



2020 Review

Department of Medicine

2019 - 2020 ANNUAL REPORT



UNIVERSITY OF
CALGARY

Department of Medicine

geographic scope

The Department of Medicine is located in the Alberta Health Services – Calgary Zone and at the Cumming School of Medicine, University of Calgary.

The Department serves a catchment of 2.4 million residents of Southern Alberta, Southeastern British Columbia and Southwestern Saskatchewan. Department Members are located at 8 medical sites across Calgary, including the Foothills

Medical Centre (FMC) and UCalgary Foothills Campus, Peter Lougheed Centre (PLC) and Sunridge Landing, Rockyview General Hospital (RGH), South Health Campus (SHC), Richmond Road Diagnostic and Treatment Centre (RRDTC), Sheldon M. Chumir Health Centre, Bridgeland Seniors Health Centre, and the Associate Clinic, Gulf Canada Square.

"MEOC brought together a multi-specialty team of physicians, operational leaders and support staff to rapidly design, test and implement a comprehensive acute care COVID-19 pandemic physician workforce plan."

Dr. Gabriel Fabreau, assistant professor and MEOC lead

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\$21.7M

in total research revenue, including \$5.6M in CIHR revenue and \$8.7M in clinical research revenue

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PARENT ORGANIZATIONS

The Department of Medicine exists as a Department within both Alberta Health Services (AHS) and the University of Calgary (UCalgary). To reflect this unique dual-organizational structure, both AHS' and the UCalgary's logos and colour palettes are featured in balance throughout this Report.

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54,377

outpatient clinic referrals received by Central Access & Triage (CAT) and Seniors Health One-line

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16K

inpatients attended in the four Calgary Adult Hospitals

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"Representation matters. Equity, inclusion and diversity are vital for high quality and innovative patient care."

Dr. Doreen Rabi, professor and division head / section chief, Endocrinology & Metabolism

5 THINGS YOU SHOULD KNOW ABOUT THE DEPARTMENT OF MEDICINE

Conquering the COVID-19 Pandemic

Our members are committed to providing patient-centered care and quality medical education throughout the pandemic. This has included providing care to those directly impacted by the COVID-19 virus, as well developing innovative ways to continue to provide care to patients with a variety of medical issues. Dr. Erika Dempsey was appointed the first vice chair of Virtual Health, tasked with helping the department move forward with innovative ways to effectively deliver patient care virtually.

Dr. John Conly, former head of the Department of Medicine and a leader in IP&C (Infection, Prevention and Control) within the Calgary zone, has been contracted by the World Health Organization (WHO) to help lead their international efforts related to the pandemic. A number of our members have also received CIHR funding focused on COVID-19 rapid research, including Drs. Eliana Castillo, Gabriel Fabreau, Zahra Goodarzi, Gilaad Kaplan, Paul Kubes, Michael Parkins, and Jason Weatherald.



Leading the way in creating an Inclusive Healthcare Environment within Alberta

The department formed an Equity & Diversity working group in 2019, co-chaired by Drs. Shannon Ruzzycki and Jayna Holroyd-Leduc and made up of membership from across the sections/divisions. This committee was formed in response to the department's gender equity study and report led by Drs. Shannon Ruzzycki and Aleem Bharwani. This working group was tasked with supporting the implementation of the

associated departmental equity action plan. This has included the incorporation of EDI (equity, diversity, inclusion) rounds within Medical Grand Rounds, the development of an inclusive language policy for all presenters at department sponsored rounds, and the education of departmental leaders about unconscious bias, just to name a few of the changes implemented to date.





Powerful Partnerships and Leadership

One of the core tenets of the Department of Medicine is that collaborative, interdisciplinary teams are essential for providing high quality patient-centered medical care to all Albertans. We have close working relationships with other departments, including Community Health Sciences, Cardiac Sciences, Oncology and Family Medicine, as well as with the University of

Calgary research institutes and the operational leadership within Alberta Health Services (AHS). Our members are also extensively involved within the AHS provincial Strategic Clinical Networks (SCNs). Our members hold 143 leadership roles outside of the department: 90 within Alberta Health Services and 53 within the University of Calgary.



Promote Wellness among Healthcare Providers

The Department of Medicine has been a leader in promoting wellness and resiliency among healthcare providers. Physician wellness is an important quality indicator of healthcare systems, and a shared responsibility between individual physicians and the healthcare systems. Dr. Jane Lemaire, vice chair of Physician Wellness

and Vitality, has led in the development of the Department of Medicine Career Adaptation guideline and the development of the department's PEER Support team, which are both focused on wellness promotion. Dr. Lemaire is now the physician lead for Well Doc Alberta, helping to promote wellness among physicians across Alberta.



Educating the Next Generation

Our Mandate is to educate, train and mentor medical learners who have the potential to become leaders within the healthcare system and/or academic leaders in medicine and related fields:

identify them; educate, train and mentor them; support them to realize their career goals and ultimately recruit them as the medical leaders of tomorrow.

RESPONDING TO A PANDEMIC: DESIGN & IMPLEMENTATION OF A COVID-19 PHYSICIAN WORKFORCE PLAN

On March 17, 2020, the Alberta provincial government declared a public health emergency in response to the global COVID-19 pandemic. Initial data indicated that the majority of cases were occurring within the Calgary Zone. Emerging reports from hard-hit areas, such as Lombardy, Italy and New York City, USA showed that the pandemic had the potential to quickly overwhelm health care system capacity.

The Calgary Zone pandemic response included four capacity stages with corresponding expansions in acute care and critical care bed capacity and cohorting of patients with suspected or confirmed COVID-19. Physician workforce planning was delegated to zone clinical department heads, who were expected to address the surge in acute care demand while maintaining pre-existing acute care and ambulatory clinical services.

“In anticipation of rapidly increasing demand for inpatient COVID-19 care, we faced a critical need to expand the internal medicine acute care physician workforce,” says Dr. Jeffrey Schaefer, MD. “The Department of Medicine worked within and contributed to the AHS effort through its support of the Calgary Zone Emergency Operation Centre (ZEOC) and the Emergency Command Centre (ECC). Collaboration with Medical Affairs was also a key component of our response.” Dr. Schaefer and Dr. Kelly Zarnke, MD MSc, the interim zone clinical and academic department heads, respectively, oversaw the Medicine Emergency-Pandemic Operations Command (MEOC) for the Department of Medicine.

“MEOC brought together a multi-specialty team of physicians, operational leaders and support staff to rapidly design, test and implement a comprehensive acute care COVID-19 pandemic physician workforce plan for hospitalized, non-ventilated patients with confirmed or probable COVID-19 across multiple hospital sites within Calgary,” says Dr. Gabriel Fabreau, MD MPH. Led by Dr. Fabreau, Dr. Aleem Bharwani,

MD MPP, Dr. Evan Minty, MD MSc, and Dr. Sachin Pendharkar, MD MSc, MEOC comprised a total of 31 internal medicine physicians, the Department of Medicine’s zone clinical department manager and project coordinator, and two clinical trainees with experience in military disaster response and logistics.

“The MEOC Pandemic Plan is a rapidly scalable, sustainable, and safe pandemic physician workforce plan developed by the cumulative efforts of many physicians within an academic department of medicine in partnership with a provincial health system,” says Dr. Bharwani. The plan was developed and implemented from March 20 to May 31, 2020.

“In anticipation of rapidly increasing demand for inpatient COVID-19 care, we faced a critical need to expand the internal medicine acute care physician workforce.”

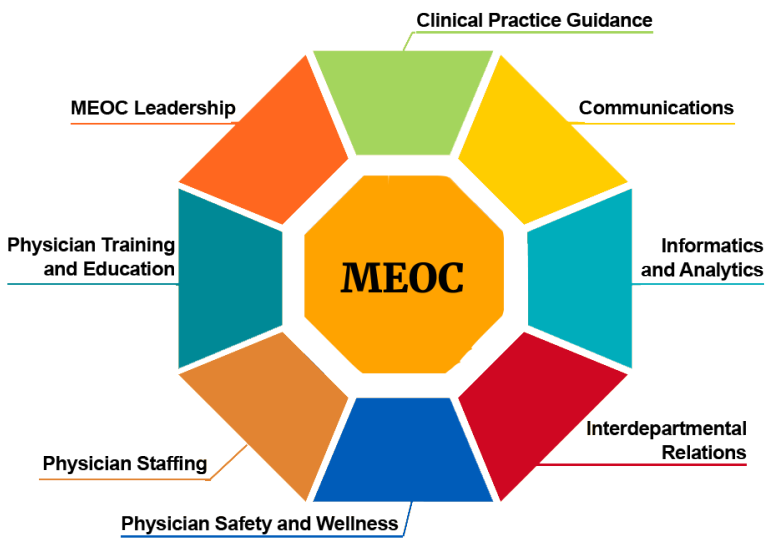
Dr. Jeffrey Schaefer

MEOC LEADERSHIP

Interim Department Heads	MEOC Leads
Jeffrey Schaefer	Gabriel Fabreau
Kelly Zarnke	Aleem Bharwani
	Evan Minty
	Sachin Pendharkar
Zone Clinical Department Manager	Project Coordinator
Wendy Desjardins-Kallar	Angela Hunter



MEDICINE EMERGENCY-PANDEMIC OPERATIONS COMMAND (MEOC)



In Command: Kerri Johannson
2IC*: Leanne Reimche
Members: Kristen Brown, Zahra Goodarzi, Glen Hazlewood, Tara Lohmann, Sofia Ahmed, Leslie Skeith, Alain Tremblay, Kristen Fraser, Selena Au, Doreen Rabi



CLINICAL PRACTICE GUIDANCE

MEOC's Clinical Practice Guidance (CPG) working group synthesized rapidly emerging evidence to produce guideline documents and clinical pathways for use by frontline physicians. These efforts were complemented by AHS' COVID-19 Scientific Advisory Group which provided rapid literature reviews in response to specific clinical questions. The CPG group also supported COVID-19 research efforts for active clinical trials. Dr. Sofia Ahmed, MD led the coordination of COVID-related research study communications, with the support of Drs. Doreen Rabi, MD MSc, Dr. Kerri Johannson, MD MPH, and Dr. Jayna Holroyd-Leduc, MD. The objectives of this working group were to provide evidence-based clinical guidance for the management and treatment of hospitalized patients with COVID-19.



COMMUNICATIONS

Outbound communications were provided through a 'MEOC Resources' website, a MEOC Daily Bulletin, and multiple online webinars. A streamlined process for inbound communications from clinicians to MEOC leaders included a dedicated email address for general feedback and an online feedback form sent to frontline physicians to complete after COVID-19 care shifts. The Communications team presented aggregated reports bi-weekly to MEOC executive, quality improvement teams, and site leaders to facilitate rapid response to frontline issues. Emerging issues were tracked via an online 'issues-tracker' to organize, delegate, and respond to challenges that arose throughout implementation.

In Command: Paul Gibson
2IC: Meghan Elliott
Members: Adam Papini, Stephanie Smith, Angela Hunter



In Command: Evan Minty
Members: Ryan Lenz, Meghan Vlasschaert

INFORMATICS AND ANALYTICS

To facilitate efficient clinical documentation, MEOC created standardized admission and hospital care (including clinical trials) order sets within the local electronic medical record (EMR) (Sunrise Clinical Manager™, Allscripts LLC). Physicians were encouraged to adopt a hybrid documentation model that replaced written clinical progress notes with a summative electronic discharge summary. To support this transition, MEOC members created standardized COVID-19 EMR templates. Physician workload estimates, obtained using hospital and Pod team censuses and COVID-19-related admission, transfer, and discharge activity in an online dashboard (Tableau™, Tableau Software LLC), were used to match workforce supply and Pod team deployment across hospitals to existing and anticipated demand. Inpatient census and empirically derived epidemiologic COVID-19 models projected anticipated two-week Pod Team physician deployment needs.

* Second in Command

1,501

VISITS TO THE MEOC RESOURCES WEBSITE



In Command:
Jane Lemaire

2IC:
Shannon Ruzyski

PHYSICIAN SAFETY AND WELLNESS

The Safety and Wellness team, under the leadership of Dr. Jane Lemaire, MD curated an up-to-date list of logistic supports for physicians at each hospital, including nutrition services, rest areas, nap rooms, and availability of scrubs. Hospital leaders were engaged to identify and address deficiencies based on the projected number of physicians per site.

To support physician wellness, MEOC leveraged existing relationships with

institutional and provincial programs, including Well Doc Alberta, which had developed pandemic-specific physician resources.¹ These resources were curated on the MEOC website, and physician wellness tips were included in MEOC Daily Bulletins. Leaders were encouraged to consider physician deployment through a lens of diversity, equity and inclusion, considering personal health issues and life situations.



In Command:
Paul MacMullan

2IC:
Kim Cheema
Parabhdeep Lail

Members:
Nimira Alimohamed
Thomas Allen
Jayna Holroyd-Leduc
Ward Flemons
Fiona Dunne
Ian Scott

INTERDEPARTMENTAL RELATIONS

In partnership with other frontline clinical departments (Emergency Medicine, Critical Care, Family Medicine, Infection Prevention & Control (IPC)) MEOC developed standardized clinical care algorithms for efficient admission, transfer, and discharge of patients with COVID-19. Protocols guided care escalation or de-escalation and consultation of appropriate services (e.g. ICU vs medical teams, internal medicine vs. family medicine). These processes aimed to support safe, rapid, and evidence-based decisions standardized

across hospitals and easily used by both expert and non-expert acute care physicians. Finally, resource bundles integrated ambulatory services with inpatient care algorithms to ensure clinicians connected patients with post-hospital care and community resources (e.g., assisted isolation hotels for patients with insecure housing).

Dr. Holroyd-Leduc, Dr. Schaefer, or Dr. Zarnke reported on physician preparedness and patient care activities to the ZEOC Calgary Planning Meetings that were held daily for

much of March and April. Schaefer also participated in an Internal Medicine committee that responded to requests from ECC (e.g. development of admission and discharge pathways). Physician champions from the department's infectious diseases and respiratory medicine subspecialties also supported the Calgary zone and province either directly or through the Strategic Clinical Networks (SCNs).

MEOC – a multi-specialty team of physicians, operational leaders, and support staff – designed, tested, and implemented a comprehensive, rapidly scalable, sustainable, and safe pandemic physician workforce plan for hospitalized, non-ventilated patients with COVID-19

Members:
Ghazwan Altabbaa
Alejandra Boscan
Ryan Lenz
Meghan Vlasschaert



PHYSICIAN TRAINING & EDUCATION

848

"PRACTICE READY" PHYSICIANS
VOLUNTEERED TO PROVIDE CARE
ON COVID-19 INPATIENT UNITS IN
THE CALGARY ZONE

PHYSICIAN STAFFING

Pod and Shift Structure

A physician Pod team structure was developed in which an experienced acute care physician (Pod Lead) would support up to three non-acute care physicians (Pod MDs), each managing up to 15 inpatients. This structure could rapidly expand acute care physician capacity and distribute acute care and subspecialty expertise across many patients. The model included a “COVID liaison” physician, an indirect patient care role that coordinated patient admissions and transfers between COVID-19 units and the Emergency Department, Intensive Care Unit or

community hospitals.

To reduce physician fatigue and risk of errors in the use of personal protective equipment (PPE), Pod teams were scheduled in eight-hour shifts for up to four consecutive days with at least three days off.^{2,3} The Plan incorporated a 25% back-up physician buffer for illness or isolation, based on experiences from other jurisdictions.^{4,5,6}

Physician Recruitment, Onboarding and Remuneration

MEOC developed a standardized recruitment process to rapidly deploy Pod physicians if inpatient

- • *PPE Training and Simulation*

Medical education experts within MEOC developed a three-part PPE course comprising of: an interactive mastery-based online certification module in the University of Calgary Office of Continuing Medical Education and Professional Development (CME&PD); an in-person buddy-system session supervised by IPC specialists where participants practiced donning and doffing PPE; and a high-fidelity patient care simulation session focused on appropriate PPE selection and use amidst additional physical, emotional, and cognitive stressors.

Orientation and Hospital Onboarding

Multiple supports were developed to aid physicians deployed to unfamiliar hospitals or those with less expertise in acute care. Resources developed included: identifying hospital-specific orientation champions, training videos, and logistical information; EMR tool training sessions; and quick reference guides for common acute care internal medicine presentations. Prior to scheduled shifts, Pod MDs were invited to complete orientation shifts shadowing Pod leads on COVID-19 units or traditional inpatient medical services.

In Command:
Caley Shukalek

2IC:

Anna Purdy

Members:

John Walsh

Ralph Hawkins

Brendan Kerr

Troy Pedersen
Craig Dew



2. National Institute for Occupational Safety and Health, Occupational Safety and Health Association. Preventing worker fatigue among Ebola healthcare workers and responders. Washington (DC): National Institute for Occupational Safety and Health; 2015 p. 1–4.

3. Dai H, Milkman KL, Hofmann DA, Staats BR. The Impact of Time at Work and Time Off from Work on Rule Compliance: The Case of Hand Hygiene in Health Care. *J Appl Psychol*. 2015;100(3):846–62.

4. Barrett ES, Horton DB, Roy J, Gennaro ML, Brooks A, Tischfield J, et al. Prevalence of SARS-CoV-2 infection in previously undiagnosed health care workers at the onset of the U.S. COVID-19 epidemic [Internet]. *Infectious Diseases (except HIV/AIDS)*; 2020 Apr [cited 2020 Jun 15]. Available from: <http://medrxiv.org/lookup>

doi/10.1101/2020.04.20.20072470

5. Bellizzi S, Fiamma M, Arru L, Farina G, Manca A. COVID-19: The daunting experience of healthcare workers in Sardinia, Italy. *Infect Control Hosp Epidemiol*. 2020 Apr 20;1–2.

6. Chirico F, Nucera G, Magnavita N. COVID-19: Protecting Healthcare Workers is a priority. *Infect Control Hosp Epidemiol.* 2020 Apr 17;1–1.

ADMINISTRATIVE
SUPPORT

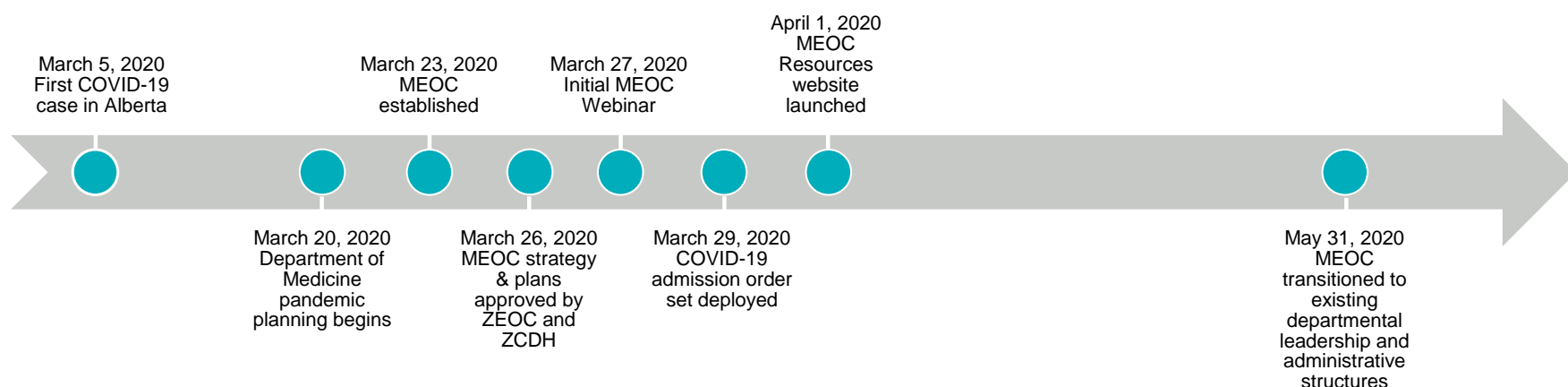
MEOC was fortunate to be supported by a stellar team of administrative support staff.

