendance and participation at both the Research Evening and Research Day, the two main research events in the Department's annual calendar. "We had a great turnout for both events with outstanding presentations by faculty, residents and students."

Department of Medicine (DoM) Research Funding

April 2005 – March 2015



Howard Webster Department of Medicine Research Chair

In 2013 while she was a research fellow at the Harvard School of Public Health, Dr. Leah Cahill was involved in a landmark study that linked skipping breakfast to an increased risk of coronary heart disease. Two years later, she continues her innovative work on the nutritional and genetic epidemiology of cardio-metabolic diseases as the recently appointed Howard Webster Department of Medicine Research Chair.

Dr. Cahill obtained her doctoral degree in nutrition and genetic epidemiology in the Faculty of Medicine at the University of Toronto. She then moved to the Harvard School of Public Health where she developed a research program investigating coronary heart disease and Type 2 Diabetes.

Nutrition and diet are relevant factors in preventing and managing many diseases and so nutritional science holds significant potential for patient-centred research.

In her capacity as the Howard Webster Chair, Dr. Cahill will develop a patient-oriented research program and facilitate collaborative opportunities to enhance the overall research productivity of the Department of Medicine.



2015 Research Day Winners

Award winners were:

Best Case Report Presentation

- Dr. Tasha Kulai, A Case Report of Severe Sprue-Like Enteropathy Associated with Olmesartan

Best Undergraduate Student Presentation

- Colin Spencer, Frailty and Stroke (poster)

Best Core Resident Presentation

- Drs. Andrew Moeller and Jordan Webber, Senior Medicine Resident Perception of Duty Hour Reform (podium presentation)

Best Sub-specialty Resident Presentation

- Dr. Natalie Parks (PGY-4, Neurology), Treatment for Cryoglobulinemic and Non-Cryoglobulinemic Peripheral Neuropathy Associated with Hepatitis C Virus Infection

Best Research Fellow/Graduate Student Presentation

- Hiran Feridooni (graduate student), Operationalization and Reliability of a Clinical Frailty Index Based on Deficit Accumulation in Naturally Aging C57Bl/6J Mice

Improving early detection of melanoma

A \$1 million gift to Dalhousie Medical Research Foundation for melanoma research could advance our knowledge and treatment of this deadly skin cancer which has a high prevalence in Nova Scotia.

The donation by local philanthropists Leslie and Allan Shaw will enable the purchase of new cutting-edge diagnostic equipment and fund a five-year clinical trial of one of these devices, the Verisante Aura handheld scanner. The trial is led by Dr. Richard Langley (right) and Dr. Peter Hull (left), Division of Clinical Dermatology and Cutaneous Science.

The study will determine whether the Verisante Aura is capable of detecting early-stage melanoma as effectively as a medical specialist. Because the device doesn't need a dermatologist to interpret the results, a potential benefit of the study is that patients may have a shorter interval prior to having suspicious moles examined.

The Shaw's donation has also prompted the Nova Scotia Department of Health and Wellness to fund a high-risk melanoma clinic at the QEII Health Sciences Centre.



Wiping out Hepatitis C

Dr. Lisa Barrett, a clinician scientist in the Division of Infectious Diseases, is leading a Hepatitis C immunity study in PEI's provincial correctional centre. The pilot study will provide new oral drugs known as direct-acting antiviral agents to 60 offenders at the centre and follow them through a year of treatment to monitor re-infection and any potential side effects of therapy on HCV immunity.

While less than one percent of the general population is infected with Hepatitis C, infection rates in correctional facilities in Canada are well over 20 percent. Eliminating the disease among this offender population is an important step in eliminating the disease nationally.

The newly approved oral medications have proven cure rates of 90 to 97 percent with minimal side effects, so they are a practical choice for treating Hepatitis C over time. PEI is the first province in Canada to fund the medications. Eventually, Dr. Barrett hopes this pilot study in correctional facilities will lead to further studies and access for people in corrections settings in the Atlantic Provinces and around the country.

"We have outstanding research being done in the Department of Medicine. Through the implementation of our strategic planning initiative, we are ensuring that research remains a priority."

DR. JOHN HANLY, Department of Medicine Research Director

CARDIOLOGY

HIGHLIGHTS

Our Patient Care:

- We continue to be responsible for 82 beds at the Halifax Infirmary Site and provide tertiary care for Nova Scotia and PEI via a 24-hour transfer service. Patients are triaged by medical priority and brought to the Halifax Infirmary to undergo necessary investigations and treatment, returning to their home hospital the following day. 2,000 patients per year are cared for in this way.
- There has been a 7% increase in the volume of echocardiograms provided in 2014/15, along with an impressive reduction in the wait time, thanks to echocardiography leaders and hospital administrators who extended service hours, increased flow through, and acquired additional echo machines and sonographers. Wait times have not yet reached national benchmark levels, though we continue to improve.
- 46 Transcatheter Aortic Valve Implantation procedures were completed in 2014/15 with maintenance of excellent clinical outcomes.

Our Research:

- Under the leadership of Drs. Martin Gardner and Ratika Parkash and research manager, Debbie Wright, we have begun consolidating research accounts, negotiating contracts and working to develop a fair and transparent process for all research activity within the division. These processes are now well documented and available in a standard operating procedure manual.
- The achievements of our researchers have been highlighted by monthly presentations. These have been extremely well received and have helped our colleagues understand the accomplishments of our busy research groups.

Welcome:

- Dr. Amir AbdelWahab joined us as a full-time academic member of the Heart Rhythm Group.
- Dr. Evan Merrick joined the Division as a part-time member relocating from his active practice in Yarmouth, Nova Scotia.

A Fond Farewell:

- The Division lost a valued colleague and friend with the passing of Dr. Bruce Josephson in December, 2014.
- Dr. Alex MacLean closed his practice in Dartmouth to relocate to his home in Prince Edward Island in April 2015.

Dr. Catherine Kells, Division Chief



Drs. Chris Gray and Martin Gardner, cardiologists

While many heart diseases are caused by unhealthy lifestyles, others are inherited and can lead to unexpected sudden death, even in children and young adults.

The Inherited Heart Disease Clinic at the QEII Health Sciences Centre assesses and counsels Maritime patients and families with genetic heart disorders. Since it was established in 2004, the clinic has seen more than 1600 individuals and identified over 450 new families with inherited heart disease.

Clinic director and founder Dr. Martin Gardner was one of Canada's first heart rhythm specialists to recognize the importance of genetics in heart rhythm abnormalities. "The abnormal gene gets passed down from parents to half the children. Someone can have this disorder, feel completely well, have no symptoms but die suddenly," says Dr. Gardner, cardiologist and professor of medicine.

Genetic heart diseases include cardiomyopathies (diseases that affect the physical structure of the heart and interfere with its ability to pump blood) and arrhythmias (diseases that affect the heart's electrical system and cause abnormal heart rhythms). The most common is Hypertrophic Cardiomyopathy, the most common heart-related cause of sudden death during intense exercise.

Indications of genetic heart disease include sudden cardiac death, heart failure in people under 50, palpitations or abnormal heart rhythm at a young age, black-outs or



seizures that don't respond to typical medications, and more than one relative with the same type of heart disease.

"It's extremely important we bring in individuals and families for testing and counseling," explains Dr. Gardner. A visit to the clinic may be a life-saving measure for many individuals who would not have otherwise known they had a heart condition.

Dr. Gardner and Dr. Chris Gray, an attending electrophysiologist and assistant professor of medicine, see patients and their families, who are then referred to cardiologists, pediatric specialists, geneticists, radiologists and genetic counselors. "We have a completely coordinated approach with all specialties and testing available on site," says Dr. Gardner.

The clinic offers an ideal learning and training opportunity for rotating cardiology residents and fellows. It also plays a critical role in research and participates in local and national studies such as the current development of a national registry led by Dr. Gardner for Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC).

Division Physicians: Amir AbdelWahab • Iqbal Bata • Hussein Beydoun • Brian Clarke • Jafna Cox • Richard Crowell • Helen Curran • Dongsheng Gao • Martin Gardner • Nicholas Giacomantonio • Chris Gray • Ronald Gregor • Gabrielle Horne • Simon Jackson • Catherine Kells • Bakhtiar Kidwai • Chris Koilpillai • Tony Lee • Richard Lodge • Michael Love • Nancy MacDonald • Paul Mears • Evan Merrick • Syed Najaf Nadeem • Ratika Parkash • Ata-Ur-Rehman Quraishi • Mirosław Rajda • Sarah Ramer • John Sapp • William Sheridan • John Stewart • Robert Stewart • Kimberly Styles • Lawrence Title • Jason Yung

CLINICAL DERMATOLOGY & CUTANEOUS SCIENCE

HIGHLIGHTS

Our Patient Care:

- In addition to general dermatology clinics, regular sub-specialty clinics are held for non-melanoma skin cancer, cutaneous T cell lymphoma, gynecology/dermatology, geriatric dermatology, dermatologic surgery and vascular birthmark clinic.
- The Dermatology Treatment Unit at the Victoria General Hospital is open from 07:00-17:00 hrs every weekday and treats high volumes of patients requiring phototherapy and specialized nursing care. A phototherapy unit, operating out of the Aberdeen Hospital in New Glasgow, is supervised by a divisional dermatologist via telemedicine.
- Tele-dermatology consultations are available to 48 sites across Nova Scotia.

Our Teaching:

- Our dermatology resident training program was identified as being overall excellent on the last Royal College review. Dr. Angela Law was successful in her Royal College certifying exams in June 2014, and has set up practice in Saskatchewan. We have one PGY 5 resident eligible to sit the national examination in 2015, one PGY3, one PGY1, and another new resident will commence training in July 2015.
- Our team always includes rotating house staff. Residents come from Internal Medicine, Family Practice, Pediatrics and Plastic Surgery. Evaluations of our service by these learners are excellent, always with comments and thanks for the superb teaching by all Division members. These learners attend teaching clinics and academic half day, have small group teaching sessions weekly, and prepare a report on a chosen topic.
- Clinical clerks rotate on our service for 2-4 weeks each.