Brandy Schreyer
Christopher Jappert
Craig Day
Jovena Borisenko*
Nathan Porter
Lanza D'Silva
Robbie Ovendon
Rylan Weist
Sandy Hafez
Tara Miller
*no picture



Department of Medicine
PERFORMANCE SCORECARD

MEOC COMPONENT	OUTCOME
Clinical Practice Guidance	<ul style="list-style-type: none">1,501 visits to MEOC Resources website1,118 visits to MEOC Hospital Care Guidelines page
Communications	<ul style="list-style-type: none">609 MEOC Daily Bulletin recipients2,599 webinar attendees45 feedback forms
Informatics and Analytics	<ul style="list-style-type: none">319 uses of order set (65% of admissions to internal medicine COVID-19 units)
Interdepartmental Relations	<ul style="list-style-type: none">6 clinical algorithmsNew COVID liaison roleDaily care checklist
Physician Safety and Wellness	<ul style="list-style-type: none">50 visits to MEOC Resources wellness page*
Physician Training and Education	<ul style="list-style-type: none">PPE training completed:<ul style="list-style-type: none">975 online module (1,276 enrolled)227 in-person training & simulation64 users completed SCM Online Training
Staffing	<ul style="list-style-type: none">1,446 volunteers848 'practice-ready' physician volunteers: 828 actively licensed, 20 retired93 physicians completed Pod shifts (65 Pod Leads, 28 Pod MDs)



MEOC Timeline

Many of MEOC's successes depended upon a strong partnership between Alberta Health Services – Calgary Zone and the University of Calgary Cumming School of Medicine. Early success with recruitment and demand-based staffing was facilitated by collaboration with other local groups, including the department's administrative staff; other clinical departments; health system data analysts; and health informatics teams. Academic expertise of MEOC team members included multi-specialty clinical care; health services, clinical and policy research; disaster medicine; operations management; health analytics and informatics; medical education; physician wellness; and, quality improvement. This collective expertise facilitated rapid synthesis of evidence and best practices to develop the MEOC Pandemic Plan. Strong clinical-academic ties supported the real-time implementation of the MEOC Pandemic Plan in other ways. For example, MEOC leveraged many university resources that were suspended due to the COVID-19 pandemic to host webinars, develop clinical tools, and train physicians. "Such collaboration aligns strongly with academic health centres' mandates and should be leveraged in future disaster responses," says Dr. Pendharkar.⁷

One relationship that was not clearly established was with health system clinical and emergency operations. "As a new ad hoc task force, MEOC did not immediately fit into the pre-existing complex health system administrative structures," says Dr. Minty. "During implementation, we encountered several longstanding issues that we struggled to mitigate; including difficulties adapting local hospital practice patterns to more closely match standardized zone-wide clinical care processes, problems with existing remuneration models for clinical care and leadership, and integration of clinical documentation

and other workflows across disciplines." Although the department's leadership supported MEOC, the absence of operational control was a significant constraint rather than a modifiable barrier. Improvement to planning for local disaster responses could include many of these cross-cutting issues.

Although the MEOC Pandemic Plan could scale to match acute care inpatient demand, it did not directly consider the workforce impact on ambulatory care (and the consequences of delayed ambulatory care for those with non-COVID-19 chronic diseases). The department formed a COVID ambulatory working group, who worked in collaboration with the Calgary zone ambulatory care planning group, to coordinate outpatient care for patients with non-COVID-19 illness in light of strict public health measures and suspension of non-urgent clinical activities. To incorporate ambulatory care perspectives, MEOC included ambulatory care specialists in planning, engaged departmental section heads to identify "all in" physicians whose ambulatory duties could be covered by other physicians, and aligned acute care follow-up processes with the ambulatory care group's activities. However, at its core, the Pod-based staffing model depended on volunteerism by non-acute care physicians who had concurrent ambulatory care responsibilities, all of whom were navigating the transition to predominantly virtual care. Future pandemic planning must embed ambulatory care strategies in the acute care response. Additionally, department section chiefs / division heads will need to be engaged to a greater extent in terms of the coordination of COVID-19 Pod physician staffing, balancing this with the need to meet all departmental clinical service expectations.

Future pandemic planning must embed ambulatory care strategies in the acute care response.

Due to the success of public health measures, it became apparent in early May that the COVID-19-related health system demand would occur over months rather than weeks, mitigating the need for a large-scale activation of the MEOC Pandemic Plan. While MEOC activities were de-escalated and MEOC leadership was transitioned to pre-existing departmental leadership, administrative, and organizational structures, the MEOC pandemic plan retains the capacity to be reactivated at short notice for future COVID-19-related surges in patient demand or other health crises.

7. Shapiro SD, Rothman PB. How Academic Health Systems Can Move Forward Once COVID-19 Wanes. J Am Med Assoc [Internet]. 2020 May 20 [cited 2020 May 26]; Available from: <https://jamanetwork.com/journals/jama/fullarticle/2766527>



Above: Dr. Dina Fisher, a respirologist and clinical associate professor in the Department of Medicine, sees a patient. File photo. Credit: Colin Way Photography Inc.
 Bottom right: Dr. Shannon Ruzyski, general internist, clinical assistant professor, and co-chair of the department's Equity and Diversity Working Group.

IMPROVING EQUITY AND DIVERSITY IN THE DEPARTMENT OF MEDICINE

In the first year of Dr. Shannon Ruzyski’s residency, an interaction with a nurse while providing patient care sparked a realization that has led in part to today’s efforts to improve equity and diversity in the Department of Medicine.

The young female patient who Dr. Ruzyski, MD, was treating had complex medical issues and was presenting with a headache. Dr. Ruzyski talked with and examined her for more than an hour, then asked the bedside nurse to administer Tylenol.

“She has to be seen by a doctor before I can give her any medicines,” said the nurse to Dr. Ruzyski, who in her work with internal medicine was wearing scrubs, a stethoscope, and a white coat embroidered with her title and name.

While the nurse astoundingly did not recognize that Dr. Ruzyski was a physician – she thought she was one of the patient’s friends – Dr. Ruzyski came to understand that, while medicine may see itself as progressive, it has a lot of work to do to actually be so.

Fast forward to today, as Dr. Ruzyski, a general internist and clinical assistant professor in the Departments of Medicine and Community Health Sciences as well as co-chair of the Department of Medicine’s Equity and Diversity Work Group (with fellow co-chair Dr. Holroyd-Leduc), aims with others in the department to remedy inequities.

“For me, to be mistaken as a non-physician then was part of the bigger issues of sexism, racism and bias in medicine that we are now addressing,” says Dr. Ruzyski.

“When we zoom out and look at all the interactions, we are looking at a pattern of behaviour. The first thing is to study this phenomenon across many settings, which allows us to see patterns.”



The Equity and Diversity Work Group aims to identify these patterns, identify areas for improvement, and implement solutions – along with work by the Gender Equity Task Force and the Racism/Racial Diversity Task Force.

Goals, successes and challenges

The Group has organized its objectives into quick-win successes and long-term goals. Formidable challenges loom.

“The long-term goals may require people to examine and give up privilege,” says Dr. Ruzycki.

Among what Dr. Ruzycki considers the quick wins is the Inclusive Languages and Images policy in the department, which is being adapted by the Office of Professionalism, Equity and Diversity (OPED) in the Cumming School of Medicine.

“We are trying to reduce or eliminate exclusive and non-person-centred language and promote inclusive and person-centred language,” says Dr. Ruzycki.

Inclusive presentations use language, images and clinical examples that are neutral, non-judgemental and based on facts, actions or physiology.

The Equity and Diversity Work Group recommends adding pronouns to email (Dr. Ruzycki uses “she/hers”) and adding a land acknowledgement to email (Dr. Ruzycki uses “I acknowledge the traditional and present day territories of the people of the Treaty 7 region in Southern Alberta. The City of Calgary is also home to Métis Nation of Alberta, Region III”).

It is now required to begin lectures and rounds presentations with a land acknowledgement and a statement that you will use inclusive and person-first language in your presentation. Also required is reading about and incorporating inclusive and first-person language in presentations.

Equity and Diversity Grand Rounds aim to increase literacy on equity, diversity, and inclusion (EDI) issues, says Dr. Ruzycki. There are four scheduled grand rounds presentations on EDI issues for the entire department.

A Diversity Census – a survey to count who works in the department in terms of diversity and where our diversity is (or isn’t) represented in leadership – will allow us to target and evaluate our work, says Dr. Ruzycki. Ethics pending, the census is expanding to all Albertan physicians and it was live and collecting data in the fall.

Long term goals at this point include:

- Developing recommendations for division-specific back-up scheduling as a wellness and equity initiative to support caregivers.
- Developing a departmental parental leave policy that collates existing information on the logistical supports and necessary steps for planning a parental leave.
- Developing a department specific mentorship program for underrepresented groups.

“For me, to be mistaken as a non-physician then was part of the bigger issues of sexism, racism and bias in medicine that we are now addressing.”

Dr. Shannon Ruzycki

Educating physicians to empower Indigenous patients

Dr. Cheryl Barnabe, MD, vice-chair of Indigenous Health in the Department of Medicine who represents Indigenous Persons’ experiences on the Task Force, says the department is committed to reconciliation and to respond to the Truth and Reconciliation Commission of Canada’s Calls to Actions. This will include individual level and system level responses.

“As individual practicing physicians, department members must interact with Indigenous patients in a way that is empowering to the patients, builds strong relationships and is devoid of racism and stereotyping,” says Dr. Barnabe, who is an associate professor of Medicine and Community Health Sciences at the University of Calgary.

This initiative will be promoted through an educational platform, using the ‘Educating for Equity’ Framework. Sessions are being delivered to PGME residents in the department, with plans to expand this to practicing physicians.

Other opportunistic activities will promote learning about Canada’s history with Indigenous Peoples, how social determinants of Indigenous Peoples’ health influence wellbeing, and how to transform health systems, says Dr. Barnabe.

“To students and prospective students, I would say we have a strong group of researchers, educators and clinicians who are taking really huge steps to make actual change and increase diversity in medicine,” she says.

“We’ve been able to build a strong core of Indigenous scholars and allies who are delivering top-notch teaching through the undergraduate medical education, the medicine residency programs and faculty education to impact change.”

Implementing the Black Applicants Admissions Process (BAAP)

Dr. Doreen Rabi, MD, who is a professor in the Departments of Medicine, Community Health and Cardiac Sciences at UCalgary, as well as a member of the Equity and Diversity Task Force and the Anti-Racism Working Group, says strides have been made but there is so much more work to do.

“We have a strong group of researchers, educators and clinicians who are taking really huge steps to make actual change and increase diversity in medicine.”

Dr. Cheryl Barnabe



Above:

Dr. Cheryl Barnabe, associate professor and vice chair, Indigenous health

Dr. Doreen Rabi, professor and head, Endocrinology and Metabolism

Previous Page:

Dr. Shannon Ruzycki, clinical assistant professor and co-chair, Equity and Diversity Work Group

There has been an under-representation historically of Black medical students in Canada. Research suggests this lack of Black physicians has resulted in a lower quality of care and poorer health outcomes for Black patients.

“Representation matters,” says Dr. Rabi. “Equity, inclusion and diversity are vital for high quality and innovative patient care.”

An important step taken this year has been the establishment of the Black Applicant Admissions Process (BAAP) at the Cumming School of Medicine. The BAAP was a direct response to the Black Medical Students’ Association’s (BMSA) Calls to Action this past summer to address institutionalized racism in medical education and health care.

“We need to come to the table knowing that senior faculty don’t always know more about how to make things better, and that the students whose voices are not heard are often

the most important ones we need to hear,” says Dr. Rabi, who is on the advisory committee for OPED.

“We need to work with the commitment to hear those voices so that we can be transformative.”

The Cumming School of Medicine worked in collaboration with the BMSA. The BAAP applies at the beginning of the 2020-21 undergraduate medical education application cycle.

“The students drove BAAP and it has been an absolute privilege to work with them,” says Dr. Rabi. “I’m only one of the faculty advisors who facilitated connections and helped to broker relationships that were necessary to see the recommendations implemented.”

New policies and practices begin with listening

“It is uncomfortable to say but we are a racist institution and we have inflicted harm on BIPOC learners, colleagues

and patients,” says Dr. Rabi. “We need to actively seek out and dismantle the policies and practices that harm BIPOC learners, colleagues and patients. This also means acknowledging our own privilege and a willingness to let it go.”

Indeed, Dr. Ruzyski believes that privilege is central to inequities, sexism and racism and, at some point, everyone must question themselves regarding what they are willing to give up to right wrongs and move progressively forward.

“We are bearing witness and documenting inequities,” she says. “We are asking you to listen to other people. Hear what they have to say.”

Below: Alberta Health Services physician and staff member in the Elbow River Healing Lodge ceremonial room. The Elbow River Healing Lodge at the Sheldon M Chumir Health Centre offers a full range of primary care services and visiting specialists to Indigenous, Métis, and Inuit peoples and their families. File Photo. Credit: Colin Way Photography Inc.



INNOVATIVE PHYSICIAN COMPENSATION

How does a Department continue to provide high-quality healthcare to an expanding and aging patient population in times of budgetary constraint? The answer: innovation!

Innovation can improve quality while containing costs in many ways. Telehealth, providing care in the home, and enhancing communication between health care team members are just a few of the Department of Medicine's innovative approaches.

Exploring innovative approaches to physician compensation is another way quality care can expand to meet demand while managing cost.

"The fee for service (FFS) model has served patients and physicians well, but it has weaknesses like any physician compensation system," says Dr. Jeffrey Schaefer. Dr. Schaefer, MD, is a clinical professor and lead of General Internal Medicine. "The fee for service system does not reward efficiency of care, nor does it prevent unnecessary care. Its dependency on face-to-face patient encounters requires the physician

to provide direct care that could be provided by other health professionals under physician supervision."

The Department of Medicine was among the pioneers in developing an Academic Alternative Funding Model, having introduced it in 2004. As Alberta Health undertakes its New Physician Funding Framework, the Department will continue to explore options collaboratively.

Dr. Schaefer referred to several patient populations where a Clinical ARP could allow specialists to provide comprehensive care more efficiently and effectively. These include patients dependent on mechanical ventilation, patients with solid organ transplants, patients with advanced liver and heart disease, patients with HIV and older patients with frailty and complex care issues.

A Clinical ARP can compensate

physicians who oversee patient care provided by nurses, dietitians, therapists, and others. Specifically, freeing up time for the physician to directly assess new patients or urgent cases. It also appropriately compensates physicians for providing important care that is not remunerated within the current FFS model. And this can all occur within a predictable budget.

Providing other supports to physicians can also improve care. The Chronic Complex Disease Management Clinic (CCDMC) at Peter Lougheed Centre (PLC) focuses on patients with multiple conditions requiring close monitoring. Specialists working at the CCDMC are supported by AHS, which provides clinic space and allied health professional support.

Department of Medicine members also provide collaborative care to populations with complex care needs at places such as the Alex Clinic, Peter Coyle Place, CUPS, Elbow River Health Lodge, Siksika Health Clinic and Tsuu T'ina Nation Clinics.

"This kind of collaborative and complex care would be very challenging to provide in a private office," says Dr. Jayna Holroyd-Leduc, MD, professor and head of the Department of Medicine, Cumming School of Medicine and clinical department head, AHS Calgary Zone. "We are very fortunate to have

physicians and AHS leadership who took on the challenge of providing care to patient populations with unique health care needs, supporting the provision of the right care at the right place."

The Calgary Zone Chronic Ventilation Program (CZCVP) is another program where a Clinical ARP could provide stable funding through a contractual agreement with specialist physicians from Medicine, Critical Care, and other disciplines. In Calgary, approximately 800 patients with neuromuscular respiratory conditions are followed by a specialist physician, with another 200 individuals requiring ventilation.

The PLC houses the Chronic Ventilator Program for the Calgary Zone. An application for an annualized Clinical ARP for the chronic ventilation patient population is underway, along with Clinical ARP applications for Specialized Geriatric Services, Transplant Services, and the Southern Alberta Clinic.

"The Department of Medicine is well positioned to work with Alberta Health and AHS on the development of additional Clinical ARPs, as required to ensure the provision of high quality and equitable care to all patients within the Calgary zone and province," says Dr. Holroyd-Leduc.

On this page: Dr. Jayna Holroyd-Leduc and Dr. Jeffrey Schaefer in conversation. File Photos. Credit: Colin Way Photography Inc.





The Southern Alberta Organ and Tissue Donation Program and the Southern Alberta Transplant Program are proud to show their love for organ donors in the province. File Photo. Credit: Alberta Health Services

THE CASE FOR A CLINICAL ARP

More creative funding models are needed to provide high quality care to patients with complex health needs in Alberta. The Southern Alberta Transplant Program (ALTRA) that serves the southern part of the province is a case in point.

An annualized clinical Alternative Relationship Plan (ARP) would provide funding certainty for the physicians and specialists who work on multidisciplinary teams, allowing for flexibility, strengthening the ability to recruit and retain staff, and ensuring seamless quality of care for these complex patients, say ALTRA program leaders.

ALTRA currently follows 3,000 patients, made up of pre and post- transplant patients in all organ groups (heart, lung, liver and kidney) with an average of 750 new referrals per year. The majority of these patients are for renal transplantation.

Though only the renal transplant surgery is done in Calgary, ALTRA is responsible for much more than the renal population, says Dr. Debra Isaac, MD, medical director of ALTRA and a clinical professor of medicine and cardiology at the University of Calgary.

"It is important to remember that transplantation is a medical therapy with a surgical component, not just a surgical procedure," says Dr. Isaac.

ALTRA evaluates and lists patients for heart, lung, and liver transplant in Calgary, manages them while they wait for a donor organ, and then manages them post-transplant, sometimes for decades. ALTRA requires the expertise of all organ transplant specialists.

Even though heart and lung are smaller by number, the complexity of the patients after transplant is such that workloads across the four groups is similar.

"There is a commitment of many years, which can be lifelong in some cases, that patients and teams in ALTRA make together," says Dr. Thakrar, MD, deputy medical director of ALTRA.

The ALTRA team includes doctors, nurses, dieticians, social workers, allied health and clerical staff. The program serves people living south of Red Deer who need solid organ transplant, those who've had a transplant, and potential living donors.

"We need a commitment to ensure we have a very stable, well-trained health team," says Dr. Thakrar. "Transplant is

"There is a commitment of many years, which can be lifelong in some cases, that patients and teams in ALTRA make together."



Dr. Mitesh Thakrar

a group where fee for service does not work, and we need to transition away from it."

A clinical ARP can help to provide certainty and enable the team to proactively care for patients with complex medical issues in a way that improves their lives and keeps them

out of the hospital, he says.

ALTRA physicians are funded through a mix of fee for service and Academic Medicine and Health Services Program (AMHSP) funding models. The AMHSP ensures physicians affiliated with Alberta's faculties of medicine are compensated for providing complex patient care along with their work related to research, innovation, education, administration and leadership.

Under the fee for service model of compensation, physicians are paid for each service they provide, using various fees and codes for different services. However, fee for service compensation does not cover all the required components of clinical service that physicians in ALTRA provide.

Critics question whether fee for service makes patients with medical complexity who require team care a less attractive fit than those with relatively simple problems solved by a quick visit.

"Fee for service encourages physicians to see more patients with routine issues rather than those in their transplant practice, where patients are much more complex, because it would pay them more money to see the higher volume of less sick patients," says Dr. Thakrar. "We need a funding model that acknowledges and values this difference in patient care."

The fee for service model also undermines the multidisciplinary approach necessary for transplant patients, says Dr. Thakrar. To take just one example, if physicians spend an hour of their time talking to nurses and 10 patients who are all outpatients, there is no appropriate billing code for it.

An annualized clinical ARP model compensates physicians for the delivery of service programs based on a pre-determined payment rate to targeted patient groups for a specific block of time.

This model can positively impact various aspects of care, including patient satisfaction and access to services, a team-based approach that is collaborative and multidisciplinary, and recruitment and retention of transplant group team members.

Applied correctly, the clinical ARP

would recognize and reward team members who are doing integrated patient-centered healthcare within the transplant group along with additional but necessary tasks, like rounds and team meetings to discuss patient issues.

"We have an ever-mounting challenge of efficiently trying to look after patients with medical complexity who may present with minor problems but have major problems lurking underneath," says Dr. Thakrar. "A lot of the primary care of these patients is best served by people who know and do transplant day in and day out."

Dr. Isaac says the program needs to be able to recruit and retain physician team members. An annualized clinical ARP is an important step in the right direction.

"We are in danger of not being able to fill team roles because people have to do other things under fee for service such as non-transplant work, which is less complex but better paid," she says.

So, in order to meet their overhead and provide a decent clinical income, they will drift from transplants and not be able to go the extra mile in the clinical program, she adds.

"Fee for service simply does not work for complex cases. This is all about providing the best clinical care, which requires more than just sitting with the patient and examining them."

If an annualized clinical ARP were applied for ALTRA, the benefit to both the provincial government and the physicians is that there would be a predictable yearly cost, based on the number of physicians required for the number of patients, says Dr. Isaac.

"The way the funding is now, you are sometimes trying to fit square pegs into round holes," she says. "There are so many hours of my week related to patient care that I don't have a billing code for. There are few billable hours for the number of hours that team members actually spend."

Both Dr. Isaac and Dr. Thakrar are seeing an increase in the number of transplant cases as medicine improves. The aging of the Alberta population is expected to further strain an already burdened medical system. If there is a best time to make funding



Family going home. File photo.. Credit: Alberta Health Services

changes that will improve ALTRA, it is now.

"We have a lot of patients in the transplant program who go back to work full time and they can really contribute," says Dr. Isaac. "There is a saved cost to the health care system there, where they are not chronically ill in hospital. I would not expect this funding change to cost the government any more money."

For Dr. Thakrar, the future care of transplant patients requires the willingness to innovate while acknowledging there is room for improvement. It can begin with a shift in funding that recognizes the specific needs of ALTRA, its team members and its patients.

"With an annualized clinical ARP, for taxpayers and the government, you know exactly what you will spend this year, and I as a physician know what I will bring and what I can budget. Everyone wins."

"The benefit to both the provincial government and the physicians is that there would be a predictable yearly cost, based on the number of physicians required for the number of patients"



Dr. Debra Isaac

EXECUTIVE SUMMARY



Dr. Jayna Holroyd-Leduc
Professor and Head,
Department of Medicine,
Cumming School of Medicine
and Alberta Health Services

The Department of Medicine's Mission is "to be widely recognized for advancing health and wellness, attracting the best doctors in an inclusive manner that promotes diversity, leading innovation, creating technologies, and disseminating knowledge."



Dr. Jeffrey Schaefer
Clinical Professor and
Former Interim Clinical Head,
Department of Medicine

It is my privilege, as department head, to present the Department of Medicine's 2020 Annual Report. Our division heads / section chiefs, vice-chairs, and members of the department's communications, finance, analytics, Research Office, and administrative teams have worked hard to provide reports and information that highlight the department's important clinical, educational, academic, and administrative activities and accomplishments in the 2019-20 Fiscal Year. I thank them for their contributions.

I would also like to extend my sincere thanks to Dr. Richard Leigh for his leadership of the Department of Medicine for the past four years, from April 2016 to December 2019. I would also like to thank Drs. Jeffrey Schaefer and Kelly Zarnke for stepping in as interim clinical and academic department heads, and their leadership during these unprecedented times.



Dr. Kelly Zarnke
Professor and Former Interim
Academic Head,
Department of Medicine

These are challenging times for the Department of Medicine, given the ongoing pandemic and the Alberta economy. Despite these challenges as well as an increase in clinical workload across all divisions / sections, department members continue to have a positive impact on the health and wellness of those living within the AHS Calgary zone and beyond. We are proud of the fact that, through creative and innovative ways, we continue to provide world-class, innovative patient-centered clinical care. In 2019-20, department members provided exemplary clinical care to over 16,000 inpatients and over 54,000 outpatients.

In addition to the outstanding clinical care we provide, the department also continues to educate future generations of physicians through our excellent core Internal Medicine Residency Program, ten sub-specialty residency training programs, and several Canada-leading Advanced Fellowship training programs, including the Antimicrobial Stewardship Fellowship Program which received RCPSC approval as an Area of Focused Competence in May 2019. Many members of the department also contribute to the medical school teaching curriculum and to the various continuing medical education programs. Learner evaluations of our departmental faculty are invariably outstanding, as evidenced by the number of Undergraduate Medical Education (UME) and Postgraduate Medical Education (PGME) teaching

awards that our members have received.

Our research, including ongoing novel COVID-19 related research contributions, is having broad impact. The Department's total annual research revenue in 2019-20 was \$21.7 million, of which \$5.6 million was in CIHR revenue. A number of our junior faculty members have begun to realize success at obtaining CIHR funding, which will positively grow the academic productivity of the department over the years to come. Our 78 full-time academic (GFT) members published a total of 492 publications (a 16% increase from last year), and were cited an average of 589 times in 2019-20.

Additionally, many of our departmental members are providing key and effective leadership within the University of Calgary and Alberta Health Services. Outside of the Department of Medicine, our members currently hold 143 leadership roles: 90 within Alberta Health Services and 53 within the University of Calgary. Among these are the roles of dean and associate deans of the Cumming School of Medicine; vice-president (research) at the University of Calgary; AHS Strategic Clinical Network (SCN) provincial associate chief medical officer, senior medical directors and scientific directors; and the Calgary zone associate zone medical director.

Great work continues to be done in the department, as evidenced by the outstanding accomplishments and achievements featured in this report, and I am proud to say that I am the head of the Department of Medicine in Calgary. I hope that you enjoy reading our 2020 Annual Report.

Sincerely,

Dr. Jayna M. Holroyd-Leduc, MD FRCPC
Head, Department of Medicine
Professor and Brenda Strafford Foundation Chair in Geriatric Medicine
Departments of Medicine and Community Health Sciences
Hotchkiss Brain Institute & O'Brien Institute for Public Health
Cumming School of Medicine, University of Calgary



Dr. Richard Leigh
Professor and Former Head,
Department of Medicine

Q&A WITH DRS. HOLROYD-LEDUC, LEIGH, SCHAEFER, AND ZARNKE

Looking back on the past year, what stands out as major accomplishments for the department?

The department was among the first in the country to take steps to identify and begin to address issues related to gender inequities within the department in 2019. This included the completion and publication of the Gender Equity report and development of the associated Equity Action plan. The department formed an Equity and Diversity working group and began to implement a number of systemic changes. This work is continuing into 2020, and now also includes the formation of an Anti-Racism Task Force in response to the spotlight the COVID pandemic and the Black Lives Matter movement have placed on systemic racism. Under the leadership of our vice-chair for Indigenous Health, the faculty and trainees within the department took steps towards obtaining the knowledge and skills required to provide high quality care to Indigenous patients and respecting community needs and approaches.

During 2019-2020, the department's Quality of Care and Patient Safety agenda reached new milestones. A quality & safety officer was identified, and we established an approved Quality Assurance Committee. A number of our members are leading in the efforts underway to realize the vision of Connect Care, a province wide Clinical Information System. Our patients and members have benefited from the earliest vision of having the 'right information at the right time'. The implementation of Connect Care in 2020 – 2022 will take that vision to the next level, and the work done in 2019-20 has laid the required foundation for this vision.

The Department Peer Support Team (launched in March 2018) strengthened its wellness mission to provide supportive listeners, guidance, and assistance in accessing external resources. Our vice chair of Physician Wellness and Vitality continued to support the wellness of physicians both within the department and beyond, through her leadership role within Well Doc Alberta.

As a large and diverse department, we learned much about ourselves during the early part of the pandemic. Informal leadership arose, for example, in the form of the many critical contributors to the MEOC structure for guiding rapid and necessary changes in our inpatient clinical services and critical HC provider education. Generosity of spirit and contribution was widespread among the departmental membership, with explicit demonstration of extensive volunteerism and standing by each other as colleagues. Recognizing this puts us in good stead for what may lie ahead, should the pandemic challenge our clinical capacity in the near future.

How do the department's 2019-20 CARE pillar measures compare to the previous fiscal year?

Our membership has decreased slightly in the past year. At the end of the 2019-20 fiscal year, the department consisted of 387 primary and 104 joint-appointed members. We have 230 Academic Medical Health Services Plan (AMHSP) members, 156 Fee-For-Service (FFS) members, and 30 Locum Tenens physicians. Despite this decrease in our membership, we continued to provide care for all those living in the Calgary zone, including programs focused on meeting the care needs for First Nations, refugees, and those experiencing housing instability or homelessness. We also extended our support to primary

care through the utilization of Specialist link.

Compared to 2018-19, the department saw an increase in the number of full-time academic (GFT) publications, but a decrease in research revenues by 27.7%. The total 2019-20 revenue does however include \$5.6M in CIHR revenue and \$8.7 million in clinical research revenue. This change in overall research revenues may in part be related to the current Alberta and Canadian economy, and the associated cuts in research funding dollars by some funding organizations.

What challenges did the Department face in 2019-20, and what do you envision for the Department of Medicine in 2020-21?

In addition to the economic downturn within the Alberta economy, the end of the 2019-20 fiscal year brought the COVID pandemic. The pandemic required the Department to quickly pivot from our usual activities and adapt how we provided clinical care and medical education, including the rapid adoption and increase in virtual care provision and online learning. We had to rapidly plan for many potential impacts the pandemic might have on the healthcare system,

as well as consider the impact on the wellness of both our patient populations and workforce. The pandemic will continue to impact the Department and Alberta through much of 2020-21. We plan to continue to optimize virtual care, as led by our new vice-chair in Virtual Health. Additionally, we will need to continue to work on supporting the wellness of our members and learners, while also focusing on inclusion and equity of opportunities.



Total research revenue

2019-20 ↓27.7%

2019-20: \$21,681,737

2018-19: \$29,991,366

2017-18: \$28,485,731

Total research revenue in Department of Medicine was \$21.7 Million in 2019-20. Of the total revenue, 40% was from Clinical Research funding and 25.6% was from CIHR funding.

21.7

In 2019-20, the Department of Medicine saw continued increases in clinical service demand and research outputs.



TOTAL GFT PUBLICATIONS



477

in 2017-18



425

2018-19



492

in 2019-20

“Despite these challenging times, department members continue to have a positive impact on the health and wellness of those living within the AHS Calgary zone and beyond.”

Dr. Jayna Holroyd-Leduc

PUBLICATIONS

492
publications

2018-19 ↑16%

2019-20 492

2018-19 425

2017-18 477

Primary GFT department members produced a total of 492 publications in 2019-20.

6.4
publications per
GFT

2019-20 ↑12%

2019-20 6.4

2018-19 5.7

2017-18 6.2

Primary GFT department members produced, on average, 6.4 publications each in 2019-20. This is higher than the average publications per GFT member for all comparator groups (CSM, basic science departments, and clinical AMHSP and non-AMHSP departments) in 2019-20.

CSM: 4.4

Basic Sciences: 4.3

Clinical AMHSP: 5.4

Clinical non-AMHSP: 4.9

387

MEMBERS

2019-20 387
2018-19 401
2017-18 389

The Department of Medicine consisted of 387 primary members in 2019-20

104

CROSS-APPOINTED MEMBERS

Primary Appointment: 387
Cross-Appointment: 104

107 Members hold cross-appointments in the Department of Medicine. Combined, there are 494 Primary and Cross-Appointed Members in the Department of Medicine.

A number of our junior faculty members have begun to realize success at obtaining CIHR funding, which will positively grow the academic productivity of the department over the years to come.

14 publications per GFT RE

2019-20 ↑11%

2019-20 14
2018-19 12.6
2017-18 14.7

Primary GFT department members produced 14 publications per Research Equivalent (RE) in 2019-20. This is higher than the publications per RE for all comparator groups in 2019-20.

CSM: 10
Basic Sciences: 7.6
Clinical AMHSP: 13.1
Clinical non-AMHSP: 13.7

589 Annual Citations per GFT

2019-20 ↑12%

2019-20: 589
2018-19: 527
2017-18: 474

Primary GFT department members' publications were cited, on average, 589 times in 2019-20. This is higher than the average number of citations per GFT member for all comparator groups.

CSM: 300
Basic Sciences: 350
Clinical AMHSP: 405
Clinical non-AMHSP: 245

RESEARCH REVENUE

\$617,713 per RE

2019-20 ↓30.6%

2019-20: \$617,713
2018-19: \$889,952
2017-18: \$878,070

The Total Research Revenue per Research Equivalent (RE) in the Department of Medicine was \$617,713 in 2019-20.

\$5.6 million in CIHR revenue

2019-20 ↓19%

2019-20: \$5,556,836
2018-19: \$6,875,405
2017-18: \$6,460,251

25.6% of Total Departmental Research Revenue.

\$8.7 million in clinical research revenue

2019-20 ↓46%

2019-20: \$8,728,936
2018-19: \$16,038,451
2017-18: \$17,433,745
40% of Total Departmental Research Revenue.

33% of Clinical AMHSP research revenue

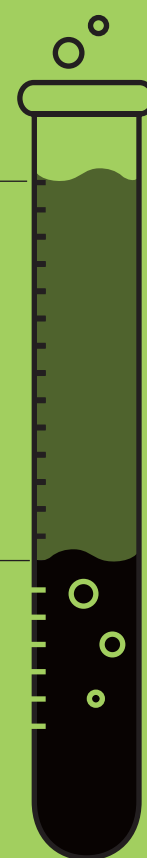
Department of Medicine: \$21,681,737

Clinical AMHSP: \$65,985,031
CSM: \$213,820,410
Research Revenue from the Department of Medicine accounted for 33% of the revenue for all Clinical AMHSP Departments, and 10% of revenue from the entire CSM.

RESEARCH REVENUE

Clinical with AMHSP
\$65,985,031

Department of Medicine
\$21,681,737



78

FULL-TIME ACADEMIC (GFT) MEMBERS

2019-20	78
2018-19	78
2017-18	78

The department had 78 primary members with Full-Time Academic (GFT) appointments.

230

AMHSP MEMBERS

2019-20	230
2018-19	238
2017-18	210

230 department members, including both primary department members and cross-appointed members from the Division of Cardiology within the Department of Cardiac Sciences, were part of the Internal Medicine Academic Medicine Health Services Program (AMHSP) Plan.

90

ALBERTA HEALTH SERVICES LEADERSHIP ROLES

15 AHS Strategic Clinical Network (SCN) Leadership Roles
11 AHS Provincial Leadership Roles (Non-SCN)
64 AHS Calgary Zone Leadership Roles

Outside of the Department of Medicine, department members held a total of 90 leadership roles (38.9 FTE) within Alberta Health Services in 2019-20, including a SCN Provincial Co-Director, two SCN Senior Medical Directors, an SCN Scientific Director, and the Calgary Zone Medical Director and Associate Zone Medical Director.

53

UNIVERSITY OF CALGARY LEADERSHIP ROLES

8 CSM Leadership Roles in the Office of the Dean
31 CSM UME/PGME/CME&PD Leadership Roles (outside the Dean's Office)
11 Leadership Roles in CSM Research Institutes or other Departments
4 University of Calgary Leadership Roles (outside the CSM)

Outside of the Department of Medicine, department members held a total of 53 Leadership roles (9.9 FTE) within the Cumming School of Medicine and the University of Calgary in 2019-20, including the Vice-President, Research and the Dean, Cumming School of Medicine.

CLINICAL STATS

9.14 days in hospital

2019-20 ↑0.6%

2019-20	9.14
2018-19	9.08
2017-18	9.5

The average hospital length of stay (LOS) in the Department of Medicine was 9.14, an increase of 0.6% from 2018-19.

34,466 inpatient consults

2019-20 ↑0.5%

2019-20	34,466
2018-19	34,288
2017-18	33,444

Department Members provided a total of 34,466 inpatient consults in Calgary hospitals in 2019-20, an increase of 0.5% from 2018-19.

14,286 inpatients admitted

2019-20 ↑2%

2019-20	14,286
2018-19	14,002
2017-18	13,527

Department Members were the admitting physicians for 14,286 inpatients in the four Calgary Adult Hospitals in 2019-20, an increase of 2% from 2018-19.

16,046 inpatients attended

2019-20 ↑5%

2019-20:	16,046
2018-19:	15,300
2017-18:	14,909

Department Members were the attending physicians for 16,046 inpatients in the four Calgary Adult Hospitals in 2019-20, an increase of 5% from 2018-19.

51,665 CAT outpatient clinic referrals

2019-20 ↓0.4%

2019-20	51,665
2018-19	51,847
2017-18	51,282

Central Access & Triage (CAT) for Endocrinology, Gastroenterology, General Internal Medicine, Hematology, Respiratory Medicine, and Rheumatology received a total of 51,665 outpatient referrals, a decrease of 0.4% from 2018-19.

2,712 Seniors Health outpatient clinic referrals

2019-20 2,712
Geriatric Medicine received a total of 2,712 outpatient referrals from Seniors Health One-line in 2019-20.

EDUCATION

181 Residents

107 Internal Medicine Residency Program (IMRP) Residents
74 Subspecialty Program Residents

In 2019-20, there were a total of 181 Residents in the Department's Core and Subspecialty Residency Training Programs, with 107 Residents in our core IMRP Program (PGY1 – PGY4) and 74 Residents in our ten Subspecialty Training Programs (PGY4 – PGY6).



DERMATOLOGY

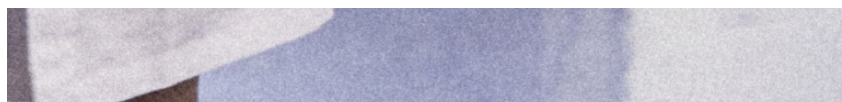
Dermatology consists of 7 full-time AMHSP members and 26 community-based dermatologists. Dermatologists, nursing staff and allied health care professionals provide a collaborative care model for patients with skin disease. Divisional members are actively involved in both clinical and basic science research, and are committed to training the next generation of dermatologists.

CHALLENGES

Dermatology has a phototherapy unit which cannot be used due to budgetary constraints. Phototherapy is an important therapeutic modality for various inflammatory skin disorders (i.e., psoriasis, eczema) and cutaneous lymphomas. A multidisciplinary cutaneous lymphoma clinic is conducted at RRDTTC, and the lack of phototherapy at the site makes it difficult to provide comprehensive management for these high-risk patients.

Dermatology, as all other specialties, is faced with challenges in the provision of and access to care. The gaps and unmet needs resulting from these challenges are, at least in part, driven by an increased demand, a diverse populace and population density imbalances. These demographic challenges are important considerations for ensuring all those living in Canada have access to dermatologic services.

Ultimately, an integrative program in cutaneous oncology will further the development of diagnostic, prognostic and therapeutic tools essential for the management of skin cancer patients.



RESEARCH

Dermatology demonstrated continued success in both clinical and basic science research. A highly successful clinical trials program, the largest in Western Canada, operates out of community and academic settings. During this reporting period, the University of Calgary dermatologists were part of a \$1.2 million CIHR Network Catalyst Grant entitled: "Skin Investigation Network of Canada (SKIN Canada)." The Section also benefited from funding through the Canadian Dermatology Foundation, the Spondyloarthritis Research Consortium of Canada, the Susanne V. Gibson Research Fund, and industry partners. An inaugural Skin Research Day was held on October 17, 2019 and facilitated knowledge translation between basic scientists and clinicians. A broad range of research topics were covered, including inflammatory skin disease (i.e., atopic dermatitis, psoriasis), cutaneous microbiome, skin cancer, wound healing, alopecia, and host-parasite interactions. Section members also led the Canadian Dermatology Association's Choosing Wisely Canada Campaign.



DR. REGINE MYDLARSKI Division Head

Dr. Régine Mydlarski is the Dermatology section chief / division head and an associate professor at the University of Calgary. As a clinician-investigator, Dr. Mydlarski heads the Translational Research Program in Dermatology and is recognized internationally for her expertise in autoimmune bullous disease. Her clinical and research interests fall in the areas of immunodermatology, transplant dermatology, and the skin microbiome. She currently holds funding from the Canadian Institutes of Health Research, the Canadian Dermatology Foundation, and industry partners.