Congratulations to:

- Dr. Laura Finlayson who was awarded the Canadian Dermatology Association's annual President's Cup Award in June 2014.

Welcome Aboard to:

- Dr. Peter R. Hull, who takes over from Dr Laura Finlayson as Head of the Division. Dr Hull comes from the University of Saskatchewan, where he was Head of Dermatology for 25 years.

A Fond Farewell to:

- Dr. Kerri Purdy, who left for Ottawa in June, 2014 for two years.

Dr. Peter Hull, Division Chief



Dr. Ariel Burns, dermatologist

When Ariel Burns decided on a career in medicine, she expected to follow in the footsteps of her father, uncle and husband and become a pathologist. But while at Dalhousie Medical School, the Ottawa native was so inspired by her dermatology teachers and lectures that she decided to take a third year elective in dermatology.

"The teachers were passionate about their field and clearly loved what they were doing," says Dr. Burns. She also found strong similarities between pathology and dermatology. "Dermatology is the specialty that is most heavily pathological; about one-quarter of our training is focused on dermopathology."

Of her dermatology elective experience, Dr. Burns comments, "I really loved working with people in this division so it was an easy choice for me to apply to the residency training program here at Dalhousie."

Competition is tight for the Dalhousie dermatology residency because it is highly regarded and only accepts one resident every two years. Dr. Burns was thrilled when she was accepted, doubly so because her husband is a practicing pathologist in Halifax.

In June 2015 Dr. Burns completed her specialty exams. "It's been an incredibly busy time. I got my license, started teaching and started practicing all at once," she says. She officially joined Dalhousie as a lecturer in the Division



of Dermatology & Cutaneous Sciences in July and enjoys teaching both residents and medical students. She also practices at the Atlantic Skin Care clinic in Dartmouth and the dermatology clinic at the Victoria General.

Dr. Burns is no less excited about her chosen career than when she was a medical student. "Dermatology is such a fascinating specialty. We're seeing major innovations such as new treatments for metastatic melanoma, a rare form of skin cancer with very poor survival rates, that are giving patients hope for more extended survival and new treatments for psoriasis that target the immune system."

In her spare time, Dr. Burns indulges her passions for running, hiking and travel. She and her husband are currently training for their first major marathon. "We try to live life to the fullest in everything we do. We're both lucky to have careers we love and great lives here in Halifax."

Division Physicians: Mary Lou Baxter • Laura Finlayson • Christopher Gallant • Peter Green • Peter Hull • Colleen Kelly • Richard Langley • Scott Murray • Catherine O'Blenes • Michael Reardon • Maria Torok • Robert Tremaine

DIGESTIVE CARE & ENDOSCOPY

HIGHLIGHTS

Our Patient Care:

- The Division expanded our participation in the provincial Colon Cancer Prevention Program. Nova Scotians over 50 years of age who test positive for blood in stool undergo colonoscopy. To meet this increasing demand for service, we have had to shift our human resources from other referred patients, increasing wait times for consultation and procedures. We are working with the Nova Scotia Health Authority to better manage these wait lists and to introduce efficiencies.
- In the collaborative model for healthcare delivery, our team of hepatology nurse practitioners treated over 200 hepatitis C patients with the new direct acting antiviral agents, achieving cure rates of over 95% as evidenced by sustained viral response.

Our Teaching:

- As part of a quality improvement process, Dr. Donald MacIntosh, Professor of Medicine, continues to provide his expertise to train other colonoscopy trainers at both national and international levels.

Congratulations to:

- Drs. Steve Gruchy and Dr Geoffrey Williams who were promoted to Associate Professors of Medicine in July 2014.
- Dr. Dana Farina, who has taken on a leadership role as co-director for District Endoscopy, together with surgeon, Dr. Paul Johnson and Health Services Director, Ms. Heather Francis.
- All three graduates of GI Residency Training Program, Drs. Hassan Abdulaziz, Jaclyn Flemming and John Igoe, who passed their Royal College examinations in Gastroenterology.

Welcome Aboard to:

- Dr. Jennifer Jones, who joined the Division in October 2014. She will focus on developing a multidisciplinary inflammatory bowel disease (IBD) program – the first of its kind east of Quebec. She is also taking the lead to re-establish the division as a centre of excellence in IBD research.

Dr. Kevork Peltikian, Division Chief



Dr. Jennifer Jones, gastroenterologist

Halifax will soon be home to a multidisciplinary program of excellence for clinical care, research and education of inflammatory bowel disease (IBD) – a much-needed resource in Nova Scotia, which has the highest IBD rates of any province in Canada.

Dr. Jennifer Jones, gastroenterologist and associate professor of medicine, is leading work to develop

a coordinated, collaborative program that better provides timely, patient centered, collaborative team-based care to people living with IBD.

“We deliver excellent care for people living with IBD in Halifax and beyond, but there are measures we are taking to deliver that care in more equitable, collaborative, efficient, and timely fashion,” says Dr. Jones.

Dr. Jones and her colleagues have begun to redefine how the IBD team works together to deliver care; develop coordinated, multidisciplinary clinics; explore new models of care provision for complex patients; and investigate and implement the delivery of patient-centered education programs.

“We are not starting from scratch, which has enabled us to achieve early objectives, such as reintegrating the multidisciplinary team, redefining collaborative care models, beginning work to standardize our referral process, and identifying gaps in care, research and education, rather quickly,” says Dr. Jones.

She and members of the multidisciplinary IBD team have a clear plan in place, informed by Dr. Jones’ experience in the field; she most recently spent six years at the University of Saskatchewan where she founded its multidisciplinary



IBD program. Prior to that, Dr. Jones completed a master’s degree in Epidemiology and Health Research Methodology at the University of Calgary and worked as a consultant gastroenterologist at the Foothills Medical Center between 2005 and 2008. She also undertook an advanced fellowship in IBD under the mentorship of Dr. Bill Sandborn at the Mayo Clinic in Rochester, Minnesota. Dr. Jones brought this experience to Halifax when she was recruited to the Division of Digestive Care & Endoscopy in 2014.

The work to establish an IBD program is well underway, but it will take time for all elements to be in place. Because of this, Dr. Jones and her colleagues are making incremental changes that will benefit patients and their families as the process to establish a program of excellence takes shape. “We are incorporating research and innovation at every stage to enable appropriate evaluation and ensure an exceptional program that will benefit patients and their families, as well as learners and the clinical team. It may take some time for patients and families to experience the full benefits of a multidisciplinary collaborative program, but they will see positive differences as we move forward,” says Dr. Jones.

Division Physicians: Ian Epstein • Dana Farina • Steven Gruchy • John Igoe • Jennifer Jones • Marie Laryea • Desmond Leddin • Donald MacIntosh • Sunil Patel • Kevork Peltikian • Duane Sheppard • Geoffrey Turnbull • Geoffrey Williams • Stacey Williams • Wendy Winsor

ENDOCRINOLOGY

HIGHLIGHTS

Our Patient Care:

- Division members continue to undertake all aspects of our mandate including clinical activities, on-call consultation service, clinical research, clinical trials, basic research and teaching at all levels, including outreach to general practitioners.
- In addition to general endocrinology clinics, we offer the following sub-specialty clinics: osteoporosis, lipid, diabetes in pregnancy at IWK, preconception clinic at IWK; multidisciplinary neuro-pituitary clinic (in association with neurosurgery); multidisciplinary thyroid biopsy clinic (in association with pathology and radiation oncology).
- Division members also offer a diabetes clinic at the Mumford Road Diabetes Centre and clinics at Cobequid.

Our Research:

- The Endocrine Research Group continues to be very active, participating in a number of important peer-reviewed funded clinical trials, as well as significant contract research activity. Dr. Kaiser has been actively involved in osteoporosis research and has been active in the Canadian Multicentre Osteoporosis Study (CaMos).

Our Education:

- We have two sub-specialty residents. Dr. Gee is the Program Director for Endocrinology and Metabolism residency training program.
- Dr. Churn-Ern Yip has taken over as the Undergraduate Coordinator for Endocrinology.

Welcome Aboard to:

- Dr. Ferhan Siddiqi, who completed his core internal medicine residency training at Dalhousie, and his sub-specialty Endocrinology training at University of Toronto.
- Christina Gibbons, Administrative Assistant to Drs. Tugwell, Imran and Siddiqi.
- Raelene Kucyk, Administrative Assistant to Drs. Ransom and Yip.

A Fond Farewell to:

- Lori Corkum, Administrative Assistant to Drs. Tugwell, Imran and Siddiqi.
- Katrina Lawson, Administrative Assistant to Drs. Ransom and Yip.

Dr. Stephanie Kaiser, Division Chief



Dr. Ferhan Siddiqi, endocrinologist

Dr. Ferhan Siddiqi finds himself continually thinking, there's got to be a better way. This is part of the reason why the endocrinologist and assistant professor of medicine is undertaking a master's degree in quality improvement in healthcare through Queen's University. The other primary reason is his engrained desire to improve patient care, especially the care of those with diabetes.

When Dr. Siddiqi joined the Division of Endocrinology & Metabolism in 2014, he was a natural fit to support the division's quality improvement efforts, including two ongoing projects to improve the care of people with diabetes initiated by his colleagues.

One of the projects aims to help make diabetes clinic visits more efficient and allows for better data collection. It involves a new assessment form and database, which are currently under development. The second project includes measures to ensure patients receive the most appropriate diabetes care.