CLINICAL

Dermatology's academic site, located at the Richmond Road Diagnostic and Treatment Centre (RRDTC), serves as a tertiary referral center for complex medical and surgical dermatology patients. Specialized clinics provide a multi-disciplinary approach to care for patients with immunobullous disease, connective tissue disease, contact dermatitis, solid organ transplants, wounds, pediatric dermatology, high-risk pigmented lesions, non-melanoma and melanoma skin cancers, and cutaneous lymphomas.

In 2019-20, Dr. Lynne Robertson received the Dr. Martin Atkinson Award for Clinical Excellence at the RRDTTC. Moreover, Drs. Richard Haber and Gilles Lauzon received the Canadian Dermatology Association's (CDA) Award of Merit and Lifetime Achievement Award, respectively.

EDUCATION

The Dermatology Residency Program at the University of Calgary, recognized nationally for its quality education, rigorous assessments, and its cordial learning environment, is highly coveted across the country. Led by Dr. Lynne Robertson, this 5-year program consistently attracts the top 5% of candidates and currently trains 15 residents. At the undergraduate level, Drs. Laurie Parsons and Jori Hardin co-chair the highly rated Course 2 (Musculoskeletal and Skin). At a national level, Dr. Régine Mydlarski co-chairs the RCPSC competence by design (CBD) workshops for Dermatology. Locally, Dr. Hardin is the Chair of CBD for Dermatology at the University of Calgary.

The development of a dermatologic surgical skills teaching program at the Advanced Technical Skills Simulation Laboratory (ATSSL) on cadavers supported the surgical training of Dermatology residents. Further, the implementation of a robust pediatric dermatology rotation enhanced the Section's post-graduate training program.

ADMINISTRATIVE

Our members are represented on regional, national and international committees. Dr. Mydlarski is the Chair of the Specialty Committee in Dermatology for the Royal College of Physicians and Surgeons of Canada (RCPSC). She also chaired the RCPSC Dermatology Working Group. Dr. Laurie Parsons currently holds the position of Vice-Chair of the Specialty Committee and Dr. Catherine Zip is on the Examination Board.

In June 2019, we hosted the CDA's 94th Annual Conference. Dr. Kirk Barber led the CDA organizing committee, and continues to serve as Editor-in-Chief of the Journal of Cutaneous Medicine and Surgery and Vice President of the Camp Liberté Society.

Our members hold several other important administrative positions: Dr. Laurie Parsons, Medical Director of the Sheldon Chumir Wound Clinic; Dr. Habib Kurwa, Director of Dermatologic Surgery; Dr. Michele Ramien, Director of Pediatric Dermatology; Dr. Richard Haber, Chair of the Evaluations Committee and TUCFA Department of Medicine representative; and Dr. Jori Hardin, Chair of Mentorship/Wellness.

Dermatology organized a highly successful inaugural Skin Research Day, an annual event which facilitated knowledge translation between dermatologists, dermatology residents, and skin scientists.

SKIN RESEARCH GROUP

Dermatology developed a Skin Research Group (SRG) to support knowledge translation between clinicians, scientists and patient advocacy groups. Members of the SRG include Drs. Régine Mydlarski, Habib Kurwa, Kathy McCoy, Markus Geuking, Nathan Peters, and Jeff Biernaskie.

With the ultimate goal of improving care for patients with inflammatory and malignant skin disease, the SRG launched their inaugural Skin Research Day in 2019-20. The annual event, which hosted dermatologists, dermatology residents and skin scientists, facilitated knowledge translation between skin scientists and dermatologists. A wide variety of topics were covered, including genetics, skin cancer, cutaneous microbiome, allergic and inflammatory skin diseases.

INDIGENOUS HEALTH AND VULNERABLE POPULATIONS INITIATIVE

The Indigenous population is affected by distinct conditions and social determinants of health which place them at an increased risk of adverse health outcomes as compared to the broader population of Canada. Other patient groups, such as newcomers to Canada (including those with refugee status), individuals with substance use, and people experiencing homelessness, have unique dermatologic needs.

In order to improve access to dermatologic services, we launched a successful Indigenous health and vulnerable population initiative, led by Dr. Jori Hardin. In addition to providing teledermatology to rural sites, dedicated dermatology clinics are now conducted at the Siksika Nation and the Alex Community Health Centre. Discussions are underway to open dermatology clinics at the Elbow River Healing Lodge and

Refugee Health Services.

During their training, dermatology residents have rotations which ensure exposure to rural and vulnerable populations. They also gain insight on the necessity, importance and limitations of telehealth services to the future of Dermatology by being exposed to telehealth in both the delivery of curriculum and clinical practice.

This program supports clinical, educational and research initiatives that facilitate equitable access to dermatologic care. It will enable care transformation, discovery and innovation, and patient partnerships.

15

Specialty Training Program Residents.

CUTANEOUS ONCOLOGY PROGRAM

The aim of the Cutaneous Oncology Program, led by Dr. Habib Kurwa, is to achieve integrated care for patients diagnosed with melanoma, non-melanoma skin cancer, and cutaneous lymphoma. UCalgary and AHS are home to some of the nation's top skin cancer specialists. Within the specialized clinics at RRDTC, a multidisciplinary team assesses and treats patients with non-melanoma skin cancers, melanoma, cutaneous lymphoma, high-risk pigmented lesions and dermatological manifestations of oncological treatments. Procedural

services include photodynamic therapy, pre-determined margin excisions, and Mohs' micrographic surgery. Members of the skin cancer team also conduct basic science and clinical research, including cutting edge clinical trials. Dermatology will continue to work toward integrating the care of our high-risk skin cancer patients into a single center to ensure the provision of a comprehensive, multi-disciplinary patient care approach. As part of our educational mandate, cutaneous oncology and Mohs' surgical fellowships will be created.

48

Applications from Prospective Specialty Training Program Residents.



ENDOCRINOLOGY & METABOLISM

Endocrinology and Metabolism consists of 27 physician members (8 GFT and 19 Major Clinical / Community) that provide care in a variety of endocrine care programs including Diabetes, Diabetes in Pregnancy, Osteoporosis, Hypertension, Lipids, Thyroid Cancer, Neuroendocrine Tumour care along with general endocrine care.

CLINICAL

Endocrinology and Metabolism is very proud of our highly effective Central Access and Triage team. We have significantly improved access to timely specialty care and improved integration between Endocrine specialists and primary care through increased support through Specialist Link. Our care programs have a high degree of inter-disciplinarity, including partnerships with endocrine surgery, neurosurgery, laboratory medicine and radiation oncology.

5

Subspecialty Training Program Residents.

CHALLENGES

The COVID-19 pandemic was an incredible challenge for all global citizens, and Endocrinology and Metabolism was no exception. As an ambulatory care specialty that provides medical services to patients with complex endocrine disease in the community, the closure of ambulatory clinics – coupled with school closures, travel and visiting restrictions – suddenly challenged our membership to find new ways to care for their patients and their families. This collective challenge was ultimately a galvanizing experience for us, as we turned to each other to find creative solutions to meet this unprecedented crisis. We are very proud of the innovations we discovered to best support our patients, our primary care colleagues and each other.

We are very proud of the innovations we discovered to best support our patients, our primary care colleagues and each other.

83

Publications



DR. DOREEN RABI
Division Head

Dr. Doreen Rabi is a professor in medicine, cardiac sciences and community health sciences. She is a health services researcher in the area of cardiovascular disease with particular interests in cardiovascular risk reduction and social determinants of health. She is a national leader in clinical practice guidelines for diabetes and hypertension. Dr. Rabi is a vocal advocate for equity, diversity and inclusion and is an ardent believer in compassionate leadership.

EDUCATION

Endocrinology continues to be the home of several award-winning educators. Our members received 16 awards for undergraduate and post-graduate teaching including the Department of Medicine “Behind the Scenes” Award for Outstanding Contributions to Course IV (Dr. Alex Leung), CSM’s Top Teacher of 2019 for Continuing Medical Education (Dr. Greg Kline) and The Dr. Michael Tarrant Award for Dedication to Teaching (Dr. Hanan Bassyouni).

The Endocrine and Metabolism Fellowship Training Program attracts a high number of excellent candidates every year. This year, we piloted a sub-specialty post-doctoral fellowship experience in Endocrine Disorders of Pregnancy. The high profile and clinical excellence of our Endocrine Disorders in Pregnancy team, led by Dr. Lois Donovan, made this experience possible.

ADMINISTRATIVE

Several of our members hold leadership positions within the Calgary zone and are contributing to care advances for Albertans through this work. Drs. Paschke and Symonds are provincial and local leads ensuring high quality Endocrine Cancer and Thyroid Cancer care respectively. Dr. Greg Kline is the medical director of the David Hanley Osteoporosis Centre, and in this role has innovated the delivery of osteoporosis care with an emphasis on equity, patient autonomy and access by introducing the self-consult program. Dr. Karmon Helmle is an AHS medical informatics lead. She is focused on Connect Care implementation and plays a vital role in translating best endocrine practices into provincial digital order sets. Dr. Julie McKeen is the medical director for the Diabetes Education Centre and was the winner of the Tom Etna Community Award this past year.

NOVEL TRANSITION PROGRAM IMPROVES LOSS TO FOLLOW UP FOUR-FOLD

During transition, youth with diabetes are at high risk for loss to follow up, worsening glycemic control, and increased hospitalizations. When we examined our follow up rates post transfer to adult diabetes care, they were poor and in the range reported in the literature. Recent transition interventions have attempted to improve post-transfer follow up rates; however, they have been unsuccessful to date.

We subsequently formed an interdisciplinary team of pediatric and adult endocrinologists, nurses, dietitians, and psychologists. The team developed a transition coordinator intervention, with simple, readily available technologies (texting, email, etc.). Our technology enhanced transition coordinator intervention was successful in improving clinic attendance in transitioning youth with type 1 diabetes. In the year following transfer, only 11.8% of the young adults in the intervention group did not attend any outpatient diabetes appointment in adult care, compared with 47.1% of young adults in the usual care group ($p < 0.01$). This is noteworthy as we demonstrated a four-fold improvement in loss to follow up rates.

\$2,485,959

of peer-reviewed research project grant funding disbursed to Endocrinology & Metabolism members in 2019-20.

RESEARCH

Endocrinology and Metabolism members published 83 peer-reviewed publications and received \$19,575,024 in peer-reviewed funding during 2019/20. With 8 GFT members and several highly engaged Major Clinical faculty, our members are involved in 41 different clinical studies spanning all 4 research pillars. We are actively building capacity in clinical research and with endocrine fellow, Dr. Jamie Benham, completing a PhD within the Clinical Investigator Program under the supervision of Dr. Ron Sigal. Dr. Benham was awarded a prestigious Fernand Labrie Fellowship from the Canadian Society of Endocrinology and Metabolism to support her fellowship.

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Applications from Prospective Subspecialty Training Program Residents.

DIABETES CARE COLLABORATION AT TSUUT'INA HEALTH CENTRE

In 2016, Drs. Nathalie Saad and Caitlin Sinclair worked with Tsuut'ina Nation members and Health Centre staff to create the Diabetes Care Collaboration (DCC), a unique patient-led diabetes care experience that respects the lived experience of individuals and carefully considers the social and family context of each patient.

This collaborative approach emphasizes the dignity of individual patients and has been successful in creating a positive diabetes care environment. Attendance rates for new assessment appointments are high, with 75% of all

WELLNESS COMMITTEE

In 2018, we recognized a need to be more conscious of issues related to equity, diversity and inclusion (EDI). We outlined several recommendations to ensure optimal professional experiences for our members, including the establishment of a divisional Wellness Committee.

Equity and wellness are tightly linked and there is strong evidence to suggest that people that feel systematically oppressed, diminished, dehumanized and/or devalued will suffer from both physical and mental health challenges. Creating a culture of solidarity, dignity and respect for all division members (clinicians and non-clinician members, faculty and trainees) would be an important element to achieve our EDI goals while promoting divisional wellness.

The Wellness Committee's main objective was to cultivate community and they worked to achieve this goal by using two tactics: encouraging opportunities for networking, and providing proactive support for individuals at critical times.

By taking an anticipatory, rather than reactive approach to wellness, the Wellness Committee has been remarkably effective. They have significantly elevated the moral of the division - even during a pandemic.



patients attending these appointments. Comparatively, only 50% of patients in Calgary attend new assessments for diabetes care. While the clinical outcomes of patients participating in the DCC have not been formally evaluated, the subjective experiences of those involved have been positive. Both clients and family physicians are appreciative of access to endocrinologists within their community. Despite Tsuut'ina Nation's proximity to the city of Calgary, barriers to access persist, including a lack cultural competency in Calgary clinics, transportation and system navigation challenges.

URGENT ENDOCRINE SERVICES GROUP

The Urgent Endocrine Services Group (EUSG) was established March 21, 2020 as part of our COVID-19 response plan. The mandate of this working group was to identify innovations and efficiencies that would allow us to support the greatest number of patients with endocrine disease with the fewest number of physicians.

EUSG worked swiftly to identify enhanced specialty care-primary care integration as a potential efficiency. In placing a dedicated physician on Specialist Link and two physicians on Triage, we were able to resume receiving new consults. Many non-urgent consults were managed through telephone consultations with the referring family physicians. In finding an efficient way to process many incoming referrals through rapid phone consultations, the EUSG created time for other members to adapt to virtual care for their existing patients. Thanks to the work of the EUSG, we increased our capacity by 16% during the pandemic and conducted 1,205 virtual assessments by June 30, 2020 (not including follow up visits).

The EUSG contributed significantly to our knowledge on care process and delivery. A key finding from the EUSG that will be carried forward includes revising the approach to triage, moving from a "push" model where vacant appointment times are filled with new consults to a "pull" model where physicians see new patients as they are able, allowing for increased capacity and flexibility.

Thanks to the work of the EUSG, we increased our capacity by 16% during the pandemic and conducted 1,205 virtual assessments.



GASTROENTEROLOGY & HEPATOLOGY

The Calgary Division of Gastroenterology & Hepatology integrates our innovative research-intensive medical school with four world-class hospitals to offer cutting-edge patient care, education and continuous quality improvement. We are the national leader of innovative patient care model development and implementation in addition to cutting-edge research, providing personalized treatment for patients with gastrointestinal and liver disease.

CLINICAL

The Endoscopic Submucosal Dissection (ESD) procedure performed on November 14, 2019 by Dr. Paul Belletrutti was one of the first in Western Canada. ESD preserves the continuity of the GI tract leading to faster recovery and improved quality of life for patients by avoiding the risk of long-term GI tract dysfunction and eliminating the need to surgically remove any segments of the GI tract.



CALGARY CENTRE FOR DIGESTIVE HEALTH (CCDH)

Our vision for establishing the Calgary Centre for Digestive Health is to accelerate the pathway from research discovery to patient wellness.

Our goal is to be the top digestive health team in Canada and to be recognized as one of the top ten digestive health groups in the world.



A partnership between the Cumming School of Medicine and Alberta Health Services offers cutting-edge gastrointestinal and liver care within four acute care hospitals. (click image above to watch video)

CLINICAL CARE PATHWAYS

The Calgary GI Division has become the **national leader** in clinical care pathway collaborative development, design and effective implementation with primary care. In partnership with Calgary's PCNs, the Calgary GI Division co-developed and implemented an "abdominal pain clinical care pathway", a first of its kind in Canada, as well as a Non-alcoholic fatty liver disease (NAFLD) clinical care pathway, which has virtually eliminated the NAFLD waitlist. Implementation of pathways through central access and triage, allows for robust data to be used to benchmark care delivery and waitlist management/ improve access. These pathways are now being shared and implemented across the province, in collaboration with primary care and the Digestive Health Strategic Clinical Network, with Calgary as the foundational leader.

Individuals involved in abdominal pain pathway included Drs. Paul Belletrutti, Matt Mazurek, Kerri Novak, and Mark Swain, as well as Primary Care (PCN) Physician Leaders: Drs. Rick Ward, Monica Sargious, Oliver David, Christine Luelo; and Operations Leads: Josh Bashow, Trevor Jarvis, Greg Heather.

Individuals involved in the NAFLD pathway included Drs. Mark Swain, Aziz Abdel Shaheen; EFW Radiologists: Drs. Roy Park, Deepak Bhayana, Alexandra Medellin; Primary Care (PCN) Physician Leaders: Drs. Rick Ward, Monica Sargious, Oliver David, Christine Luelo; and Operations Leads: Josh Bashow, Trevor Jarvis, Greg Heather.

~25%

NAFLD affects ~25% of the adult population in Canada and can progress to cirrhosis, liver failure and liver cancer.

CHALLENGES

The GI Division receives > 2000 outpatient referrals per month and provides endoscopic services to the Zone, and this demand continues to outstrip matched supply of services. Ambulatory care was profoundly impacted by COVID-19 pandemic restrictions, requiring significant, rapid changes that were implemented to address the evolving paradigm.

Our principle aim was the safety of our healthcare staff and patient population, resulting in near complete restriction of face-to-face outpatient services, limited to those emergently and urgently unwell. With this, came a massive and nimble shift to virtual care to continue to meet patient needs. As a result, our urgent waitlist was nearly eliminated (our routine wait list was already zero) and our moderate wait list has been reduced by more than 50%).

“With this, came a massive and nimble shift to virtual care to continue to meet patient needs.”

Dr. Mark Swain

ADMINISTRATIVE

GI has two new site Leads – Dr. Paul Belletrutti at FMC (taking over from Dr. Chris Andrews) and Dr. Shane Devlin (taking over from Dr. Rachid Mohamed)

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Subspecialty Training Program Residents.



DR. MARK SWAIN *Division Head*

Dr. Mark Swain is professor of medicine and currently holds the Cal Wenzel Family Foundation Chair in Hepatology. He is a clinician-scientist with a basic science research interest, focused on deciphering how inflammatory liver diseases cause symptoms such as fatigue. His clinical interests involve quality improvement, wait list reduction and patient access strategies and clinical trials in gastrointestinal and liver disease.

40

The Gastroenterology & Hepatology Residency Training Program received 40 applications from prospective residents.

RESEARCH

Dr. Maitreyi Raman and Dr. Chris Ma received the Crohn's Colitis Foundation (of America) "Precision Nutrition" Award for \$953K USD (\$1.2M CAD). Dr. Steven Heitman (PI) received a PRIHS-5 Award. He and Dr. Robert Hilsden were co-PIs on two funded CIHR Project Grants. Dr. Gilaad Kaplan (PI) was awarded a CIHR Project Scheme grant. Dr. Kerri Novak (PI) was awarded a Choosing Wisely Alberta grant.

The GI IBD and Liver Groups are the most active clinical trial groups in the Cumming School of Medicine.

EDUCATION

Dr. Kelly Burak, Associate Dean of Continuing Medical Education & Professional Development (CME & PD), served as the Course Chair for COVID Corner which, between March 18 and June 24, 2020, delivered up-to-date continuing professional development (CPD) to 7,332 participants.

Dr. Remo Panaccione was appointed as Director of Admissions, Undergraduate Medical Education (UME) in the Cumming School of Medicine.

Dr. Maitreyi Raman was appointed Head of the CSM Clinician Investigator Program.

Dr. Gilaad Kaplan, Scientific Director for Crohn's Colitis Canada, chaired weekly paired national patient and provider webinars for COVID.

POC INTESTINAL ULTRASOUND

In 2019-20, we implemented an acute IBD flare clinic **integrating point-of-care** (POC) abdominal ultrasound to best manage IBD patients during the COVID pandemic – a non-invasive tool used to evaluate inflammation and avoid hospital-based endoscopy. Led by Dr. Kerri Novak and Dr. Cathy Lu, Calgary is the **National leader** in POC abdominal ultrasound for IBD patients. This is a collaborative, multidisciplinary, teaching clinic with nursing, trainees and immense operational support.

Individuals involved in this initiative: Dr. Kerri Novak; Dr. Cathy Lu; Ms. Joan Heatherington, IBD Nurse Practitioner; Dr. Richard Ingram, IBD Fellow; Dr. Melissa Chan, IBD Fellow.