"These two projects serve as examples of the division's quality improvement efforts, which will grow and strengthen inline with the Department of Medicine's emphasis on quality improvement and the infrastructure and support it has so far put in place, namely the department's Quality and Professional Appraisal Committee and quality leader," says Dr. Siddiqi.

In keeping with his desire to improve patient care for those with diabetes, Dr. Siddiqi is also pursuing clinical and basic research interests. On the clinical research



front, he has an interest in determining the effectiveness of screening for complications of diabetes as a way of preventing end-stage disease. "There are guidelines for diabetes care and for screening, but how well we follow these guidelines and initiate early treatment of complications hasn't yet been determined," says Dr. Siddiqi.

At the other end of the research spectrum, Dr. Siddiqi is exploring the role of epigenetics, the mechanisms that switch genes "on" and "off", in diabetic kidney disease. "Not everyone with the same degree of diabetic kidney disease is at the same risk to develop complications. Research is underway that aims to determine what role, if any, epigenetics plays in the discrepancies, and how this may translate into new therapies," says Dr. Siddiqi.

Dr. Siddiqi will finish the two-year master's degree in quality improvement in 2016. Upon completion, he will add this experience to the wealth of expertise he brings to the Division of Endocrinology & Metabolism and Department of Medicine.

Division Physicians: Shirl Gee • Ali Imran • Stephanie Kaiser • Thomas Ransom • Ferhan Siddiqi • Barna Tugwell • Churn-Ern Yip

GENERAL INTERNAL MEDICINE

HIGHLIGHTS

Our Research:

- Dr. Colin Van Zoost is actively involved in numerous research projects, including: EnHants – aimed at improving health related quality of life in rural adults with multi-morbidity; HaliVAX PIE – investigating pharmacist initiated immunizations in the emergency department; and research regarding managing foot problems among the homeless.
- Drs. Lori Connors, Babar Haroon, Anne Marie Krueger-Naug, Sarah McMullen and Colin Van Zoost are all supervisors for medical student research projects.

Our Education:

- Three general internal medicine residents completed training in the fall of 2014; four residents are expected to complete training by June 2015; and one will finish in December 2015. There will be four PGY4 residents and two PGY5 residents commencing training as of July 2015.

Our Teaching:

- Dr. Lori Connors is the Med 1 Skilled Clinician Unit Head and the Assistant Clerkship Director for the Department of Medicine.
- Dr. Babar Haroon is the Simulation Chair for the DoM, and a member of the Capital Health Simulation Operational Advisory Committee.

Congratulations to:

- Dr. Colin Van Zoost who was honored with a 2014 Dalhousie Alumni Award recognizing his volunteer work to support those in Halifax living below the poverty line.

Welcome Aboard to:

- Dr. Mahsa Rezaei Nejad accepted a one year locum position on September 15, 2014.
- Dr. Chris Gallivan accepted a one year locum position on January 1, 2015.

A Fond Farewell to:

- Drs. Elizabeth Mann and Rajender Parkash, who retired on July 1, 2014.



Dr. David Simpson, Division Chief

Dr. Ann Marie Krueger-Naug, general internist and Ms. Sandra Duke, nurse practitioner

A trek to the hospital can pose significant risk to some people's health. This is why Dr. Anne Marie Krueger-Naug and Ms. Sandra Duke are working to support frail people with heart failure at home. The two are responsible for the QEII Health Sciences Centre's General Internal Medicine Heart Failure Clinic.

Dr. Krueger-Naug, assistant professor of medicine, is clinic director, and Ms. Duke, is the clinic's nurse practitioner. Together, they have transitioned the clinic's model of care from hospital-based to one where care is provided primarily in the patient's home.

When Dr. Elizabeth Mann and Ms. Roz Benoit founded the clinic in the late 1990s the focus was on providing much-needed care at the QEII in an ambulatory clinic environment. "While we continue to provide care with the aim of lessening readmission to hospital and maintaining quality of life, we have recognized, through greater understanding of patients' needs and of the health impacts of frailty, that we can best serve patients in their homes," says Dr. Krueger-Naug.

Ms. Duke visits an average of three to four patients per day. Each visit includes a comprehensive health history, physical examination, and discussion of the patient's wellbeing and goals of care. Ms. Duke also reviews and changes (when necessary) the patient's medications, and provides education to the patient and, when possible, their family members.



"We review what heart failure is, how best to stay well, and what to do when things aren't going as expected. And I always leave them with my contact information," says Ms. Duke.

While the patient visits are central to the care Dr. Krueger-Naug and Ms. Duke provide, in between visits there are many telephone conversations with patients, and coordination and consultation with other care providers such as the patient's family physician or nurse practitioner, cardiologist, homecare providers, and others. "We aim to be as collaborative and responsive as possible to meet patients' needs," says Ms. Duke.

Dr. Krueger-Naug is careful to emphasize that the clinic's model of care necessitates the nurse practitioner role. "We couldn't have transitioned the clinic's model of care without Ms. Duke's expertise as a nurse practitioner working to full scope of practice. Our community based model requires a high degree of clinical expertise and independent care delivery," says Dr. Krueger-Naug.

Division Physicians: Paul Charlebois • Lori Connors • Brent Culligan • Stephen Duke • Chris Gallivan • David Haase • Jennifer Hancock • Babar Haroon • Anne Marie Krueger-Naug • Gina Lacuesta • Jorin LindenSmith • David Manning • Sarah McMullen • Mahsa Rezaei Najad • Rosario Rebello • Raid Shaarbaf • David Simpson • Colin van Zoost • Stephen Workman • Khawar-Uz Zaman

GERIATRIC MEDICINE

HIGHLIGHTS

Our Patient Care:

- Drs. Mallery, Moorhouse, and Krueger-Naug continue to participate in the PATH Clinic (Palliative and Therapeutic Harmonization). New data analysis of the first 420 patients completing the program showed that 225 had decisions to make about undergoing further medical and/or surgical treatment. Of these, 80% of patients /families opted to cancel further procedures.
- Dr. Glen Ginther provides a Geriatric Medicine Outreach Clinic to Soldiers' Memorial Hospital, Middleton, NS.
- Dr. Daniel Carver provides Telehealth clinics to Western Kings Memorial Health Centre, Berwick, NS and Kings Regional Rehabilitation Centre, Waterville, NS.

Our Research:

- International recognition of research by Division members continues in widespread uptake of the Clinical Frailty Scale and the Frailty Index, also independently evaluated in dozens of papers in 2014.

Our Education and Teaching:

- Joanna Blodgett completed a MSc in Community Health and Epidemiology through Geriatric Medicine Research, co-supervised by Drs. Kenneth Rockwood and Olga Theou.
- Shanna Trenaman, Geriatric Specialty Pharmacist, completed her Masters of Applied Health Services, co-supervised by Drs. Susan Bowles and Melissa Andrew.

Congratulations to:

- Dr. Olga Theou, awarded a prestigious Banting Postdoctoral Award from the Canadian Institutes of Health Research.
- Dr. Pierre Molin, a geriatrician from Laval University, joined us for a one-year cognitive neurology fellowship with Drs. Darvesh, McKelvey and Rockwood.
- Dr. Catherine Wang and Dr. Qiukui Hao, visiting China Scholarship Council scholars from China, join Drs. Andrew and Rockwood for one year fellowships on frailty research.

A Fond Farewell to:

- Dr. Oleg Veselskiy completed his residency training in June 2015 and will work in Peterborough, ON joining another graduate of our program, Dr. Donald Doell.

Dr. Christopher MacKnight, Acting Division Chief



Dr. Susan Freter, geriatrician

Delirium can be frightening for the individual suffering from it and for those witnessing it. The symptoms can include severe confusion, inability to focus, spatial disorientation, and lack of awareness of surroundings. It is difficult to diagnose because many symptoms can also be seen in dementia, and in the absence of information about the patient's usual status, the clinician may not know if the confusion is acute or longstanding. In fact, a common error is to assume that all confusion is dementia, thereby missing the presence of delirium.

Dr. Susan Freter, a geriatrician and associate professor of medicine, is an expert on delirium and is committed to increasing scientific and clinical knowledge about this all-too-common condition. "Elderly patients are at the highest risk of experiencing delirium. It is caused by medical problems and is generally reversible – but it needs to be recognized and treated urgently," she explains.

Dr. Freter teaches Dalhousie medical students about cognitive impairment and delirium and has taught nurses and other health care professionals in workshops and on orthopaedic units where elderly patients are at particularly high risk for post-operative delirium.

"Pain medications after orthopaedic surgery can contribute to confusion and over-sedation," says Dr. Freter.



In a recent research trial led by Ms. Elaine Brooks, NP, Dr. Freter participated in investigating the effects of multimodal pain medication approaches on pain management and delirium. Currently, she is completing a pilot project with Dalhousie Orthopaedic Surgery, to examine the feasibility and effectiveness of implementing "delirium-friendly" post-operative orders in early hip fracture patients. "Early results suggest it's possible to reduce the risk of delirium in this frail population, both before and after surgery," she says.

Dr. Freter has presented on cognitive impairment at the Alzheimer's Society of Nova Scotia's annual conference and is regularly involved with the Seniors' Expo in Halifax. She has also contributed to a website, www.thisisnotmymom.ca, that provides information and resources on delirium.

Dr. Freter's work is improving treatment and outcomes for elderly patients with delirium, and adds to the Division's world-wide reputation for leadership in geriatric medicine.

Division Physicians: Melissa Andrew • Costa Apostolides • Daniel Carver • Susan Freter • Glen Ginther • Janet Gordon • Katalin Koller • Chris MacKnight • Laurie Mallery • Paige Moorhouse • Kenneth Rockwood

HEMATOLOGY

HIGHLIGHTS

Our Patient Care:

- The Division continues to see, assess and care for a large number of inpatients and outpatients. In 2014/15, there were 1,915 new and 9,404 return patients seen in clinics; 11,295 patients assessed and treated in MDU; 918 inpatient consultations; 711 admissions and 102 blood and marrow transplantations.
- Collaborative clinics were held at the IWK Health Centre, Moncton and St. John's on a monthly basis. The St. John's transplant clinic ended in January 2015.
- Weekly clinics for patients with hematologic cancers commenced in September 2014 in Sydney, Cape Breton.

Our Research:

- The Division continues to lead and participate in a large number of peer-reviewed and industry supported clinical trials. At year's end, more than 50 clinical trials were open in the Division.

Our Teaching:

- Dr. Sudeep Shivakumar is the new post-graduate program director for hematology and Dr. Mary Margaret Keating is the new undergraduate medical education director.

Congratulations to:

- Dr. G. Ross Langley, a former member of the Division of Hematology, who received an Honorary Doctor of Laws Degree (honoris causa) from Dalhousie University in May 2015.
- Dr. Ormille Hayne, who received the Doctors Nova Scotia Senior Membership Award.
- Dr. David R. Anderson who received the Department of Medicine Research Lifetime Achievement Award.
- Dr. Stephen Couban who received the Resident's Choice Faculty Award at Research Day.
- Dr. Andrea Kew who received the Department of Medicine Excellence in Medical Education Award.

Passages:

- The Division was saddened by the death of Dr. G. Ross Langley who passed away in June 2015.

Dr. Stephen Couban, Division Chief



Dr. Ormille Hayne, hematologist

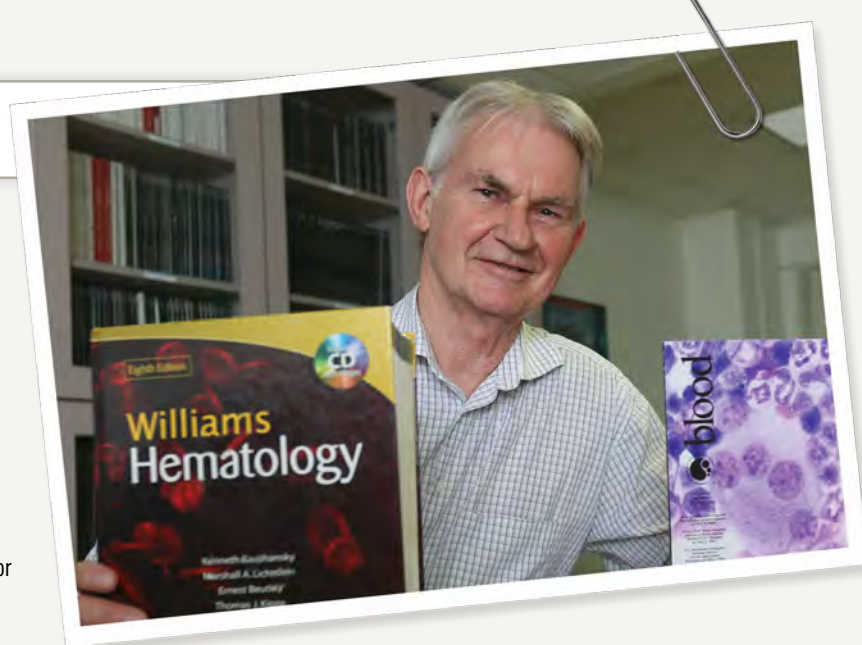
Forty years in medicine can teach you a lot, but Dr. Ormille Hayne believes the amount of knowledge residents and fellows need to know today is exponentially greater than when he started his career in 1972. Dr. Hayne is an associate professor of medicine and the most senior hematologist in Nova Scotia.

"As much as medicine has advanced over the years, it has become that much more complicated, that much more sophisticated, and thus the intellectual demands on physicians and other health care providers, are that much greater," says Dr. Hayne. "We certainly had to know our stuff as doctors, but medicine was much simpler then."

In keeping with this, Dr. Hayne senses that upon completion of residency and fellowship, physicians are smarter and savvier now. "Medical education and training has evolved such that residents and fellows are highly equipped to deliver the best possible care," says Dr. Hayne.

He would know. After more than forty years as a hematologist in Halifax, Dr. Hayne is highly respected by his colleagues, students and residents. He rejoined the Department of Medicine three years ago after a brief retirement.

"I was anxious to get back into practice, and having spent much of my career focusing on community based hematology, it was a great opportunity to be more integrated into the academic environment," says Dr. Hayne.



Dr. Hayne continues to astound his colleagues and students with his knowledge, curiosity and unwavering service; he was recently recognized by Doctors Nova Scotia for his high standing in the province's medical community.

"The aim to provide superior care has remained the same over the years, but the treatments, at least in hematology, and the evidence upon which they are based, is more precise, due mainly to advances in our understanding of the biologic complexity of disease," says Dr. Hayne.

Dr. Hayne hails from Nova Scotia and other than a two-year stint at Washington University School of Medicine in St. Louis, Missouri where he did a fellowship in coagulation, he has built his career here. He is a graduate of Saint Frances Xavier University and Dalhousie University where he earned his MD and completed an internal medicine residency.

Division Physicians: David Anderson • Stephen Couban • Wanda Hasegawa • Ormille Hayne • Mary Margaret Keating • Andrea Kew • David Macdonald • Sue Robinson • Sudeep Shivakumar • Darrell White

INFECTIOUS DISEASES

HIGHLIGHTS

Our Patient Care:

- We see patients with a variety of infectious diseases in our outpatient clinics. A large part of our practice is management of patients on home intravenous antimicrobials. There is no organized outpatient antimicrobial therapy program in Nova Scotia, unlike most other provinces.
- We take hundreds of telephone calls each year from physicians throughout Maritime Canada, giving patient management advice.

Our Research:

- Dr. Lisa Barrett has made significant strides in establishing her research program in study of the immunology of chronic viral infections, specifically HIV, hepatitis C, and cytomegalovirus (CMV). She has obtained new investigator funding through CDHA, NSHRF, and UIMRF to study relationships between chronic viral infection, aging, and vaccine responses.
- Dr. Shelly McNeil continued as Principal Investigator of the Serious Outcomes Surveillance Network of the Canadian Immunization Research Network (CIRN). In the 2014/15, the SOS Network published the first data demonstrating failure of influenza vaccine to prevent hospitalization, prompting public health advisories to clinicians regarding adjunctive measures for influenza treatment and prevention.
- Dr. Nik Thomas' lab continued to look at the microbiome that is associated with inflammatory bowel disease (IBD) and/or Crohn's and Colitis in partnership with researchers at the IWK Pediatric Gastroenterology Division, supported by an NSHRF grant. As well, his lab continued study on pathogenic E. coli and Vibrio species through an NSERC Discovery Grant.

Our Education:

- Our Infectious Diseases Resident Training Program remains active, and closely linked with the Medical Microbiology Training Program, both with Dr. Todd Hatchette as Program Director. There were three residents in Medical Microbiology and two in Infectious Diseases in 2014/15.

A Fond Farewell to:

- Dr. Kathy Slayter left us in August 2014 to take a position as infectious diseases pharmacist and antimicrobial stewardship pharmacist at the IWK Health Centre.
- Dr. Rafael Garduno, who has taken a position with the Canadian Food Inspection Agency.

Dr. Shelly McNeil, Division Chief



Dr. Lynn Johnston, infectious diseases specialist

The 2014/2015 Ebola epidemic in West Africa has been the largest and longest in the disease's four-decade history. Previous outbreaks were brought under control within weeks. This one, however, has resulted in more than 27,000 cases and more than 11,000 deaths (World Health Organization [WHO]).

Dr. Lynn Johnston, infectious diseases specialist and professor of medicine, is one of thousands of health care providers from around the world who felt compelled to help.

In early 2015, Dr. Johnston ventured to West Africa to help slow the spread of the deadly disease. In this case, the veteran of infectious diseases medicine was a rookie travelling solo to join a WHO-led team of health care volunteers once in Africa.

"I knew I was doing the right thing and was comfortable with my terms of reference, but I didn't know exactly what I would be doing or where I would be deployed and I was unsure of what to expect because it was my first international mission," says Dr. Johnston.

Once in Sierra Leone, Dr. Johnston first worked alongside a WHO infectious diseases consultant from Uganda for two weeks as part of an orientation she requested before being assigned to Tonkolili District, one of the smallest of 13 districts in the country. There, she served as infection prevention specialist helping to sustain the fragile control the District had gained over new Ebola cases – no new cases had occurred in the three weeks before she arrived.



Dr. Johnston was charged with helping to improve infection prevention practices across the District, which includes a hospital and 103 peripheral health units staffed 24/7 by nurses who reside in the units. She also assisted the temporary Ebola Community Care Centres to maintain their skills. Dr. Johnston spent much of her time with a driver, bumping along Tonkolili's roads to and from the peripheral health units and community care centres where she would conduct facility assessments and help to introduce or reinforce infection prevention and control measures.

"I was essentially the WHO face of infection prevention and control, building allegiances with the health care providers and other key partners in the district," says Dr. Johnston. "I provided a lot of coaching, direction and mentoring."

Division Physicians/Faculty: Lisa Barrett • Ian Davis • Lynn Johnston • Shelly McNeil • W.F. Schlech • Nikhil Thomas

MEDICAL ONCOLOGY

HIGHLIGHTS

Our Patient Care:

- We continue to see large volumes of new patients, exceeding the Canadian standard of new consults per clinical FTE.

Our Education:

- Dr. Alwin Jeyakumar has taken on a leadership role nationally in the competency based education program of the Royal College. The Division will be one of the first to adopt this program nationally.