We are a national Leader in the development and successful implementation of GI and hepatology collaborative primary care – specialty care clinical care pathways to more effectively manage waitlists and wait times.





GENERAL INTERNAL MEDICINE

General Internists are specialist physicians who provide medical care to adult patients. We care for patients who have multiple medical conditions, are acutely unwell, require medical care around the time of surgery or pregnancy, and have undiagnosed medical concerns. In Calgary, there are approximately 100 general internists that provide clinical care, medical education, research, and medical leadership.



DR. JEFFREY SCHAEFER
Division Head

Dr. Jeffrey P. Schaefer has been the head of General Internal Medicine since 2016. He is a career medical educator and has served in a variety of leadership roles. His interests include information technology, clinical epidemiology, and medically unexplained symptoms. He is the Connect Care Medicine Area Council co-chair and a surveyor for the Royal College.

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Subspecialty Training Program Residents.

CLINICAL
General Internal Medicine (GIM) clinical highlights include continued participation in Addictions Medicine, Bariatric Medicine, Central Access and Triage for Thrombosis, Complex Care Hub (hospital at home), Indigenous Health, NetCare e-Advice, Palliative Care, Refugee Health and continued expansion of general GIM Services within the hospital setting, community, and surrounding areas. At end of 2019-20, preparations for the COVID-19 pandemic became GIM's focus. Next year, we will report on the profound effects that the pandemic had on health care, medical education, research, and the lives of all within our division/section.

GIM continued to provide leadership in the areas of physician wellness, quality and safety, Connect Care implementation, as well as site based leadership, vice-chair, and interim department head roles.

RESEARCH
GIM enjoyed research success in the areas of medical education, women's and peripartum health, improving the health of socially disadvantaged populations, equity and diversity, perioperative care, point of care ultrasonography, physician wellness, and case reporting of infrequent clinical presentations. GIM undertook several quality of care and patient safety projects.



KEY SUCCESSES
Patient safety was among our priorities. There were high levels of participation among the medical staff and excellent collaboration with AHS operations. Our researchers received several top dollar grants and enjoyed considerable success at publishing their work. Several teaching awards were received by the medical staff and residents in our discipline.



ADMINISTRATIVE

GIM continued to provide leadership in the areas of physician wellness, quality and safety, Connect Care implementation, site based leadership (FMC, PLC, RGH, SHC), vice-chair, and interim department head roles. Leadership in medical education at the undergraduate and post-graduate levels continued. Dr. William Ghali was appointed to the position of vice-president (research) at the University of Calgary and continues as the scientific director of the O'Brien Institute for Public Health.

Several projects were undertaken to improve patient and provider safety and improve the health care experience for all stakeholders.

CHALLENGES

The key challenge facing GIM in 2019-20 was the increased demand for hospital care and anticipation of the COVID-19 pandemic.

THE GENERAL INTERNIST

In low population or remote areas where physicians are few, the general internist serves several subspecialist roles. Other general internists have developed specialized clinical skills such as providing medical care to pregnant patients. Because general internists work throughout the health care system, many serve in education or leadership roles. And some general internists are highly productive researchers.

QUALITY AND SAFETY COMMITTEE

GIM's Quality and Safety Committee matured during the year. The effort was led by Dr. Anshula Ambasta with terrific participation at the acute care sites. Meetings were held regularly.

Several projects were undertaken to improve patient and provider safety and improve the health care experience for all stakeholders. Improving the rates and effectiveness of hand hygiene, reducing the risk of renal injury, reducing the use of urinary catheters, improving routine and perioperative lab testing, improving conversations about serious illness, and improving the triage process were among the projects undertaken.

EDUCATION

The GIM Residency Program continues to be successful under the leadership of Dr. Mike Fisher and assistance of Ms. Charlene Brass. We were pleased to match our positions for the 2019-20 academic year and welcome five new subspecialty residents.

At end of 2019-20, preparations for the COVID-19 pandemic became GIM's focus. Next year, we will report on the profound effects that the pandemic had on health care, medical education, research, and the lives of all within our division/section.



GERIATRIC MEDICINE

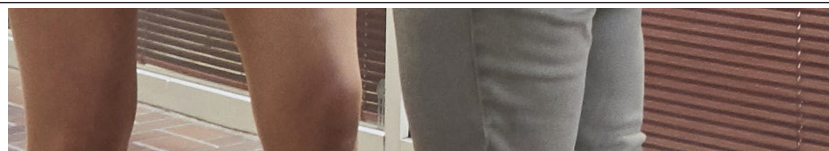
Our 18 geriatrician members contribute substantially to the mandate of the Department of Medicine through our contributions to education, research, administration and clinical service. We provide a comprehensive range of clinical services for frail older adults in the Calgary zone, which are administered through AHS Calgary zone Specialized Geriatric Services (SGS).

ADMINISTRATIVE

Several of our members hold administrative leadership roles within AHS. In 2019-20, this included Medical Director of Specialized Geriatric Services (SGS) (Dr. Holroyd-Leduc) and Medical Director of Home Care (Dr. Kwan) in the Calgary zone; Medical Lead of the AHS Provincial Fracture Liaison Service (Dr. Dempsey), and Medical Director of the Seniors Health SCN and Senior Medical Director of AHS Seniors Health (Dr. Silvius). Dr. Hogan is the director of the University of Calgary Brenda Strafford Centre on Aging. Dr. Holroyd-Leduc was the department's deputy head (academic).

38 Peer Reviewed Publications

with leadership roles on 15 as first/senior author.



PREOPERATIVE GERIATRIC MEDICINE CLINIC

Treatment decisions can be particularly challenging for frail older adults with complex health needs. Surgical interventions for older adults with frailty do not always have the same benefits and risks as they do for robust patients. Individualized care decisions need to consider medical comorbidity, goals of care and overall life expectancy.

In early 2020, Dr. Stacey Hall collaborated with SGS, surgery, and the FMC preoperative clinic to establish a pre-operative geriatric medicine clinic. This evidence-informed clinic, one of the first of its kind in the country, was established to help frail patients and their family members make informed and individualized decisions related to elective surgery. The clinic includes discussions on topics such as the potential impact of frailty and medical comorbidity on surgical outcomes, perioperative delirium, goals of care, and preoperative nutrition.

“This evidence-informed clinic, one of the first of its kind in the country, is focused on supporting frail older adults and their families to make informed decisions related to surgery.”

Dr. Stacey Hall

The clinic, in collaboration with the geriatric medicine inpatient consult teams and the Geriatric Day Hospital, is also positioned to help optimize perioperative function and postoperative recovery among those who choose to proceed with surgery.

RESEARCH

Drs. Hogan, Holroyd-Leduc, Goodarzi and McMillan are conducting applied research in geriatrics, aging, dementia, neurodegenerative disorders, mood disorders, HIV and frailty. Our members supervised or co-supervised 3 Masters' students, 2 PhD candidates and 2 Post-doctorate Fellows, and were members on several thesis committees.

The number of peer-reviewed publications increased by 21% compared to 2018-19 (38 peer-reviewed publications, with leadership roles on 15 as first/senior author). Our research activities have positively impacted the care provided to older Albertans, including our leadership in a number of recent and ongoing PRIHS grants. Drs. Hogan and McMillan are the UCalgary co-site leads for the Canadian Longitudinal Study on Aging.

2,712

referrals to the Seniors Health Clinics in 2019-20

INCORPORATION OF EVIDENCE INTO CARE

Dr. Goodarzi is leading an initiative to implement a care pathway into the Calgary zone Seniors Health and Cognitive clinics related to the assessment and management of depression among persons with dementia. Dr. Jacqueline McMillan is leading the implementation of a frailty care pathway for patients living with HIV into the Southern Alberta Clinic (SAC). Starting in 2019 and moving forward, Dr. Dempsey is leading us in the implementation of virtual ambulatory care and Specialist Link services, which will be informed by a CIHR-funded knowledge synthesis grant in the area that Dr. Goodarzi is leading.

21% ↑

The number of peer-reviewed publications by Geriatric Medicine members increased by 21% compared to 2018-19.



DR. JAYNA HOLROYD-LEDUC
Division Head

Dr. Jayna Holroyd-Leduc was the section head / division chief during the 2019-20 Fiscal Year. Dr. Holroyd-Leduc and a team of researchers, in partnership with the UCalgary Brenda Strafford Centre on Aging and the Brenda Strafford Foundation (BSF), submitted an application to the CFI (Canadian Foundation for Innovation) entitled "Rethinking Continuing Care". This innovative research initiative, if funded, will focus on developing a living research laboratory within the BSF Cambridge Manor continuing care facility.

CLINICAL

Geriatric Medicine clinical services are administered through AHS Calgary zone SGS.

Our clinical services include Seniors Health clinics both in Calgary and at rural/suburban sites across the zone. The Seniors Health clinics received over 2,700 referrals this fiscal year, with wait times remaining at under 2 months. We continue to grow our ambulatory services, developing a pre-operative geriatric medicine clinic and expanding our rural/suburban clinic sites in 2019-20. Our Acute Geriatric Unit (AGU) welcomed two new geriatricians in 2019-20 (Drs. Samii and Mangat) and, with the addition of two more geriatricians in early 2020-21, will expand to include six geriatricians as MRP on the AGU. This has supported the AGU in becoming recognized for its expertise in providing acute care and functional rehabilitation for frail older hospitalized patients with complex comorbidities.

Our section continued to provide inpatient geriatric medicine consults to all four Calgary adult acute care hospitals, as well as provide medical care to those attending the Geriatric Day Hospital.

CHALLENGES

Due to staffing pressures related to the AHS Operational Best Practice initiative, we were forced to close our Seniors Health clinic at South Health Campus at the end of the 2019-20 fiscal year. The recruitment of more geriatricians will be necessary to meet the clinical needs of an aging population; however, SGS will struggle to support more physicians without additional or sustained operational support and a clinical ARP. To help address this issue, we have submitted a proposal for a clinical ARP to Alberta Health, which would support both geriatricians and care-of-the-elderly family physicians to provide care for older adults within the Calgary zone. We are optimistic the clinical ARP will be funded in the fall of 2020.

8 Subspecialty Training Program Residents

We welcomed 4 PGY4 and 4 PGY5 residents in 2019-20.

EDUCATION

We have a number of award-winning educators and leaders. Dr. Fruetel is the department's vice-chair of education, Dr. Hall is the IMRP associate program director, Dr. Burback is the IMRP CBD lead, and Dr. Dempsey is the UME Course V coordinator.

The Geriatric Medicine Residency Training Program is currently recognized as one of the strongest in the country. Under the leadership of Dr. Pearce, the training program successfully implemented CBD and underwent a RCPSC Internal Review in 2019-20.

Our Members teach across the UME, Graduate, PGME, and CME programs at UCalgary. Drs. Fruetel, Hall, Kwan and Pearce are Master Teachers, and Drs. Goodarzi, Hogan, Holroyd-Leduc and McMillan hold appointments with CHS.

As the Continuing Education (CE) Lead, Dr. Schmaltz led a number of successful continuing professional education events in 2019-20, including the 2019 UCalgary CE Geriatric Update course.

Mission: to lead in the care and wellness of frail older adults.

Vision: to optimize the health, function and quality of life of frail older adults living within the AHS Calgary zone.

RESPONSE TO COVID-19

In collaboration with our operational colleagues in SGS, we took quick and decisive measures in early March to modify our ambulatory services in order to minimize risks to our frail high-risk patient population. This included rapidly converting to virtual clinic visits, and developing resources related to COVID-19 for our patient population and their family caregivers.

The AGU was modified to include in-house physician coverage 24/7 and admissions directly from the RGH emergency department. This allowed the AGU to become an acute medical unit for frail hospitalized older adults. This change was a team effort that involved Dr. Michelle Persaud (AGU Medical Director), our hospitalist colleagues, geriatricians (Drs. Arnold, Mangat, Pearce, Persaud, and Samii), and geriatric residents (Drs. O'Shaughnessy and Stanton), in collaboration with RGH operational leadership.

A PRIHS project team, led by Drs. Holroyd-Leduc, Ewa, and Lang, was able to support continuing care staff to detect atypical COVID-19 presentations sooner and to help with the MOH-mandated requirement to use RAAPID to assist in the effective and appropriate transfer of residents infected with COVID-19 to the emergency department. Dr. Silvius also played an important leadership role in COVID-19 provincial preparations, focused on supporting older adults and continuing care.

FIVE-YEAR STRATEGIC PLAN

In 2019 Geriatric Medicine developed a 5-year strategic plan (2020-25). Seven operational processes and organizational capacity focuses were identified to achieve our targeted stakeholder outcomes:

1. Increase rural/suburban capacity in the provision of evidence-informed care to a rapidly aging rural population;
2. Improve the diagnosis and management of dementia within the AHS Calgary zone (and beyond);
3. Further optimize continuing care;
4. Further develop relationships with other clinical programs that focus on optimizing the health, function and quality of life of frail older adults within the AHS Calgary zone;
5. Expand the geriatric medicine knowledge and skills of trainees within residency training programs across UCalgary;
6. Develop AGU into a best-in-class model for acute geriatric care;
7. Develop the section's Applied Research Program.

Throughout the first wave of the COVID-19 pandemic, the AGU remained above 100% capacity, freeing up beds on other units to admit patients infected with COVID-19.

HEMATOLOGY & HEMATOLOGICAL MALIGNANCIES

Hematology & Hematological Malignancies (Hematology) treats patients with acquired and inherited blood disorders. We are comprised of 32 Hematologists and provide inpatient, outpatient and/or consultative hematology services at all four Calgary acute care hospitals and the Tom Baker Cancer Center.

CLINICAL

There are three comprehensive care programs within Hematology: the Alberta Blood and Marrow Transplant Program, the Southern Alberta Rare Blood and Bleeding Disorders Clinic, and the Primary Immune Deficiency Treatment Program.

Hematology received approximately 5,000 referrals through Hematology Central Triage in the 2019-20 fiscal year. A further 2,500 consultations were received through the Tom Baker Cancer Center triage system, and 1,300 Thrombosis Clinic referrals were received through Internal Medicine Triage.

The Thrombosis Clinic at RRDT, a new initiative in 2019-20, was developed in collaboration with General Internal Medicine. The goal of the clinic is to see all newly-diagnosed patients with VTE. Urgent referrals can be seen within 2-3 weeks, while routine visits are seen within 3-6 months. The Thrombosis Clinic received over 1,300 referrals in its first ten months. As capacity within the program is developed, wait times should come down and clinical trials of novel agents will be offered.

EDUCATION

Hematology provides incoming medical students with their first block of medical training. Course 1 includes Hematology and Gastroenterology and is consistently rated as one of the most impactful blocks of the University of Calgary medical school curriculum. The Hematology section of the course was chaired by Dr. Dawn Goodyear, who is stepping down this year. Trainees may rotate through clinics at FMC, TBCC, PLC and SHC and inpatient rotations are offered at FMC and PLC. All are highly-rated.

The University of Calgary remains a highly desirable site for Hematology subspecialty training, and we consistently attract the top 10-15% of candidates. This year we are training our first international lymphoma fellow, Dr. Robin Noel.

5,000

Hematology Central Triage received approximately 5,000 referrals in 2019-20.



DR. ANDREW DALY
Division Head

Andrew Daly has been a practicing hematologist for twenty years. His clinical practice includes management of patients with Leukemia and Lymphoma and he specializes in the use of hematopoietic cell transplantation in the treatment of these disorders. His research interests include the use of alternative stem cell donors to expand access to transplantation. He was previously the medical director of the Alberta Blood and Marrow Transplant Program.

5

Subspecialty Training Program Residents.

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Applications from Prospective Subspecialty Training Program Residents.

ADMINISTRATIVE

There were several important leadership changes within Hematology. Dr. Peter Duggan stepped down as division head / section chief after a very successful five-year term, and Dr. Andrew Daly moved into this position. Dr. Mona Shafey then assumed the role of medical director of the Alberta Blood and Marrow Transplant Program. Dr. Lynn Savoie became the inaugural medical director of Unit 57. Dr. Natalia Rydz assumed the role of medical director of the Southern Alberta Rare Blood and Bleeding Disorder Clinic after Dr. Man-Chiu Poon stepped down.

Hematology members are represented on regional, national and international committees. Our members direct the activities of programs such as the Southern Alberta Rare Blood and Bleeding Disorders Clinic, the Alberta Blood and Marrow Transplant Program and the Primary Immune Deficiency Treatment Program. They are also represented on several committees at the Tom Baker Cancer Center and in the Calgary Zone.

RESEARCH

Our researchers showed continued success in attracting tri-council funding. CIHR grants awarded this year support projects in Women's Health and Thrombosis and in Platelet Transfusions in Hematopoietic Cell Transplantation. We also benefited from Alberta Cancer Foundation funding for projects on Early Integration of Palliative Care in Hematopoietic Cell Transplantation, Early Detection of AML Relapse after HCT and High-Dose Thymoglobulin for GVHD Prophylaxis.

Hematology members continue to publish their research in high-impact journals, such as the New England Journal of Medicine, Blood and Leukemia.

Hematology operates a very successful Clinical Trials program through the Clinical Research Unit of the Tom Baker Cancer Center. Clinical trials of new treatments for patients with lymphoid, myeloid and plasma cell malignancies are available, as are interventional and observational studies in hematopoietic cell transplantation.



THROMBOSIS AND HEMOSTASIS BASIC SCIENCE LAB

Inflammation, platelet activation, hemostasis and thrombosis are critically interwoven processes. This has become of paramount importance with the global COVID-19 pandemic, in which up to one third of the most critically ill patients have developed venous or arterial thrombosis.

Hematology members have identified a need to increase collaboration and integrate thrombosis and hemostasis research across various disciplines, including translational and basic science. They have built a cohesive translational research program to accelerate high-impact thrombosis and hemostasis research in Calgary. Ultimately, they hope to develop a dedicated and highly specialized laboratory to study these processes across several University of Calgary Departments and Institutes.

Some of the early successes of this collaboration include studies on:

- Complement and platelet activation in pregnant women with

antiphospholipid syndrome (PI Dr. Leslie Skeith);

- Platelet activation in preeclampsia (Manuscript in preparation, Dr. Adrienne Lee and Dr. Ejai Agbani);
- Thromboelastography in orthopedic surgery (PI Dr. Prism Schneider);
- The role of platelet procoagulant membranes in DDAVP coagulation enhancement (PI Dr. Adrienne Lee);
- The role of platelet activation in SARS-CoV2 infection (PI Dr. Adrienne Lee).

Over the next one to two years this group plans to expand laboratory infrastructure to include new advanced hemostasis analyzers, dark-field microscopy, Luminex and aggregometry instruments. Once the laboratory is fully equipped they will be able to expand their collaboration to other researchers and departments (e.g. cancer thrombosis, cardiopulmonary bypass/anesthesia and obstetrics).

This has become of paramount importance with the global COVID-19 pandemic, in which up to one third of the most critically ill patients have developed venous or arterial thrombosis.

ALLOGENEIC BMT LONG-TERM FOLLOW-UP CLINIC

As patients in the BMT Program survive longer, their care needs transition from management of acute transplant-related side effects to prediction and management of late effects of transplant (subsequent malignancies, cardiovascular disease and endocrinopathies). The clinic structure at Tom Baker Cancer Center was recognized to be inadequate to address late effects given the short, focused appointments and clinics that are overbooked with acute patients.

The BMT Long-Term Follow-Up Clinic (BMT LTFU Clinic) at the Holy Cross Hospital is a multidisciplinary clinic that provides care from transplant hematologists, nurses, pharmacists and dietitians in a single one-hour appointment. This clinic receives patients from the BMT clinic at TBCC and has offloaded more than 200 long-term patients from these clinics in its first year of operation. Patients receive counselling regarding exercise, cancer screening, smoking cessation, heart-healthy eating, diet in diabetes (if applicable), appropriate calcium intake and review of vaccination. A Framingham risk profile is calculated for each patient to support decision making.

The BMT LTFU Clinic supports survivorship research in BMT and has already shown early research success. Three abstracts have been presented at national and international meetings and one manuscript on the incidence of subsequent malignancy in this population is already in preparation.