Our Team:

- Our team consisted of 9.8 clinical FTE medical oncologists providing clinical cancer care to mainland NS (exclusive of Valley Regional Hospital catchment) through clinics at the VG Site, Cobequid, New Glasgow and Yarmouth NS.
- The division has a clinical associate, Dr. Arab Zadeh, who assists with inpatient and urgent care issues in the chemotherapy unit and a nurse practitioner, Donna Grant, who works with the adjuvant breast and colorectal cancer patient population.

Congratulations to:

- Dr. Mary Davis who received the Cancer Care Nova Scotia Award of Excellence in Patient Care.
- Dr. Lori Wood who was awarded the Medical Oncology Teacher of the Year Award by Medical and Radiation Oncology Residents.

Welcome Aboard to:

- Dr. Nathan Lamond, a full time medical oncologist, who joined the division on July 1, 2014.
- Dr. Ravi Ramjeesingh, a medical oncologist, who joined the division in May, 2015.

A Fond Farewell to:

- Dr. Mary Davis who retired April 30, 2014, having devoted the last twenty years to serving the cancer patient population in Nova Scotia.
- Dr. Paramjit Bains who will be relocating to the UK following her oncology fellowship training with us, to pursue a fellowship in genitourinary oncology.

Dr. Daniel Rayson, Division Chief



Dr. Ravi Ramjeesingh, medical oncologist

Dr. Ravi Ramjeesingh is the newest member of the Division of Medical Oncology. The medical oncologist and assistant professor of medicine joined the division in May 2015. He brings with him a combination of expertise in medical oncology and translational research, and a desire to build a successful career in Halifax – one that advances the care of people living with cancer.

Dr. Ramjeesingh holds an MD and PhD from the University of Toronto and completed residency training in internal medicine and medical oncology through Queen's University in Kingston, Ontario. It was then that he was awarded the Canadian Institutes of Health Research/RX&D Canadian Association of Medical Oncologists Research Program Fellowship Award and undertook a two-year Clinical Trial Methodology and Translational Research fellowship with the NCIC Clinical Trials Group at Queen's University. His work focused on the appropriate timing of administration of adjuvant chemotherapy to patients with breast cancer, which has recently been submitted for publication.

Though Dr. Ramjeesingh has just started his practice at Dalhousie and in Halifax, he is very pleased with his experience, and that of his family, so far. "I had felt for some time that Dalhousie would be a good fit for me and we had our heart set on moving to Halifax. I was thrilled when a position became available," says Dr. Ramjeesingh.



In addition to providing inpatient, ambulatory and consultative care for people with breast cancer, gastrointestinal cancer and melanoma in Halifax, Dr. Ramjeesingh and colleague, Dr. Nathan Lamond, offer a monthly medical oncology clinic in Yarmouth. There, Drs. Ramjeesingh and Lamond see patients with breast and gastrointestinal cancers primarily.

While Dr. Ramjeesingh's current focus is on clinical practice, he has a keen interest in medical education and will continue his work in translational research, specifically the development of cancer tissue microarrays and clinical outcomes. Building on the research he began as part of his fellowship with the NCIC Clinical Trials Group, he intends to explore the potential for establishing a translational research group in Halifax with the aim of collaborating with research colleagues in Kingston, Ontario.

Division Physicians: Bruce Colwell • Mark Dorreen • Arik Drucker • Alwin Jeyakumar • Cory Jubenville • Nathan Lamond • Robyn Macfarlane • Mary MacNeil • Wojciech Morzycki • Rajbir Pahil • Ravi Ramjeesingh • Daniel Rayson • Stephanie Snow • Lori Wood • Tallal Younis

NEPHROLOGY

HIGHLIGHTS

Our Patient Care:

- We opened a new, full service dialysis unit at the Halifax Infirmary, with capacity for 48 patients. This facility provides better access to treatment for inpatients who require dialysis. Establishing the new unit was a collaborative effort between the Division of Nephrology, the Central Zone Renal Program, and the Department of Health and Wellness. Planning is underway for a new dialysis unit at the Cobequid Centre to better serve the patients in that area.

Our Research:

- Dr. Tennankore and Ms. Cynthia Stockman, Manager of the Dialysis Unit, have initiated work on their TRIC grant for delivery of on-line care support to home dialysis patients.
- Dr. Dipchand, in collaboration with interventional radiologist, Dr. Barry, is studying a non-surgical approach to the creation of dialysis fistulas.
- The Division produced several high profile publications and presentations at international meetings.

Our Education:

- Dr. Neil Finkle assumed the Program Director role for the Nephrology Fellowship Program.
- Dr. Tammy Keough-Ryan was a member of a national committee that instituted a new Royal College Training Program in Renal Transplantation. The Division will now offer this fellowship to candidates that have completed Nephrology training.

Our Teaching:

- The Division now welcomes PGY2 Internal Medicine residents onto our Nephrology rotation. Previously, only PGY1 residents rotated on Nephrology.

Congratulations to:

- Dr. Christine Dipchand, who was promoted to Full Professor in July 2014.

Welcome Aboard to:

- Dr. Amanda Miller, who joined the Nephrology Residency Training Program July 2014.

A Fond Farewell to:

- Dr. Talal Alfaadhel, who completed his Nephrology Resident Training Program June 2014.

Dr. Kenneth West, Division Chief



Dr. Penelope Poyah, nephrologist

Soon after Dr. Penelope Poyah was appointed medical lead of the renal clinic at the QEII Health Sciences Centre in 2013, she began reviewing its operations. She intended to apply a fresh perspective and critical thinking to ensure the clinic would provide the highest quality care as efficiently as possible.

The clinic's growing waitlist and a need to improve patient access and flow through the clinic prompted Dr. Poyah's review, but appropriateness of care, or rather ensuring patients receive the right care from the right service in good time, was its true premise.

"It is more important than ever to be smart and evidence-based about how resources are allocated and care is delivered to ensure care is suited to individual patient needs, and access to care is timely," says Dr. Poyah, nephrologist and assistant professor of medicine.

Kidney disease can affect people of all ages and at any time and there are a variety of risk factors, causes and degrees of severity. Subsequently the care required by people living with kidney disease differs. Preventative measures include living a healthy lifestyle, and managing modifiable risk factors.

One of the first steps in Dr. Poyah's review was to analyze the clinic's wait list and its referrals in consideration of evidence-based care guidelines in place across Canada. She found that about one-third of patients referred would receive the most appropriate care from their primary care physician or nurse practitioner rather than the renal clinic.

Division Physicians: Christine Dipchand • Neil Finkle • David Hirsch • Tammy Keough-Ryan • Bryce Kiberd • Romuald Panek • Penny Poyah • Steven Soroka • Karthik Tennankore • Kenneth West • Michael West



The findings prompted a revision of clinic intake and triage criteria to help ensure those patients at higher risk would be seen at the clinic while patients at low risk would continue to see their primary care physician or nurse practitioner.

"In the end, we examined every aspect of the clinic's operations, including our model of care, and made changes to our processes and procedures to best balance our resources with the specialized care we are here to provide," says Dr. Poyah.

The team made multi-level improvements to administrative processes and implemented new measures to maintain the waitlist and lessen the number of no shows. It also ensured the clinic's model of care takes full advantage of the skills and scope of practice of its three renal nurse practitioners.

"We have so far received great support from physician colleagues and colleagues in our multi-disciplinary renal care team which has been instrumental in our successes to date," says Dr. Poyah.

NEUROLOGY

HIGHLIGHTS

Our Patient Care:

- The Acute Stroke Service on 8.1 in the Halifax Infirmary provided care for 460 inpatients in 2014/15. The service serves as a provincial resource for training personnel from other hospitals throughout the Maritimes.
- A shortage of registered EEG/EMG technologists continues to result in increased wait times for these procedures. Two student technologists began training in 2014 and are progressing well.
- Drs. Kerrie Schoffer, Heather Rigby and Roger McKelvey are expanding the Movement Disorders Program, with introduction of Botox clinics and a multidisciplinary Parkinson's disease clinic in collaboration with physiatrist, Dr. Sonia McVeigh.
- Dr. Cory Jubenville runs a neuro-oncology clinic every other week, managing the neurologic complications of cancer.

Our Research:

- The Maritime Brain Tissue Bank, directed by Dr. Sultan Darvesh, raised over \$300,000 through Dalhousie University's Molly Appeal. Dr. Darvesh gave over 25 interviews to TV, radio and print media during this campaign.

Congratulations to:

- Dr. Sultan Darvesh on receiving the prestigious DMRF Irene MacDonald Sobey's Endowed Chair in Curative Approaches to Alzheimer's Disease in May 2014.
- Dr. Allan Purdy, selected as Nova Scotia's recipient of the Canadian Medical Association Honorary Membership award in June 2015, in recognition of his dedicated service to general and neurological medicine.

Welcome Aboard to:

- Dr. Heather Rigby, who joined the Division of Neurology on January 1, 2015. Dr. Rigby will work with the movement disorder team.
- Nurse Practitioner, Christine Bryden, joined the Division on March 31, 2015.

A Fond Farewell to:

- Dr. Sarah Kirby who retired from the Division of Neurology on December 31, 2014. Dr. Kirby worked with us for almost 23 years as a neuro-oncologist and general neurologist.

Dr. Virender Bhan, Division Chief



Multiple Sclerosis Research Unit

Canada has one of the highest rates of Multiple Sclerosis (MS) with an estimated 90,000 people with this disabling disease. MS prevalence in Nova Scotia is 268/100,000 – exceeding the national average.

Not surprisingly, Nova Scotia is home to one of Canada's first MS Clinics. Founded in 1980 by Dr. Jock Murray, the Dalhousie MS Research Unit (DMSRU) is an integrated clinical care and research centre primarily serving Nova Scotians, but also acting as a tertiary referral centre for the Maritimes. The multi-disciplinary clinic handles 3,000 patient visits per year with an additional 10,000 telephone visits conducted by physicians and nursing staff.

In addition to providing comprehensive MS care, the DMSRU is active in education and research. Ms. Trudy Campbell, nurse practitioner and manager, notes that education is a major focus. "We educate our patients, their families and the public at large. We have a diverse group of learners, including neurology residents doing MS rotations, residents from other disciplines, and medical, nursing, and psychology students from Dalhousie and other Canadian Universities."

"Research is high priority," says Dr. Virender Bhan, Director of DMSRU and Head, Division of Neurology. "We have one of the most comprehensive patient registries in the world, collecting detailed data since the clinic inception 35 years ago. For this we are very grateful to our patients. We were the first to report increasing female to male ratio (3:1) in MS and the real world effectiveness of disease

Division Physicians: Timothy Benstead • Virender Bhan • Sultan Darvesh • Ian Grant • Gordon Gubitz • Cory Jubenville • David King • Richard Leckey • Alexander MacDougall • Charles Maxner • Roger McKelvey • Stephen Phillips • Bernd Pohlmann-Eden • R. Allan Purdy • Heather Rigby • Mark Sadler • Kerrie Schoffer



(L-R) Ms. Karen Stadnyk, data analyst; Dr. John Fisk, neuropsychologist; Ms. Trudy Campbell, nurse practitioner/unit manager; Dr. Virender Bhan, neurologist/director; Mr. Mike Kehoe RN, Dr. Roger McKelvey, neurologist/associate director.

modifying therapies. We are known as a top patient recruiter and high quality data provider, making us an ideal partner for academic research groups hoping to understand MS better and pharmaceutical companies looking to test new therapies.

The DMSRU has been the coordinating site for the Atlantic Regional Research Training Centre, one of five Canadian centres for the "EndMS Program" funded by the MS Society of Canada. Under the leadership of Dr. John Fisk, Departments of Psychiatry, Medical Neuroscience and Psychology, and Division of Geriatric Medicine, this program has fostered collaborative research amongst MS clinics and basic science researchers throughout the Atlantic region.

Academic health authorities often talk about "integration of clinical care and research" as the desired goal. The DMSRU is one of the best to actually do it.

PALLIATIVE MEDICINE

HIGHLIGHTS

Our Patient Care:

- The Capital Health Integrated Palliative Care Service (CHIPCS), together with Continuing Care, have designated three community coordinators for palliative care. They have committed to a service model aimed at building capacity for palliation within our geographic and clinical referral bases.
- There are 6 palliative medicine physicians (5.0 FTE's); 3 full time and 3 part time.
- Physicians provide 24 hour, seven day/week emergency and on call coverage. This includes care of patients in the community and in hospital.
- Attending service coverage is provided for a 13 bed inpatient unit and inpatient consultation service to hospitals throughout HRM.
- Outpatient clinics are held at the Nova Scotia Cancer Centre, the Cobequid Centre, Dartmouth General Hospital and Spryfield Wellness Centre.
- Palliative Medicine physicians provide weekday home consult service to patients/families in the home setting.
- The Capital Health Integrated Palliative Care Program was featured as a leading innovative care model in the CMA's National Call to Action on Palliative Care. Dr. David Dupere and Dr. Erin Gorman Corsten were the leads on this project.
- Dr. Robert Horton, Associate Professor in the Faculty of Medicine is leading a major initiative in developing a public-private partnership for the creation of an inpatient Hospice and Center of Excellence in Halifax Regional Municipality.

Our Education:

- The Division continues a strong commitment to teaching undergraduate and postgraduate medical trainees, and the continuing education of allied health professionals in a variety of settings. From July 1, 2014 - June 30, 2015 a total of 51 learners rotated through the Palliative Medicine service.
- The Palliative Medicine Residency Program is jointly accredited by the Royal College of Physicians and Surgeons of Canada and the College of Family Physicians of Canada and is led by Interim Residency Program Director, Dr. Erin Gorman Corsten.
- Dr. Erin Gorman Corsten has a Masters degree in Education, and is working on developing an on-line palliative care resource for family medicine practitioners.

Congratulations to:

- Dr. Paul McIntyre who was promoted to Professor in July 2014.

Dr. David Dupere, Division Chief



Drs. Jeff Dempster and Robert Horton, palliative medicine specialists

The desire for better continuity of care is at the heart of a recent reorganization of the integrated palliative care service in the Nova Scotia Health Authority's Central Zone. Drs. Jeff Dempster and Robert Horton led the reorganization that allows for patients in the community to be seen by the same care team regardless of whether they visit a palliative medicine clinic or the care team visits them in their home.

Previously, one care team, which includes nurses and a physician, would provide care in patients' homes and another would provide care at a centralized clinic.

"With the reorganization of the service, we have decentralized the clinic so that there are now clinics in the Halifax, Dartmouth, Windsor and Sackville areas, and the care teams are assigned patients based on resident location rather than whether the patient needs to be seen at the clinic or in their home," explains Dr. Dempster, palliative medicine specialist and associate professor of medicine.

"For patients and families, the changes mean the team that provides care in the clinic when patients are well enough to get there is the same team that provides care in their home when they are not doing as well," notes Dr. Horton, palliative medicine specialist and associate professor of medicine.

There is comfort in becoming familiar with the care team, developing a rapport with the clinicians wherein patients and families can freely communicate their questions and



concerns and build trust in the care being delivered. This is part of the rationale for continuity of care. Another is the familiarity the clinical team develops with the patient and the care required to meet their needs.

While continuity of care served as the premise for the reorganization of the integrated palliative care service, the changes are also thought to be a more efficient use of resources and allow for even greater collaboration with the many clinical and administrative services involved in the delivery of palliative care in Nova Scotia.

"Because of changes we made to how physicians are assigned to the care teams and the inpatient aspects of our service, there is also a benefit for rotating residents in that they experience more varied care delivery," says Dr. Dempster, palliative medicine specialist and associate professor of medicine.

The reorganization follows recommendations of previous service reviews and took effect in January 2015. It aims to meet the goals of better continuity of care, greater efficiency and fewer care transitions. The focus now is now on collecting the appropriate data to measure the goals.

Division Physicians: Erin Gorman Corsten • Jeffrey Dempster • David Dupere • Robert Horton • Danielle Kain • Anne-Marie Kneuger Naug • Paul McIntyre

PHYSICAL MEDICINE AND REHABILITATION

HIGHLIGHTS

Our Patient Care:

- We continue to provide inpatient, outpatient and outreach services to the province of Nova Scotia. We provide secondary and tertiary level rehabilitation to persons with stroke, traumatic brain injury, neurodegenerative disorders, neuromuscular disorders, multiple sclerosis, cerebral palsy, traumatic and non-traumatic spinal cord injury, arthritis, polytrauma, deconditioning, chronic pain and amputation.
- In 2014/15, we had 498 admissions to our inpatient rehabilitation programs, providing over 22,000 inpatient days of care.
- We provide interdisciplinary specialty clinics with neurologists for management of patients with ALS and with MS; with urologists and neurosurgeons for management of patients with spina bifida; and with gastroenterologists in management of patients with neurogenic bowel syndrome.
- Dr. Mountain continues her pediatric transition clinics with the IWK Hospital.
- We continue our interdisciplinary orthotic (bracing) clinic to assist patients with complex bracing needs.
- We provided 118 telehealth visits in 2014/15 to patients who are unable to travel to the HRM for assessment and follow up care;
- A major fundraising campaign launched by the QEII Foundation raised over \$2.5 M in 2014/15 for re-construction of our therapeutic pool and construction of two new activity of daily living suites.

Our Education:

- Our Brain Injury Program, together with sponsorship from the QEII Foundation, Dalhousie's HEALS program, the Robert Pope Foundation, the Centre for Art Tapes and the Royal Society of Canada created a documentary film, "Strategies of Hope", with filmmaker Ariella Pahlke. Using a variety of art forms, the film explores the effects of a stroke or brain injury and share strategies for recovery. It was screened at the Atlantic Film Festival in 2014, and will be used for brain injury awareness and patient and family education. The full documentary can be viewed at: <http://www.cdha.nshealth.ca/news/strategies-hope-watch-full-length-documentary>.

Welcome Aboard to:

- Dr. Julie Millard, a new faculty member from Toronto, Ontario, who joins us on a part time basis, while also establishing a private physiatry practice in HRM.

Dr. Christine Short, Division Chief



Sonja McVeigh, physiatrist

For Dr. Sonja McVeigh, Parkinson's disease is personal. Her mom was diagnosed with the disease seven years ago, a fact that has strengthened Dr. McVeigh's resolve to develop a better treatment model for Parkinson's disease in Nova Scotia.

"We have local highly trained neurologists who diagnose Parkinson's disease and have expertise in managing medications for its many symptoms, but given that Parkinson's affects a number of motor and non-motor functions, these wide-ranging symptoms could be optimally managed by several health care providers who are providing that care in a collaborative manner," says Dr. McVeigh, physiatrist and associate professor of medicine.

At a recent international conference, Dr. McVeigh was inspired by evidence that an interdisciplinary approach is the emerging trend in Parkinson's management globally. Soon after, she set about to establish an interdisciplinary Parkinson's disease clinic at the Nova Scotia Rehabilitation Centre in Halifax.

The first Interdisciplinary Parkinson's Disease Clinic was offered in July 2015. "We're still in the early stages and currently have the capacity to have one clinic a month. It is hoped we'll be able to expand the clinic in the future," says Dr. McVeigh.

At the clinic, various healthcare providers work collaboratively to address each patient's identified goals. In addition to Dr. McVeigh, the team includes a neurologist,



speech language pathologist, nutritionist, occupational therapist, and physiotherapist. The clinic also accesses the services of a neuropsychologist, and hopes to bring in a social worker in the future.