Individuals involved:

Dr. Kareem Jamani (Clinic Director), Dr. Andrew Daly (Hematologist), Caitlin Wallis (RD), Nikki Blosser (Pharmacist), Catherine Leyshon (Pharmacist), Kyia Hynes (Pharmacist), Baljit Randhawa (Nurse Practitioner), Lina Nunez (RN), Shannon Hayden (RN), Anne Tremblay (RN)



INFECTIOUS DISEASES

Infectious Diseases (ID) provides comprehensive inpatient consultative services at each of Calgary’s four adult hospitals in addition to servicing a very busy home parenteral therapy program (HPTP) at each site - a program intended to reduce hospitalizations. In addition to in-hospital services, we provide care in a number of outpatient subspecialty clinics including HIV (SAC), Tropical Medicine, Sexually Transmitted Infections, Cystic Fibrosis, Hepatitis C, Wound Care and General Infectious Diseases.



DR. MIKE PARKINS
Division Head

Dr. Michael Parkins took over as the division head / section chief from Dr. Donna Holton in November 2019. Dr. Parkins is also the director of the Calgary Adult Cystic Fibrosis Clinic and the Home Parenteral Therapy Program (HPTP). He is a clinician-scientist with research interests supported by CIHR, the Cystic Fibrosis Foundation, CF Canada and NIH.

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*Subspecialty Training
Program Residents.*

CLINICAL

ID services four home parenteral therapy programs (HPTP) – one at each adult hospital in Calgary. Clinics at the Foothills Medical Centre and the Rockyview General Hospital are open Monday-Sunday, whereas the Peter Lougheed Centre and South Health Campus clinics are open Monday-Friday. Patients are referred to the HPTP from two streams: emergency rooms and urgent care clinics - when outpatients are unwell enough to require parenteral antibiotics, but do not require hospitalization, and inpatient units – when inpatients require continued parenteral antibiotic therapy, but are fit enough to continue treatment at home and no longer require other hospital supports.

The HPTP clinics operate without a waiting list and patients are seen within 24 hours of referral. In the 2019-20 fiscal year, ID physicians completed more than 18,400 patient-visits – significantly reducing the patient volume pressures on our emergency rooms and hospitals.

EDUCATION

We are particularly proud of our three graduating PGY5 Trainees. Dr. Raynell Lang is currently pursuing a highly coveted sub-specialty training program in data analytics with the HIV consortium; NA-ACCORD - based in Baltimore (supported by the Helios UCMG and Dr. Subrata Ghosh Post Fellowship Awards). Dr. Brett Edwards has been accepted at a premier tuberculosis and non-tuberculosis mycobacterial sub-specialty fellowship training at the University of Toronto (supported by the Helios UCMG Post Fellowship Award). Dr. Sam Bourassa-Blanchette is currently pursuing a PGY 6 year in Medical Microbiology at the University of Calgary in order to become dually certified by the RCPSC in both microbiology and infectious disease.

The “de-simplified” ART program has resulted in a cost savings to Alberta Health of over \$4 million to date. The project was supported by the medical, nursing, pharmacy, and research staff of SAC.

RESEARCH

While ID had many research successes in 2019-20, the Cystic Fibrosis Research group – led by Drs. Mike Parkins and Ranjani Somayaji, had a particularly productive year. Together with their research staff (Ms. C Smith, A. Langevin, V. Levesque and L. Fatovich), they participated in four industry led clinical studies (Phase 2 & 3), five investigator initiated clinical studies, and became one of the principle sites of the newly created Cystic Fibrosis Canada Accelerating Clinical Trials Network (CF CanACT). Furthermore, Dr. Parkins and Somayaji applied for and received ~\$1 million in CIHR funding to lead a prospective national observational trial investigating the effects of Cytomegalovirus on CF lung disease progression.

ADMINISTRATIVE

ID adopted a newly organized leadership structure this fiscal year. Dr. Bonnie Meatherall serves as the clinical lead of Service 1, the two FMC inpatient infectious disease consultation services. Dr. Joseph Kim serves as the clinical lead of Service 2, which includes each of the PLC, RGH and SHC. Dr. Kristen Brown has led the development of a quality improvement program in the ID HPTP clinics, which seeks to improve quality of care in our clinics and to further increase our capacity to decant patients from our hospitals to an optimized outpatient setting. Furthermore, each of the respective HPTP programs now have formal leads: Dr. Bonnie Meatherall for FMC, Dr. Joseph Kim for RGH, Dr. Jack Janvier for PLC, and Dr. Oscar Larios for SHC, enabling both improved coordination amongst sites and appropriate regionalization.

ANTIMICROBIAL STEWARDSHIP FELLOWSHIP PROGRAM

In April 2020, Drs. John Conly and Joseph Vayalumkal (Pediatric ID) received confirmation from the Royal College of Physicians and Surgeons of Canada that their proposal to create a fellowship program around antimicrobial stewardship - as an Area of Focused Competence - had been formally approved. This program, the first of its kind in the country, will attract highly trained individuals from a multitude of disciplines (infectious disease, medical microbiology, internal medicine, pediatrics, and Public Health and Preventative Medicine) to pursue advanced training in antimicrobial stewardship, mentored by world-leading experts. The Antimicrobial Stewardship Program has one fellow currently (Dr. Khaled Al Sager) with plans to recruit up to two trainees per year going forward. The Antimicrobial Stewardship Fellowship simultaneously will enrich ID and serve to disseminate important information in Calgary area hospitals – benefiting our patients and community as a whole.

18,400

HPTP patient-visits

PROSTHETIC JOINT INFECTIONS

Dr. Elissa Rennert-May joined ID as a GFT member in December 2019. One focus of Dr. Rennert-May's work has been on the potentially avoidable costs associated with prosthetic joint infections (PJI).

Using a combination of population level data involving all Albertans over a three-year period derived from Alberta Health corporate gross costing and microcosting data, Dr. Rennert-May and colleagues Drs. Shannon Puloski (Orthopedics) and Stephanie Smith (ID, UofA) established that the mean one-year cost of a complicated PJI was >\$95,000 – 4.8 fold greater than the uninfected cohort !

In a manuscript published in Antimicrobial Resistance and Infection Control, Dr. Rennert-May and colleagues then performed a cost effectiveness analysis of a proposed universal Staphylococcus aureus decolonization protocol using intranasal mupirocin and chlorhexidine body washes (relative to standard of care). While the costs of a decolonization bundle were projected at ~\$20/ person, owing to overall cost savings attributable to reduced occurrence of expensive PJI in Alberta, a cost savings potential was confirmed.

If introduced universally across Alberta, the protocol is estimated to reduce health care costs by more than \$1.25 million annually. Dr. Rennert-May and her colleagues used this research to work with the Alberta Hip and Knee clinics to change their best practice clinical care pathway guidelines, and introduce a decolonization bundle prior to hip and knee replacement. Dr. Rennert-May and colleagues have funding from the Alberta One Health Consortium and materials supplied by 3M Canada to explore the implementation and outcomes of this guideline change.

CHALLENGES

COVID-19 disrupted all aspects of clinical and academic life in the first quarter of 2020 – and was particularly impactful in Infectious Diseases. Owing to the nature of the disease, many of our members were forced to rapidly adopt prominent roles required for understanding the disease's epidemiology and pathobiology, infection transmission potential – and means of preventing, and therapeutics – in addition to their routine duties. We rose to the challenge - and then some!

NOVEL COST SAVING INITIATIVE FOR TREATMENT OF HIV

The last decade has witnessed continued improvements in the health outcomes of individuals living with HIV. These improvements are the direct result of fantastic progress in anti-retroviral therapies (ART), including the bundling of multiple ART agents into single tablet regimens enabling reduced treatment burden and improved compliance. An unfortunate consequence of these advancements has been a dramatic increase in the cost of therapy – averaging \$13-20,000 per year per patient.

Dr. M. John Gill, Medical Director of the Southern Alberta Clinic (SAC) for HIV, recently published a pivotal study in HIV Medicine studying a novel cost saving initiative – one that runs counter to mainstream HIV medicine. The team approached patients who were stable on a single one-pill-once-a-day regimen of abacavir-lamivudine-dolutegravir regarding their willingness to switch to a two-pill-once-a-day regimen. Over 50% of patients demonstrated a willingness to change therapies on a purely altruistic basis. Both regimens contained the same medications: dolutegravir and abacavir-lamivudine, the latter of which is now generic – potentially enabling significant cost savings. More than 600 patients were followed for three years of observation; patients who selected a “de-simplified” regimen did not experience any adverse events in either drug effects or in measures of HIV disease progression.

This program has resulted in a cost savings to Alberta Health of over \$4 million to date. The project was supported by the medical, nursing, pharmacy, and research staff of SAC.

KEY SUCCESSES

The same challenges posed by COVID-19 led to tremendous successes within ID this year. Our infection control physicians at each hospital: Drs. Conly (FMC), Kim (RGH), Larios (SHC) and Missaghi (PLC) led the charge in developing and implementing strategies to prevent, identify, and contain infections. Our members participated in multiple ad-hoc standing committees including ZEOC, MEOC, site-based emergency commands, and fielded endless media requests and CME events. ID members are actively involved in therapeutic research trials, infection prevention measures trials, and basic science experiments studying the epidemiology and pathobiology of SARS-COV-2. Further, our group formed and led a COVID-19 interest group, made up of small working groups each responsible for various aspects of the illness, in order to facilitate the efficient dissemination of rapidly changing information amongst our members.

The Antimicrobial Stewardship Fellowship Program, the first of its kind in the country, will attract highly trained individuals from a multitude of disciplines to pursue advanced training in antimicrobial stewardship, mentored by world-leading experts.



NEPHROLOGY

Nephrology provides care to patients with Kidney Disease in the Calgary Zone, and supports patient kidney care in the South and Central zones. Nephrology consists of 32 members, and is equally represented by early, mid, and senior career members. We are highly academic with strengths in education, specialized clinical care, basic and clinical research.

CLINICAL

Nephrology continues to maintain active inpatient and outpatient clinical services for patients with kidney disease. In addition to general nephrology such as dialysis, inpatient and consult services, we also provide specialized care for glomerulonephritis, genetic kidney disease, chronic kidney disease, central access and triage, urgent nephrology and acute kidney injury, and apheresis. We have also developed leading edge programs in home dialysis and urgent care for patients with kidney disease.

ADMINISTRATIVE

Nephrology members have active leadership roles at the University of Calgary, the Strategic Clinical Networks and Alberta Health Services.



EDUCATION

Nephrology contributes to education at all levels including UME Renal and Endocrine Course IV and PGME for Internal Medicine. The Section has a Nephrology Fellowship Program. Sub-specialization fellowships in Transplantation, Glomerulonephritis and Dialysis/Vascular Access are also available. Section members are also actively involved in CME for Nephrology and Internal Medicine.



DR. DAN MURUVE
Division Head

Dr. Dan Muruve is a professor, division head and zone clinical section chief of Nephrology in the Department of Medicine, and a member of the Snyder Institute for Chronic Diseases. Dr. Muruve is a certified kidney specialist and basic scientist with expertise in the biology of kidney disease and the molecular basis of inflammation and the immune system. Dr. Muruve holds a Canada Research Chair in Inflammation, Personalized Medicine, and Kidney Disease.

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*Subspecialty Training
Program Residents.*

RESEARCH

Active research is ongoing in the following areas: basic science of kidney disease, role of inflammation in kidney disease, kidney stem cells and regenerative medicine, precision medicine in nephrology, health services research and clinical trials in nephrology, vascular access research, translational physiology of the kidney, sex and gender in kidney disease, clinical epidemiology of kidney disease, acute kidney injury and chronic kidney disease, patient engagement in kidney disease clinical care and research. The group also participates in a number of industry-sponsored therapeutic trials.

AKC-SOUTH PROGRAM FOR HOME DIALYSIS

Home dialysis options such as peritoneal dialysis (PD) and home hemodialysis (HHD) have equivalent survival, better quality of life and reduced costs as compared with traditional facility based hemodialysis (HD). Home dialysis is better able to provide patient centered care with emphasis on patient autonomy, freedom and lifestyle. Despite the benefits of home dialysis only 30% of Alberta Kidney Care South patients are on home dialysis (22% PD, 8% HHD). Given the annual increase in demand for renal replacement therapy (growth of 3%/year) AKC-S aims to increase uptake of Home Dialysis to 40% by 2025. By doing so will result in significant cost savings; at approximately \$30 000/patient, this translates to over \$4 million). As part of this goal, AKC-S has created a unified Home Dialysis Program at the Sheldon M Chumir Health Centre. This program is led by Dr. Jennifer MacRae, Dr. Elena Qirjazi and Dr. David Ward. Dr. Rob Quinn is an instrumental team member conducting research in home dialysis therapies.

Amalgamation of PD, HHD and a new Dialysis Transition Unit (DTU, designed to provide a supportive environment for patients starting on dialysis), under the umbrella of the Home Dialysis Program with a single manager and a single medical director, combines resources for the shared purpose of promoting and maintaining patients on home dialysis. Sharing home dialysis resources avoids duplication and circumvents the silo effect which often leads to miscommunication and lack of awareness between units. Also, as part of this mandate, the DTU (housed within the Home Dialysis Program) will further expand capacity to facilitate and promote the transition of patients into home dialysis.

The key components to successful growth of a home dialysis program include providing the infrastructure to allow PD at multiple sites within Calgary. AKC-S is developing the infrastructure to provide an urgent PD start program at the PLC for new dialysis patients and to provide ongoing PD care for established PD patients. In addition, the groundwork for timely

access to PD catheter insertion has been established with the access surgeons at Foothills Medical Centre resulting in a 22% increase in the number of PD catheters insertions and subsequent PD starts since March 2020.

Ongoing growth in home dialysis requires an increase in the number of new patients starting on home dialysis and a reduction in the number of patients leaving for facility based HD. In conjunction with the Kidney Health Strategic Clinical Network, working groups have been established to determine the reasons for exit from home dialysis in order to develop strategic program interventions to address modifiable reasons. AKC-S has also established a working group to explore how to promote home dialysis in rural regions with an emphasis on indigenous communities. Since the inception of the program in March 2020, the number of patients on all home dialysis modalities has increased by 30%.

SEX AND GENDER IN KIDNEY DISEASE

Nephrology has an active research program in Sex and Gender as it pertains to kidney disease and cardiovascular health, which is led by Drs. Sandi Dumanski and Sofia Ahmed. The research merges clinical expertise in kidney and cardiovascular disease with vascular physiology, and endeavors to understand the impact of sex and gender on cardiorenal outcomes in women and men.

Specifically, Dr Dumanski investigates the implications of fertility and the effect of fertility-related hormones on micro- and macro- vascular health. She has a special interest in anti-Mullerian hormone, a sex hormone secreted by both females and males to augment fertility, and its physiologic role in both kidney and cardiovascular outcomes. Ongoing studies seek to further understand the complex relationships between fertility, endogenous and exogenous sex hormones, parity, vascular dysfunction, and cardiovascular risk in women and men with and without kidney disease.

PRECISION MEDICINE IN NEPHROLOGY

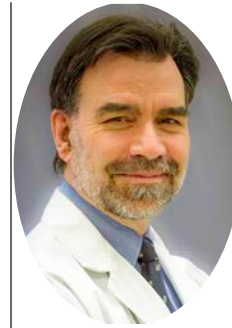
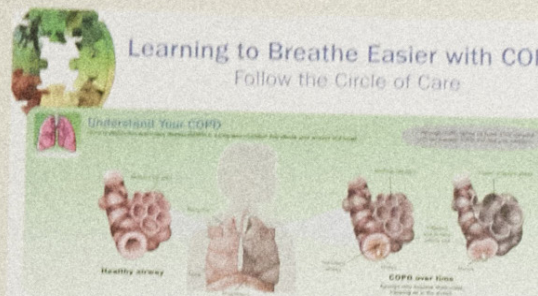
The Precision Medicine Program in Nephrology in Calgary began in 2012 with the establishment of the largest kidney biobank in Canada. Precision medicine is an approach to patient care by selecting treatments that are individualized to patients based on a molecular and genetic understanding of their disease.

TARGET-KD (The Application of Renal Genomics to Enhance the Treatment of Kidney Disease) is an initiative within the Precision Medicine Program in Nephrology that is collecting a population-based biorepository for all patients with kidney disease undergoing a kidney biopsy in Southern Alberta. Biospecimens include blood, urine, DNA and blood mononuclear cells linked to individualized clinical data within Alberta Precision Laboratories. The initiative is being led by Drs. Justin Chun, Daniel Muruve, and Hallgrimur Benediktsson (Pathology and Laboratory Medicine).

With advances in technologies and stem cell biology, the TARGET-KD program can reprogram patient blood mononuclear cells to induced pluripotent stem cells (iPSC) and generate patient-derived (specific) “mini-kidneys” called kidney organoids. The kidney organoids can be used to model various kidney diseases for the purpose of identifying unique molecular signatures that are different between patients with different diseases. The kidney organoids are a powerful, human platform to understand patient-to-patient disease differences, cellular disease mechanisms, perform drug testing for efficacy and toxicity in a patient-specific manner.

Since the inception of the AKC-S program in March 2020, the number of patients on all home dialysis modalities has increased by 30%.





DR. WARD FLEMONS
Division Head

Dr. Ward Flemons is the division head / section chief of Respiratory Medicine. He practices at the Foothills Medical Centre where, in addition to providing general respiratory inpatient and outpatient care, he also sees patients in the sleep clinic and bone-marrow transplant clinic. Dr. Flemons is also the Department of Medicine vice chair, health analytics and safety. In addition, he serves as a medical director for the Health Quality Council of Alberta.

RESPIRATORY MEDICINE

Respiratory Medicine provides comprehensive inpatient and outpatient care to patients in Southern Alberta at all four adult acute care sites in Calgary. We staff nine on-call inpatient services and assist with a tenth (cystic fibrosis).

CLINICAL

Respiratory Medicine continued to have a busy clinical year expanding the inpatient service at the PLC to include a separate service for lung transplant and pulmonary hypertension patients. The inpatient TB consulting service, available 24/7, continued to increase its capacity as the requests for services and advice continued to grow.

In addition to general respiratory consultation and inpatient care, we offer 15 subspecialty outpatient services, including asthma, complex inflammatory airways, Chronic Obstructive Pulmonary Disease (COPD), cough, interstitial lung disease, hereditary hemorrhagic telangiectasia, dyspnea (malignant pleural effusion), Alberta Thoracic Oncology Program (ATOP) / Interventional Pulmonary Medicine, ALS, pulmonary hypertension, nontuberculous mycobacteria (NTM), tuberculosis (TB), chronic ventilation / neuromuscular, lung transplant, sleep, bronchiectasis, cystic fibrosis, and bone marrow transplant.

RESEARCH

Respiratory Medicine has seven GFT members; five of whom have a major research focus. In addition, three other major clinical AMHSP members have more than 20% protected time for research activities. Our members authored / co-authored more than 100 publications, over 90 of which were peer-reviewed. There were 10 unique CIHR grants that members were co-investigators on. Several of these grants involved working with collaborators across Canada. Members fostered research and state-of-the-art practice by participating in 22 national and 10 international committees / groups working on standards and guidelines.

9

Unique CIHR grants

9

Subspecialty Training Program Residents.

EDUCATION

In addition to our highly successful Respiratory Medicine two-year fellowship program, we continue to attract fellows doing advanced training in interventional pulmonary medicine, sleep, and interstitial lung disease. The sleep group played a major role in getting Royal College certification for an Area of Focused Competence in sleep. The two year fellowship program spent many hours planning for its internal review and for the start of the Royal College's Competency by Design program in respiratory medicine. Both of these initiatives were placed on hold because of the COVID pandemic.

Respiratory Medicine played a major role in providing frontline care for COVID patients and leading COVID teams in the event that they were required in Calgary hospitals.

ADMINISTRATIVE

Respiratory Medicine continues to contribute in many administrative areas. Several members played key roles in the Respiratory Strategic Clinical Network, including Dr. Sachin Pendharkar who co-chaired the sleep working group that brought together AHS and non-AHS clinicians in the province together with the College of Physicians and Surgeons and the College and Association of Respiratory Therapists of Alberta to implement provincial accreditation standards for home sleep apnea testing.