Patients are referred by neurologists. "We receive our referrals through the Movement Disorders Clinic and also work closely with the clinic," says Dr. McVeigh.

The Interdisciplinary Parkinson's Disease Clinic addresses all aspects of the disease. "The patient has access to a variety of health care providers at one visit. For example, the patient might identify swallowing or speech as an issue, so the speech language pathologist will do an assessment and make recommendations at that visit," explains Dr. McVeigh. "Or, the team may identify a patient's bowel dysfunction for which the physiatrist may have management suggestions, and is able to ensure the bowel medications recommended do not interfere with the medications provided by the neurologist. It is simply better patient care through an integrated approach."

Division Physicians: Edwin Hanada • Brenda Joyce • Lee Kirby • George Majaess • Sonja McVeigh • Julie Millard • Anita Mountain • Amra Saric • Christine Short

RESPIROLOGY

HIGHLIGHTS

Our Patient Care:

- Wait times for patients with sleep disorders have markedly improved with the addition of a part time sleep specialist, Dr. Gosia Phillips, in the Sleep Clinic.
- To ensure appropriate and timely access to care, the Division runs a successful “Rapids” Respiriology Clinic for urgent and semi-urgent referrals.
- The Canadian Foundation for Healthcare Improvement (CFHI) and Boehringer Ingelheim have launched a pan-Canadian initiative in 19 centres following the INSPIRED COPD Program, under the medical direction of Dr. Graeme Rocker, as a leading practice model for service delivery.
- The Cystic Fibrosis clinic, under the direction of Dr. Nancy Morrison, has been awarded a clinical incentive grant by Cystic Fibrosis Canada to provide care to adult patients with cystic fibrosis.

Our Research:

- Swati Bhatawadekar successfully completed the requirements for a PhD in Biomedical Engineering (thesis: airway impedance, heterogeneity, and variability in adult asthma) under the supervision of Drs. Geoff Maksym and Paul Hernandez.

Our Team:

- Continues to work to improve our teamwork, communication, and overall quality of patient care and academic activities. A series of successful mini strategic planning retreats were conducted.

Congratulations to:

- Dr. Paul Hernandez for being appointed chair, Royal College examination respirology committee.
- Dr. Colm McParland, on being promoted to Professor of Medicine.
- Brittany Newell, Pulmonary function technologist, on success in the national certification examination for the Canadian Cardiopulmonary Technologists.

Welcome Aboard to:

- Dr. Mohammed Fahim, who is working as a locum.
- Brittany Newell, who has been appointed to a full time Pulmonary Technologist position.

A Fond Farewell to:

- Dr. Roger Michael, who retired from the practice of Respirology in June 2014.

Dr. Paul Hernandez, Division Chief



Dr. Meredith Chiasson, respirologist

Dr. Meredith Chiasson likes it when things go wrong because there is not usually as much to learn when things go right.... And things never go right at 2 in the morning. The respirologist and assistant professor of medicine leads simulation sessions for internal medicine residents aimed at improving their capacity to care for critically ill patients.

“Simulation is more real than many people think. My hope with these sessions is to expose residents to the things that can go wrong in a safe and supportive environment so that they acquire and practice the skills they will need when faced with the real thing,” says Dr. Chiasson.

The simulation sessions include a pre-brief where residents are advised of what to expect and the intended learning outcomes, and a post brief. The post brief enables residents to express how they are feeling, analyze the critical moments and discuss what crisis resource management skills they can implement in comparable situations.

“Simulation hopefully takes residents through the fire and then walks them back out safely again,” says Dr. Chiasson. “Many of the crisis resource management skills I teach in simulation can be applied to most other areas in medicine and even in one’s personal life. It boils down to knowing your resources, thinking clearly and communicating effectively.”

Simulation is considered highly valuable in medical education and its use is growing at all levels in medical schools across Canada, including Dalhousie. “Though not always applicable, simulation is considered the safest way to learn the skills and competencies required for direct patient care,” says Dr. Chiasson.

Division Physicians: Dennis Bowie • Meredith Chiasson • Mohammed Fahim • Paul Hernandez • Colm McParland • Debra Morrison • Nancy Morrison • Gosia Phillips • Scott Rappard • Graeme Rocker



Large photo: Dr. Meredith Chiasson, respirologist and Ms. Donna Warren, Simulation Program Coordinator for Central Zone. Small photo: respirology patient, Jessica Best-Grant.

In addition to her work with residents, Dr. Chiasson has also been involved with simulation at PIER 4 (medical students) and will teach fellow Dalhousie faculty members as part of a simulation workshop in 2015. The workshop is part of Dalhousie’s efforts to increase the number of faculty members who have formal training in simulation. Dr. Chiasson has completed both the Acute Critical Events Course (ACES) and the Simulation Educators Training (SET) offered by the Royal College of Physicians and Surgeons of Canada. She credits Dr. Babar Haroon, director of simulation, for inviting her to be a part of the simulation group at the QEII Health Sciences Centre.

RHEUMATOLOGY

HIGHLIGHTS

Our Patient Care:

- Due to physician manpower resources, our referrals remain preferentially biased to those patients with inflammatory arthritis and autoimmune rheumatic diseases or those for whom there is diagnostic uncertainty.

Our Research:

- Dr. Hanly remains the only member with protected research time. He continues to be lead investigator in a CIHR funded international study in CNS Lupus.
- Drs. Sutton, Bakowsky and Taylor participate in national research groups in scleroderma, vasculitis and spondyloarthropathies respectively.

Our Teaching:

- Dr. Wong is a case based tutor. Dr. Bakowsky is the unit head for the MSK/Dermatology block. All members contribute to the MSK clinical skills teaching, undergraduate and postgraduate OSCEs and academic half days for clinical clerks, family medicine residents and internal medicine residents.

Our Team:

- We have four full-time and four part-time community based rheumatologists working in the division along with one family practitioner who has advanced training in rheumatology.
- One ward aide, two licensed practical nurses and two 0.8 RNs work cooperatively with the rheumatologists in the clinics.
- Multidisciplinary clinics run on Tuesday and Friday mornings with nursing, physiotherapy and the GP specialist, supervised by Dr. Sutton.
- One part time medication resource specialist assists with patients obtaining pharmaceutical coverage for Rituximab. This is part of a larger project involving private infusion clinics, co-pay assistance and compassionate coverage from industry.
- Three full-time research staff support our clinical research program.

A Fond Farewell to:

- Dr. Alexa Smith who accepted a position in Saint John, New Brunswick.

Dr. Evelyn Sutton, Division Chief

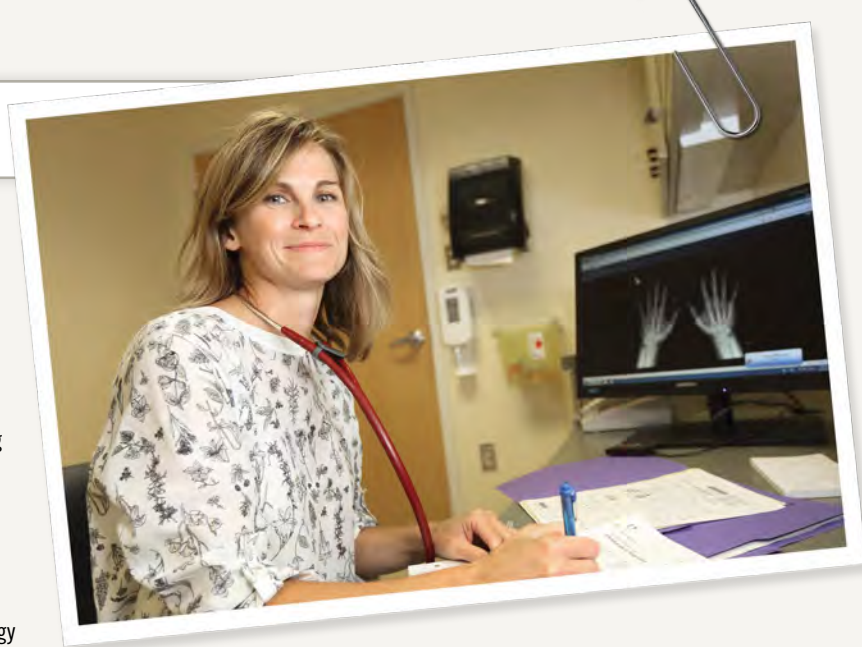


Dr. Elana Murphy, rheumatologist

Dr. Elana Murphy is among a cohort of young physicians recently recruited to the Department of Medicine who bring with them fresh perspectives, bright ideas and a contagious enthusiasm for the care they deliver. The rheumatologist and assistant professor of medicine joined the Division of Rheumatology part-time in July 2014 after having completed her rheumatology training at Dalhousie University. At that time, she also set up a private rheumatology practice in Halifax.

"My private practice was full-time, but I also wanted to be active in an academic centre, participating in teaching and research. Working part-time in the division allowed for this opportunity and the experience of both private and academic practice," notes Dr. Murphy. "It also enabled me to reflect on my career goals and where I most wanted to practice moving forward, which led me to join the division full-time earlier this year when a position came available."

"Though I enjoyed having a private practice, particularly the control and flexibility it affords, and benefitted from navigating the steep learning curve at the outset, I am very excited by the academic opportunities available to me within the Division," says Dr. Murphy. And although the clinical aspects of her work as part of the Division are similar to those of her private practice, she has increased her academic activity to include more teaching of medical students and residents, and research.



Dr. Murphy is currently collaborating with colleague, Dr. John Hanly, rheumatologist and professor of medicine, on an international study of lupus, an autoimmune disease in which the body's immune system mistakenly attacks healthy tissue. The aim of the study is to validate an algorithm in an international cohort of cases that would assist with attribution of neuropsychiatric events to underlying disease.