Dr. Richard Leigh was promoted from Department Head, Medicine to Senior Associate Dean, Faculty Affairs. Dr. Chris Mody continues to serve as the Department Head of Microbiology, Immunology and Infectious Diseases.

COPD / HF QI PROJECT

AHS Executive Leaders have declared COPD and Heart Failure (HF) a major quality improvement priority because of the large number of patients with these conditions and the high number of inpatient bed days that are used to treat these patients.

Respiratory Medicine (Dr. Flemons) was an integral partner with Cardiology (Dr. Jonathan Howlett) and Administration as well as Integrated Quality Management and Health Analytics. A multiphase approach was undertaken focusing on acute care admission, transition back to the patient's medical home and then working with primary care.

Care pathways that included standardized care were created. Learning collaboratives were implemented and regular team meetings took place at all four acute care sites. Hospitalists and GIM were engaged and partnerships with primary care were established. At the acute care sites, Respiratory Medicine leads for the QI teams played an important role in implementing acute care pathways - this included Drs. Chan, Hirani, Lohmann and Walker. In addition, Dr. Walker worked with Dr. Howlett to develop and deliver educational sessions for primary care. Detailed and relevant analytics were developed by the Zone's Health Analytics unit under the guidance of Drs. Flemons and Howlett.

The project is ongoing and moving into community supports as well as emergency department care. The project successfully engaged with a large number of healthcare providers – nurses, unit managers, clinician educators, physiotherapists, pharmacists and various physician groups. The logistics were challenging but the project has met with success and there has been very good uptake.

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Subspecialty outpatient services in addition to general respiratory consultation and care

COVID RESEARCH

Dr. Jason Weatherald was the principal investigator on a \$1.1 million CIHR grant for a trial to test the efficacy of awake prone positioning for hypoxemia. Other investigators included Drs. Ken Parhar and Tom Stelfox from the Department of Critical Care Medicine, two other collaborators at McMaster University, and two Respiratory Medicine collaborators (Drs. Johansson and Mitchell).

Dr. Alain Tremblay was the Calgary PI on the CATCO trial, an international multicenter open label adaptive randomized trial of COVID-19 treatment for hospitalized (general inpatients OR ICU) with confirmed COVID-19 illness. The adaptive nature of this trial allows treatment arms to be dropped or added if new safety or efficacy data becomes available and, as such, is well suited to the nature of the rapidly evolving knowledge on this illness. The initial design had 4 arms: Control / standard of care arm, Lopinavir / ritonavir (Kaletra), Remdesivir, and Hydroxychloroquine.

Other Respiratory Medicine members (Drs. Lim, Vakil, Fell, Mitchell, and Weatherald) were also involved. The study is designed to last until 2022.

CLINICAL COVID RESPONSE

Respiratory Medicine played a major role in providing frontline care for COVID patients and leading COVID teams in the event that they were required in Calgary hospitals.

In addition to leading Respiratory Medicine's pandemic response, Dr. Flemons accepted the position of Department of Medicine site lead for FMC, where he worked closely with leads for GIM, Hospitalists, and the FMC Facility Medical Director. Respiratory Medicine's other site leads (Dr. Fraser for RGH; Dr. Thakrar for PLC; Dr. Fell for SHC) played integral roles in developing their site's specific COVID response plans, and our members were integral to the detailed plan for creating COVID teams at each acute care site.

Dr. Tremblay took the lead in developing a plan to consolidate all invasive procedures at the FMC bronchoscopy suite, where our interventional respirologists developed safe protocols and kept procedures going throughout the COVID response. Dr. Pendharkar agreed to come back early from his sabbatical to become a co-lead of MEOC. Dr. Johansson was MEOC's Clinical Practice Guidelines Officer. Dr. Walker served as a member of the provincial Scientific Advisory Group.

A key document that guided the clinical approach to patients who might need non-invasive ventilation (NIV) was created by Respiratory Medicine under the leadership of Dr. Fraser. Several versions of his document guided the Zone's response and informed the provincial approach. Clinical decision-making around use of NIV based on the likelihood patients may have COVID relied on work done by Dr. Flemons in conjunction with Dr. Conly (IP&C) and other medical leaders in the Zone.

90

Authored / co-authored, peer-reviewed, publications

KEY SUCCESSES

Respiratory Medicine successfully recruited nine respirologists: Drs. Povitz and Leung (FMC); Drs. Ramsahai (RGH), Vis and Chee (SHC – due to start later in 2020); Drs. Liu, Lim, Chen and Harper (PLC – the latter two starting later in 2020).

We expanded complex airways disease management with the recruitment of Dr. Ramsahai, who joins Dr. Mitchell at RGH and Drs. Walker and Leigh at FMC.

We expanded the lung transplant and pulmonary hypertension inpatient service at the PLC, which was aided by the addition of a nurse practitioner (Kyla Murray) and two recruits (Drs. Liu and Harper).

CHALLENGES

The lung-transplant program has responded to increasing patient numbers and complexity by creating a separate inpatient service at the PLC. This service requires six or seven respirologists to adequately staff an inpatient service and an ever increasing number of outpatient referrals. There are currently three respirologists with this expertise in Calgary.

eReferral was adopted by Respiratory Medicine to standardize referral processes and reduce workload. However, the use of eReferral by primary care and other specialty groups has not resulted in improved and robust workflows. It has actually increased workload on the Pulmonary Central Access and Triage staff to enter faxed information into the eReferral program.

The Calgary Zone's Chronic Ventilation and Neuromuscular Program has been led for the past 20 years by Dr. Karen Rimmer, a respirologist and former intensivist who is retiring in the coming year. A key challenge for Respiratory Medicine is to work with the Department of Critical Care Medicine to develop a plan for how to continue the excellent work done by Dr. Rimmer. Recruitment of one or more physicians with expertise in chronic ventilation is a top priority.

RHEUMATOLOGY

Rheumatology's membership consists of 15 AMHSP physicians and 19 Fee-For-Service community physicians who provide an integrated musculoskeletal program of clinical care using a patient centered collaborative care model with rheumatologists, nursing and Allied Health professional staff in Southern Alberta. We also have several honorary members, including a growing non-physician academic and clinical doctorate contingent.

ADMINISTRATIVE

Dr. Paul MacMullan took over as Division Head from Dr. Dianne Mosher as of July 1st, 2019.

Dr. Dianne Mosher was appointed the Associate Dean of Strategic Partnerships and Community Engagement.

Ms. Ellen Lee was renewed as the Divisional Program Manager and Administrator for the Rheumatology Postgraduate Residency Training Program.

“Virtual Care, enhanced co-operation and collaboration with primary care, and utilization of care pathways will soon become the norm. This is to be welcomed and encouraged.”

Dr. Paul MacMullan



DR. PAUL MACMULLAN Division Head

The Section of Rheumatology was formed in 1975 and is the oldest within the Department of Medicine. It was established by Dr. Doug Kinsella and has flourished under his and the leadership of those that followed, namely; Drs. Marvin Fritzler, Martin Atkinson, Liam Martin, and Dianne Mosher. Dr. Paul MacMullan has recently taken on this role, thankful that he is standing on the shoulders of giants.

7

*Subspecialty
Training Program
Residents.*

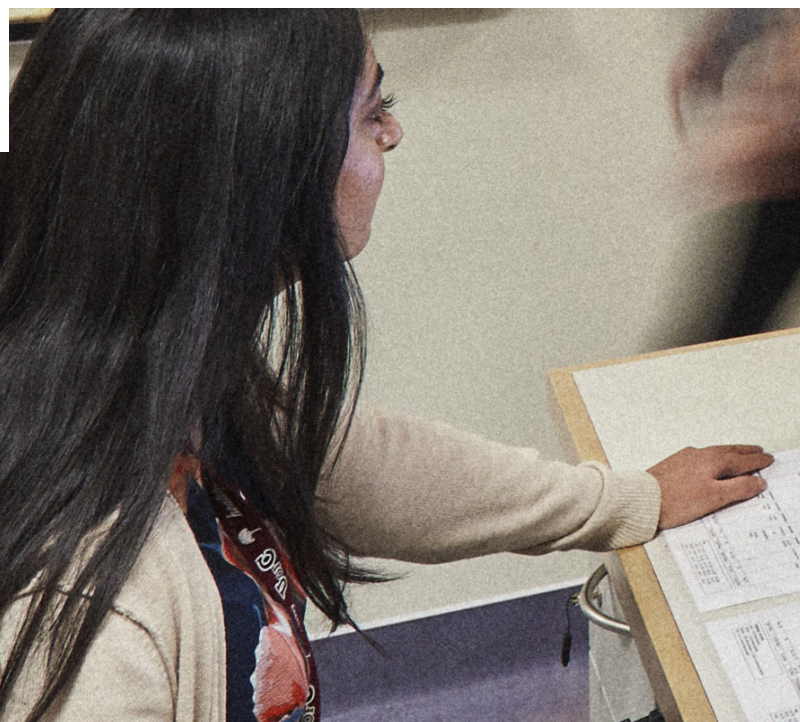
*The Rheumatology
Residency Training
Program welcomed 3 PGY4
and 4 PGY5 Residents in
2019-20.*

EDUCATION

The Royal College Competency by Design (CBD) Program led by Dr. Steven Thomson, Rheumatology CBD Chair, has been successfully launched, despite the pandemic.

Dr Cristina Moran-Toro has taken over as the Rheumatology Lead for Course 2 at the Cumming School of Medicine and for all things involving Undergraduate Medical Education (UME).

Dr Gary Morris continues as Program Director and has done an amazing job in these difficult times.



CLINICAL

We have strong clinical programs with numerous specialty and combined clinics including, but not limited to, Early Inflammatory Arthritis, Spondyloarthritis, Nurse-Practitioner, Crystal Arthritis, Transition (YARD), Lupus, Vasculitis, Biologics, combined Neuro-Immunology, combined Antiphospholipid-Lupus, combined Interstitial Lung Disease-Scleroderma, combined Renal-Vasculitis, in addition to General Rheumatology and Nurse-led Stable Rheumatic Disease clinics.

Our Central Access and Triage (CAT) Program underwent an overhaul of physician governance this year that has led to the appointment of the first dedicated MD Lead for CAT. (Dr. Steven Thomson)

The last year has also seen an increase in community based office practices with young members whose practices are thriving. Their collegiate and dedicated response to ensuring proper continuity of care for patients with rheumatic disease during the recent COVID pandemic is greatly appreciated. The enhanced collaboration with the Pan-Primary Care network (led by Dr Rick Ward) has opened the possibility of new models of care, thus fully incorporating the true concept of the Medical Home, involving Care Pathways, Specialist Link, and Virtual Care.

Vision: Creating the future of Rheumatology care in the Calgary Zone

26

Applications from Prospective Subspecialty Training Program Residents.

Mission: Controlling the impact of rheumatic disease with the Right treatments for the Right patients at the Right time, and fostering a culture of education, research and innovation.

RESEARCH

The research profile of Rheumatology continues to grow from strength to strength, exemplified by Dr. Claire Barber winning the Emerging Investigator Award from the Canadian Rheumatology Association that Dr. Glen Hazlewood won last year. Our grant success, publication record and postgraduate stewardship continue to flourish, all aligned with our vision, mission, and values. We also house two academic chairs, The Arthritis Society Chair and The Arthur Child's Chair currently held by Drs. Ann Clarke and Deborah Marshall, respectively, in addition to the CIHR Canada Research Chair recently awarded to Dr. Cheryl Barnabe. Given the nature of rheumatic disease, we are committed to a clear focus on precision medicine delivered in a personalized manner.

We have a group of young researchers who receive numerous accolades and awards and are recognized nationally and internationally, in addition to a seasoned faculty who have made significant contributions to the field of rheumatology and beyond, over many years.

CHALLENGES

Rheumatology has faced and responded to the multitude of evolving challenges and considerations in these especially challenging times. The advent of the COVID-19 pandemic has brought particular challenges for specialties like Rheumatology that are primarily based in the ambulatory care setting. We are committed to meeting those challenges through innovative means such as maximizing virtual care in addition to ensuring safe and timely access to in-person assessments. Virtual Care, enhanced co-operation and collaboration with primary care, and utilization of care pathways will soon become the norm. This is to be welcomed and encouraged.

The enhanced collaboration with the Pan-Primary Care network has opened the possibility of new models of care, thus fully incorporating the true concept of the Medical Home, involving Care Pathways, Specialist Link, and Virtual Care.



OUR COMMUNITY

"We are proud of the fact that, through creative and innovative ways, we continue to provide world-class, patient-centered clinical care; educate the next generation of physicians; conduct impactful research; and provide key and effective leadership within the University of Calgary and Alberta Health Services."

Dr. Jayna Holroyd-Leduc





1. Drs. Man-Chiu Poon and John Dawson celebrate at the Department of Medicine Annual Fall Awards Dinner.

2. Claire Morrison receives the Allied Health Award.

3. Members of the Department of Medicine Physician Leadership Team: Drs. Shannon Ruzicky, Cheryl Barnabe, Jennifer Williams, Ward Flemons, Jayna Holroyd-Leduc, Richard Leigh, Jeff Schaefer, Paul MacMullan, Regine Mydlarski, Diedre Jenkins.

4. Chief Resident Dr. Alyssa Lip presents Dr. Jeff Primm with the Rural Teaching Excellence Award.

5. The Department of Medicine's 2019 Annual Leadership Retreat focused on Physician Wellness.

6. Drs. Jayna Holroyd-Leduc, Jim Silvius, Rahim Kachra, Shannon Ruzicky, and Stacey Hall at the 2019 Awards Banquet

7. Chief Resident Dr. Stefana Pancic presents Dr. Meghan Vlasschaert with the Silver Finger Award.

8. Dr. Rahim Kachra, seen posing in front of the image of himself on the Department of Medicine banner, receives the Golden Bull Award.

9. Drs. Karen Fruetel, Donna Holton, and Jennifer MacRae in a working group discussion at the 2019 Retreat.

10. Dr. Aurore Fifi-Mah receives the South Health Campus Award for Clinical Excellence.

11. Dr. Kimberley Nix receives the Benevolent Heart Award.

12. Dr. Shannon Ruzicky receives the Rookie of the Year Award.

13. Dr. Erika Dempsey receives the Quality Improvement and Patient Safety Award.

14. Dr. Michael Fisher receives the Repeat Offender Award.



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30.

15. IMRP Program Director Dr. Marcy Mintz presents Dr. Davis Sam with the Resident Professionalism Award.

16. Lanza D'Silva, Dr. Richard Leigh, and Angela Hunter.

17. Dr. Ward Flemons accepts the inaugural Dr. Brenda Hemmelgarn Professionalism Award on behalf of Dr. Stephen Field

18. Dr. Parabhdeep Lail receives the Silver Tongue Award.

19. Drs. Drew Brotherston and Michaela Water receive Internal Medicine Clerkship Unsung Hero Awards.

20. Dr. Donna Holton at the 2019 Leadership Retreat.

21. Dr. Peter Duggan receives an appreciation award for his service as division head / section chief.

22. Chief Resident Dr. Alyssa Lip presents Dr. Stacey Hall with the Work Life Balance Award.

23. Drs. Paul MacMullan and Jeff Cao in a working group discussion.

24. Dr. Jennifer MacRae receives the Dr. John Dawson Award for Clinical Excellence at FMC.

25. Dr. Julie McKeen receives the Dr. Tom Enta Award for Clinical Excellence in the community.

26. Chief Residents Drs. Alyssa Lip, Bryce Barr, and Stefana Pancic with

Dr. Marcy Mintz, IMRP Program Director.

27. Dr. Anshula Ambasta in discussion with Dr. Karen Fruetel at the 2019 Leadership Retreat.

28. Dr. Christopher Humphreys receives the IMRP Resident Research Award.

29. Dr. Nathalia Rydz receives the Team Builder of the Year Award.

30. Dr. Philip Blutstein receives the Dr. Howard McEwen Award for Clinical Excellence at PLC.

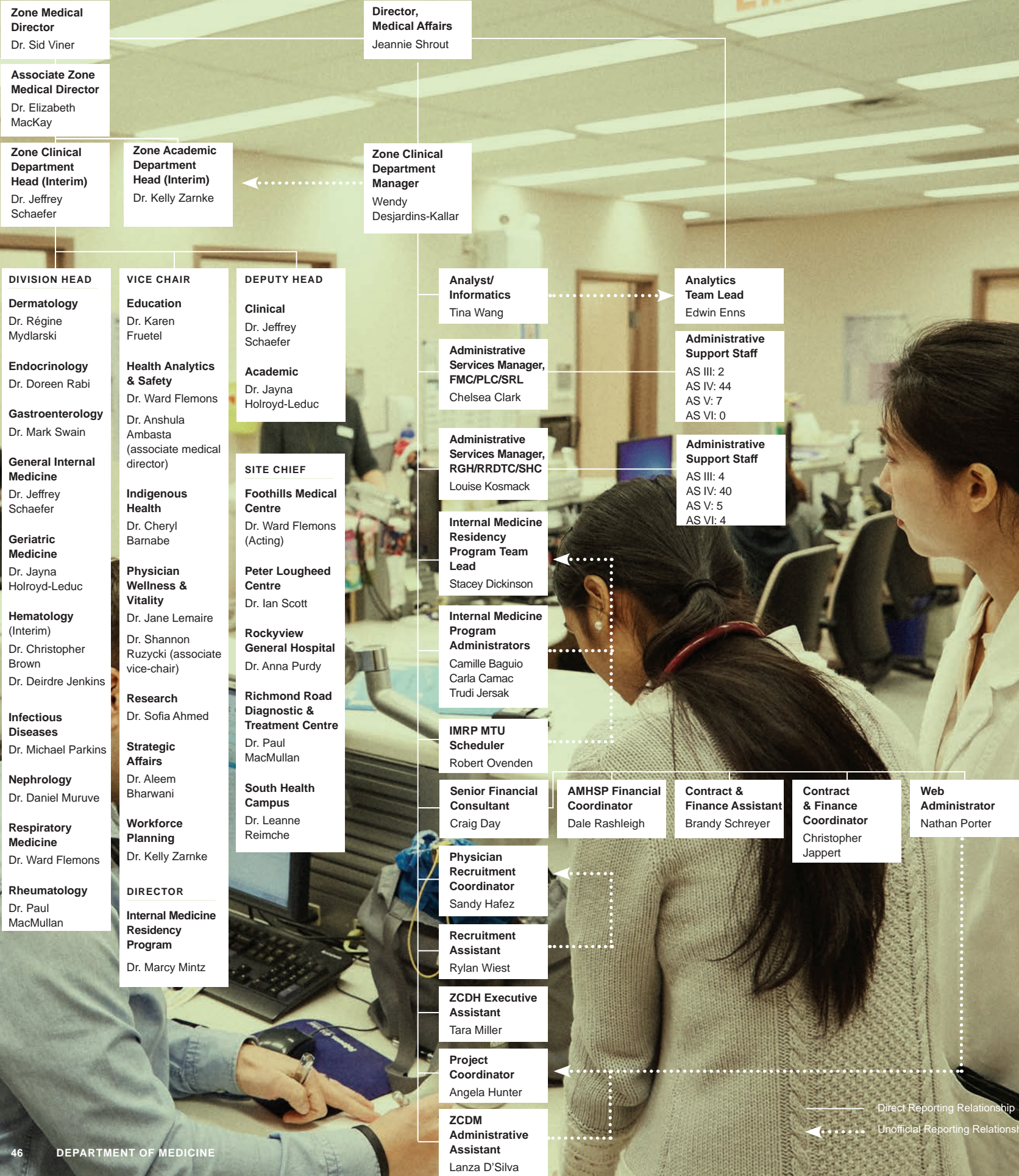
31. Dr. Terry Groves presents Dr. Cynthia Cleary with the Dr. Terry Groves Award for Clinical Excellence at RGH.



31.