While Dr. Murphy has a keen interest in medical education and research, her primary role as a physician is undoubtedly to deliver the highest quality patient care. As part of the Division, she provides ambulatory and consultative rheumatology care to people in Halifax and across Nova Scotia.

Dr. Murphy earned her MD at Dalhousie University and completed her internal medicine residency and rheumatology training in the Department of Medicine. She joined the Division of Rheumatology full-time in June 2015.

Division Physicians: Volodko Bakowsky • John Hanly • Juris Lazovskis • Elana Murphy • Souad Shatshat • Emily Shaw • Evelyn Sutton • Trudy Taylor • Jill Wong

SAINT JOHN NB

HIGHLIGHTS

Our Patient Care:

- Saint John Regional Hospital recently kicked off our “Smoke Free Together” campaign. Cardiologist, Dr. Robert Stevenson and his team have worked diligently over the past 2 ½ years to make the Saint John Regional Hospital a smoke-free environment for the health and safety of all our patients, staff and visitors. Resources such as smoking cessation and/or nicotine withdrawal management will be provided through Horizon’s Employee Health and Wellness Department for staff who wish to quit.

Our Team:

- We presently have 2 physicians with academic billing numbers, and we are actively recruiting for a third in Infectious Diseases and hope to have a 4th physician approved for General Internal Medicine shortly. Twenty-eight academic billing numbers were provided to the Associate Dean DMNB, in order to recruit new physicians to New Brunswick to support our teaching mission. Each position comes with the requirement to provide 0.3 FTE teaching. Drs. Alexa Smith and Elizabeth Zed are the first two physicians recruited under this arrangement.
- We are very pleased to welcome Dr. Alexa Smith, a rheumatologist, to the Saint John campus. Her practice will include treating patients with inflammatory arthritis, connective tissue diseases and vasculitis. She is an assistant professor at DMNB and is currently completing her master’s degree in education. In addition to being a clinical skills and tutorial group leader, she is the Pier IV DMNB Head. Pier IV is the final block in medical school, and focuses on preparing students for the transition to residency.
- Dr. Elizabeth Zed started her practice in Hematology/Internal Medicine in August of 2014 and is an assistant professor with the Dalhousie University and Memorial University Faculties of Medicine. Dr. Zed is actively involved with numerous teaching activities. This fall she will begin a term as the clinical faculty DMNB representative on the Faculty Development Program Committee, and looks forward to continuing these commitments and adding other opportunities to contribute to DMNB for years to come.
- Our resident complement in 2015/16 included 10 core Internal Medicine residents.

Dr. Paul Sohi, Department Chief



Dr. Terrance Comeau, hematologist

More than 25 people received high-dose chemotherapy to combat cancer at the Saint John Regional Hospital within the last year. This was possible because Dr. Terrance Comeau returned to his hometown to start the New Brunswick Stem Cell Transplantation Program.

Stem cell transplantation helps patients with cancer recover from high-dose chemotherapy. Healthy stem cells, which are extracted before treatment and then injected after treatment, help rebuild the patient’s immune system destroyed by the chemotherapy.

Dr. Comeau is a hematologist who subspecializes in transplantation. Before joining the Department of Medicine at the Saint John Regional Hospital in 2008, he spent nearly 15 years in North Carolina, where he established a new Blood and Marrow Stem Cell Transplantation Program at the Brody School of Medicine and later enabled the stem cell transplant program at the University of North Carolina in Chapel Hill to become accredited by the Foundation for the Accreditation of Cellular Therapy (FACT).

He applied those experiences to initiate a pilot transplantation program in New Brunswick in 2009. Three stem cell transplants were done in the province that year. Since then, about 110 people have received stem cell transplants through the New Brunswick Stem Cell Transplantation Program.

Division Physicians: Anil Adisesh • Oriano Andreani • Amelia Barry • Colin Barry • Kathy Baxter • Ricardo Bessoudo • David Bewick • Graham Bishop • Dylan Blacquiere • Margot Burnell • Tania Chandler • Alan Cockram • 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 • Phillip Reid • Anthony Reiman • Elizabeth Rhynold • Ewa Sadowska • Greg Searles • Alexa Smith • Paul Sohi • Robert Stevenson • Glen Sullivan • Robert Teskey • Satish Toal • Mark Tutschka • Duncan Webster • Chadwick Williams • Elizabeth Zed



The majority of people who receive high dose chemotherapy and thus stem cell transplants have been diagnosed with multiple myeloma. Those with lymphomas and leukemia also receive the treatment and therapy.

“Before we established the program, people in New Brunswick received stem cell transplants in Halifax. It was difficult for patients and their families, particularly to leave their support system in their home province. It also wasn’t sustainable. The number of people eligible for stem cell transplantation has increased over time as supportive care treatment modalities have improved. People in their early 70s can now receive stem cell transplants whereas the maximum age would have been just over 60 years not long ago,” says Dr. Comeau.

A next step in the evolution of the transplantation program is to become an accredited transplantation centre through FACT, for which Dr. Comeau has been an inspector. Another is the exploration of opportunities to use apheresis and transplantation therapies in the treatment of other diseases.

In 2014/15 there were **141.2** FTE physicians in Department of Medicine's **15** divisions. All are faculty members with Dalhousie University's Faculty of Medicine.

Clinical Care

- DoM physicians provided inpatient care for a total of 108,589 bed days at the QEII & VG sites.
- 16,716 inpatient consultations were provided.
- 146,622 ambulatory patient visits to clinics.
- 18,171 registered chart checks and phone consultations provided by DoM physicians.
- Geriatricians and Palliative Medicine physicians provided and/or supervised 2,472 home visits.
- 2,440 cardiac catheterizations performed and an additional 1,618 PCIs performed by interventional cardiologists.
- 85,821 ECGs performed.
- 6,300 Stress Tests and 4,071 holter monitors and loops.
- 650 pacemakers, AICDs and BIVs inserted.
- 381 cardiac electrophysiology studies and ablations performed.
- 13,205 cardiac echos performed.
- 9,666 patients were treated in Dermatology Phototherapy Unit.
- 6,242 endoscopies performed by Gastroenterologists.
- 11,308 hematology procedures performed in Medical Day Unit.
- 102 bone marrow transplants performed.
- 39,007 hemodialysis procedures performed in Central Zone.
- 796 acute hemodialysis procedures performed on inpatients.
- 7,681 chemotherapy treatments provided in Central Zone.
- 2,132 EMGs performed
- 1,393 EEGs performed
- 1,879 telemedicine consultations by dermatologists and physiatrists.
- Satellite clinics are provided by Geriatric Medicine, Hematology and Medical Oncology.



Education & Research

- DoM has a total of 108 residents; 44 Core Internal Medicine (Halifax based) 10 Core Internal Medicine (Saint John, NB based); 54 sub specialty residents.
- DoM faculty provided 932 hours teaching the Skilled Clinician series and 88 hours teaching Rotating Electives for Med 1 students.
- DoM faculty provided 760 tutor hours for Med 1, 2 & 3 Case Base Learning, and 108 hours teaching Med 3 Wednesday seminars. 29.5 hours were spent by DoM faculty teaching the Med 2 to 3 IMU link.
- Med 2 Teaching for Cardiology, Musculoskeletal, Neuro, Respiratory and Consolidated Clinical Skills totaled 1,146.5 hours provided by DoM faculty.
- DoM faculty provided 114 hours acting as examiners for Med 2 & 3 student's clinical exams (OSCE's).
- A total of 575 two and four week undergraduate electives were provided by DoM faculty in a variety of divisions in 2014/15.
- DoM Faculty taught for a total of 105 hours at Academic Half Day in 2014/15.
- A total of 729 four-week clinical rotations were supervised by DoM faculty for postgraduate trainees (residents) in 2014/15, including 203 rotations for non-medicine Dalhousie residents and 24 rotations for non-Dalhousie residents.
- DoM faculty received a total of \$16,017,926 in research funding in 2014/15, including Industry/Contract funding of \$12,402,783 and grants totaling \$6,404,721.
- 162 DoM faculty were involved in presentation of 114 abstracts at International medical conferences; 115 faculty presented 50 abstracts at national conferences, and 116 faculty presented 41 abstracts at local conferences.
- 8 peer reviewed and 2 non peer reviewed book chapters and review articles were published by DoM faculty in 2014/15.
- 1 peer reviewed book/monograph was published in 2014/15, and 7 non-peer reviewed.
- 1 patent was issued and 1 applied for.
- 4 non-peer reviewed letters to the editor or editorials were published.
- 237 peer reviewed papers were published and 3 non-peer reviewed papers were published.
- 18 PGY1 residents completed a mandatory research methodology course in 2014/15.



- For more detailed information regarding the academic and administrative deliverables provided by Department of Medicine, please see the **Faculty, Academic and Administrative Monograph 2014/15** on our website:
<http://www.medicine.dal.ca/departments/departments-sites/medicine/about/annual-reports.html>
- For detailed information related to specific clinical activities provided by Department of Medicine Divisions, please see the **Compendium of Divisional Activity 2014/15** on our website:
<http://www.medicine.dal.ca/departments/departments-sites/medicine/about/annual-reports.html>
- For up-to-date guidelines and processes for referring patients to Department of Medicine specialists in all Divisions, please see the Department of Medicine Triage Process and Wait Time Standards for Ambulatory Care on our website:
<http://www.medicine.dal.ca/departments/departments-sites/medicine/patient-care/for-referring-physicians.html>
- To review current wait times for ambulatory care (updated quarterly on Jan 31, Apr 30, July 31 and Oct 31), please see our website:
<http://www.medicine.dal.ca/departments/departments-sites/medicine/patient-care/for-referring-physicians.html> or <http://waittimes.novascotia.ca/>



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