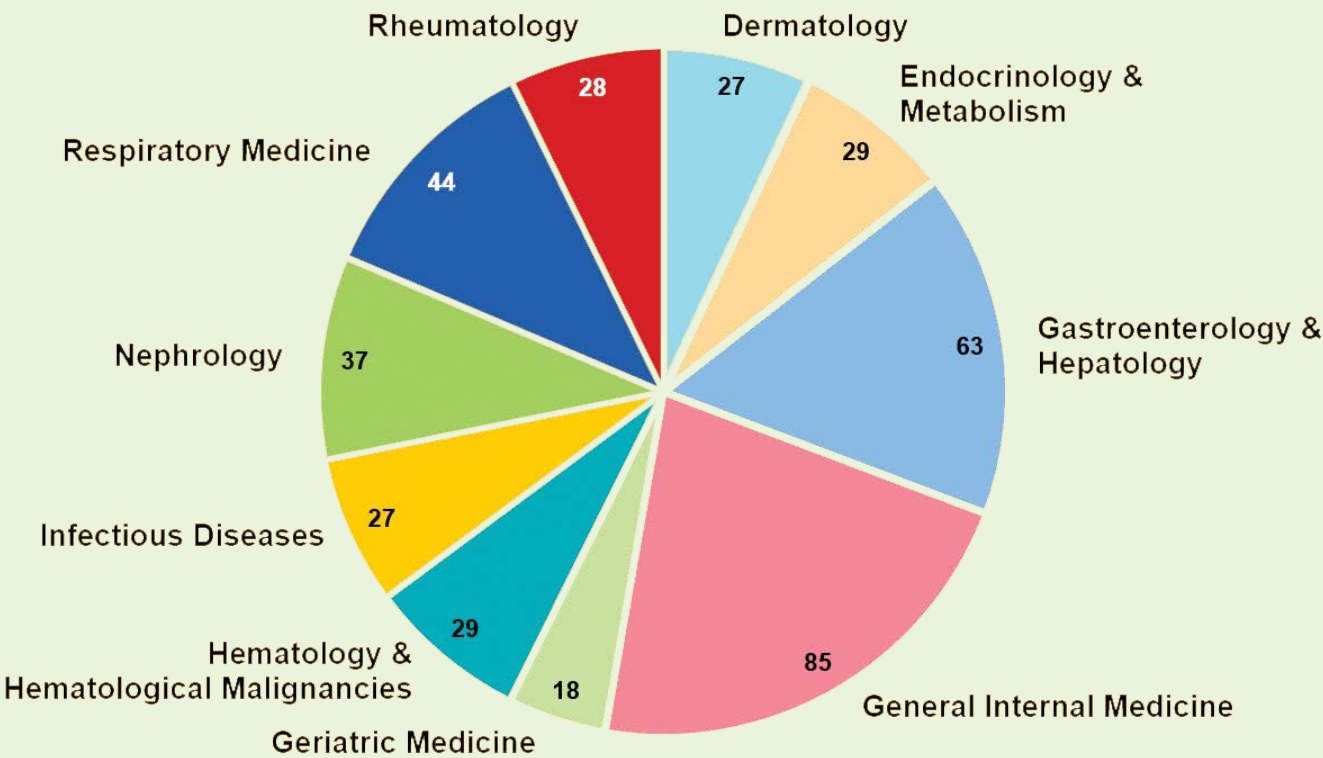
ORGANIZATION CHART

AS OF MARCH 31, 2020
UNLESS OTHERWISE NOTED



MEMBERSHIP DATA

Department of Medicine Subspecialties ¹



DEPARTMENT MEMBERS WITH A PRIMARY APPOINTMENT ²

DERM	ENDO	GI	GIM	GERI	HEM	ID	NEPH	RESP	RHEUM	Grand Total
27	29	63	85	18	29	27	37	44	28	387

DEPARTMENT MEMBERS WITH A CROSS APPOINTMENT ³

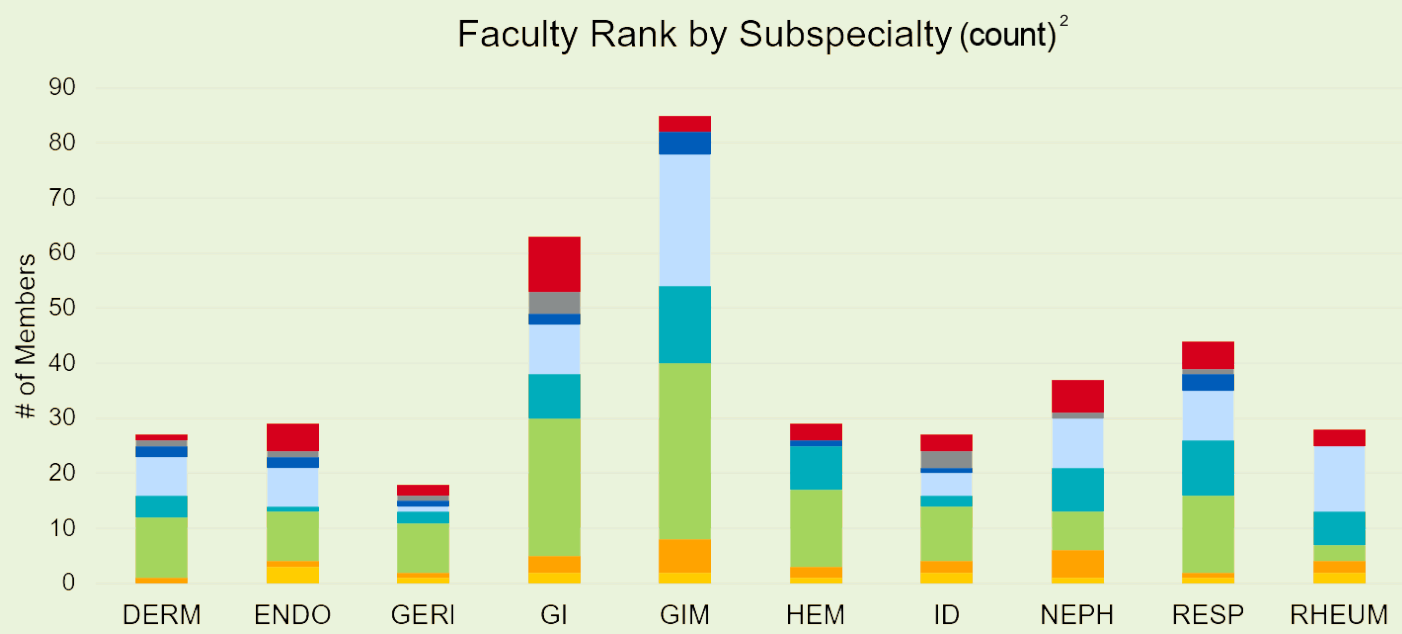
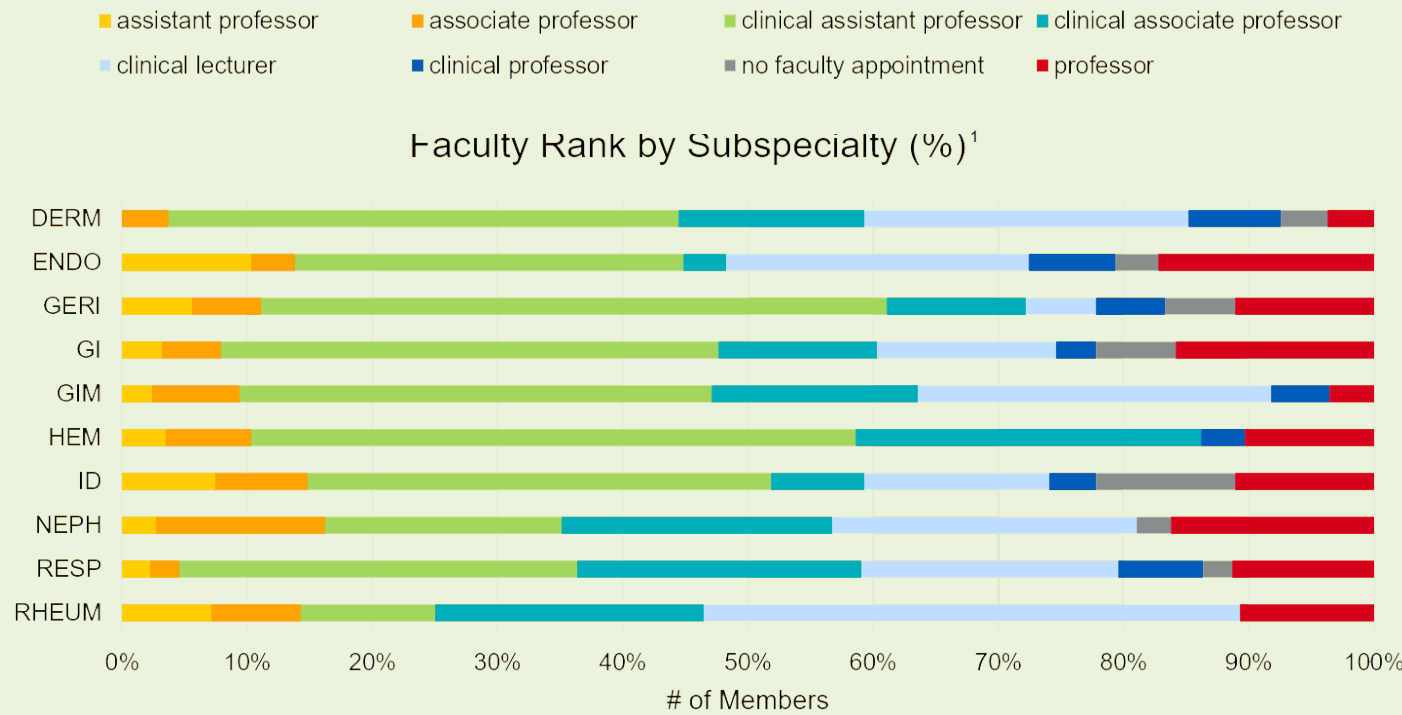
Cardiac	Cell Bio	Clin Neuro	Comm Health	Crit Care	Emerg Med	MIID	Ob Gyn	Onc	Paeds	Lab Med	Phys Pharm	Psych	Rad	Grand Total
44	1	1	5	11	3	2	1	14	7	8	3	3	1	104

MEMBER SUMMARY ⁴

	Total
Members with primary appointment in Department of Medicine	387
Members with cross appointment in Department of Medicine	104
Grand Total	491

1. Source: Department of Medicine Gizmo
2. Source: Department of Medicine Gizmo
3. Source: Department of Medicine Gizmo
4. Source: Department of Medicine Gizmo

FACULTY APPOINTMENT DATA



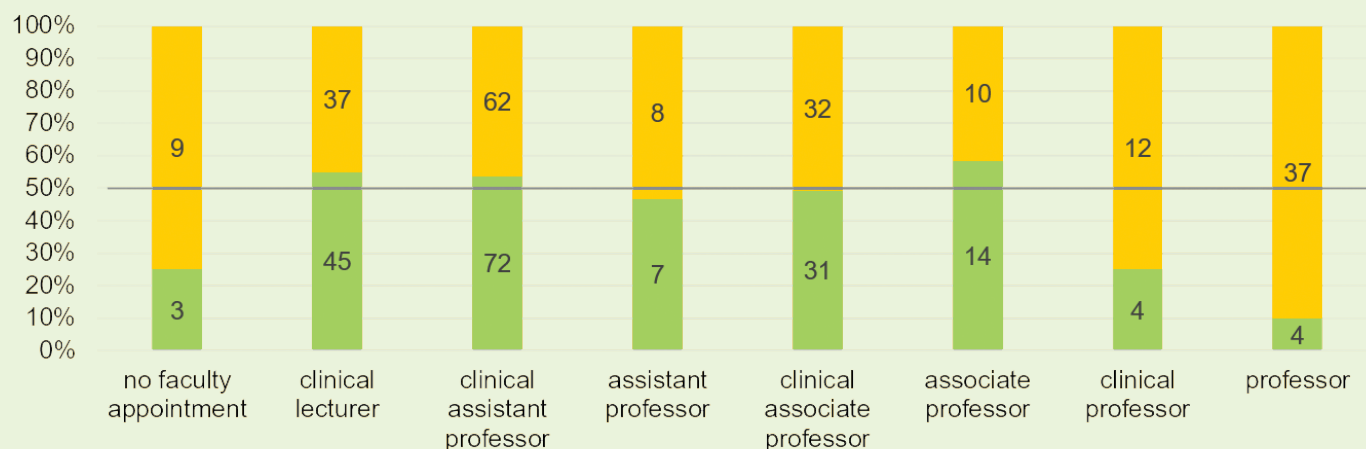
Faculty Rank	DERM	ENDO	GERI	GI	GIM	HEM	ID	NEPH	RESP	RHEUM	Grand Total
no faculty appointment	1	1	1	4			3	1	1		12
clinical lecturer	7	7	1	9	24		4	9	9	12	82
clinical assistant professor	11	9	9	25	32	14	10	7	14	3	134
assistant professor		3	1	2	2	1	2	1	1	2	15
clinical associate professor	4	1	2	8	14	8	2	8	10	6	63
associate professor	1	1	1	3	6	2	2	5	1	2	24
clinical professor	2	2	1	2	4	1	1		3		16
professor	1	5	2	10	3	3	3	6	5	3	41
Grand Total	27	29	18	63	85	29	27	37	44	28	387

1. Source: Department of Medicine Gizmo
2. Source: Department of Medicine Gizmo

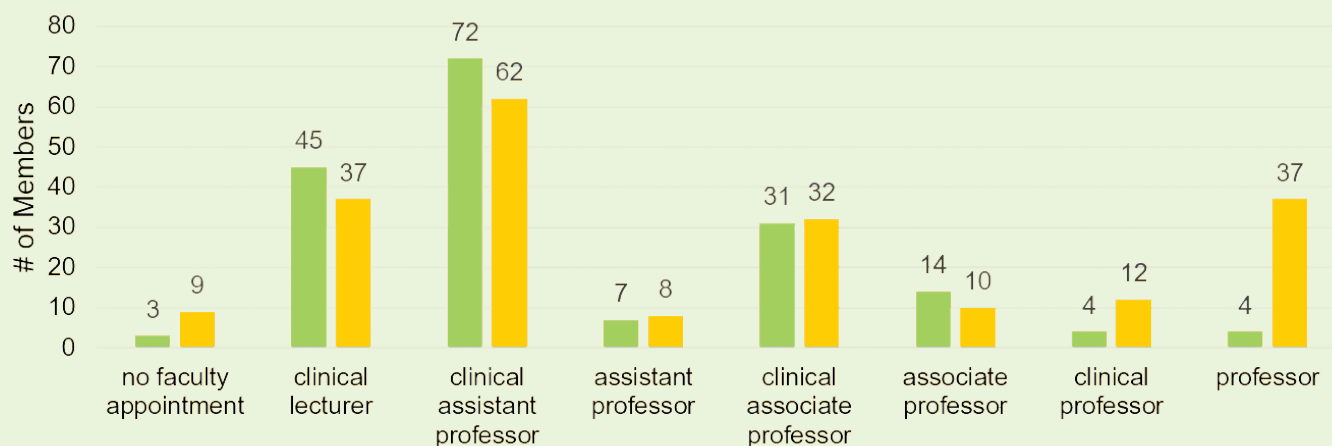
GENDER EQUITY DATA

■ Female ■ Male

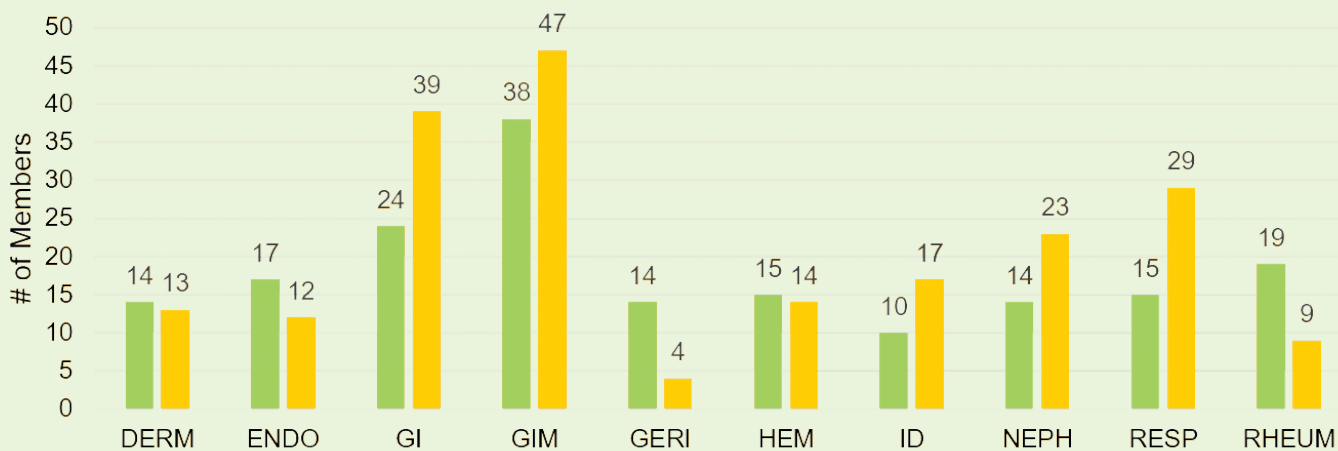
Gender Distribution by Faculty Rank (%)¹



Gender Distribution by Faculty Rank (count)²



Gender Distribution by Subspecialty³



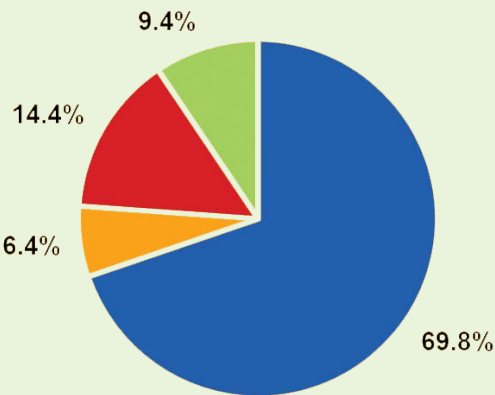
1. Source: Department of Medicine Gizmo

2. Source: Department of Medicine Gizmo

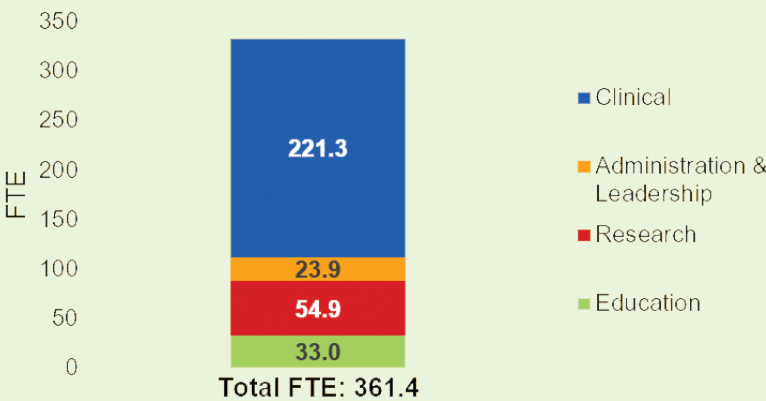
3. Source: Department of Medicine Gizmo

ISA & FTE DATA

Average CARE Pillar FTE ¹



Total CARE Pillar FTE ²

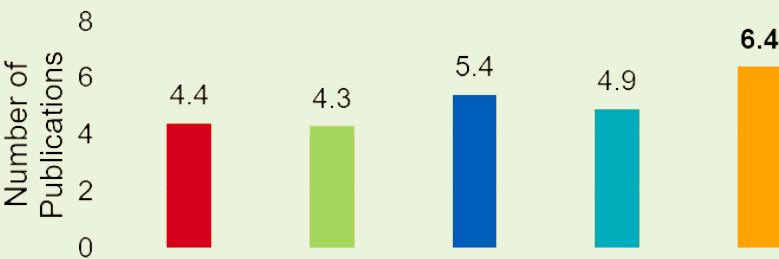


PUBLICATION DATA

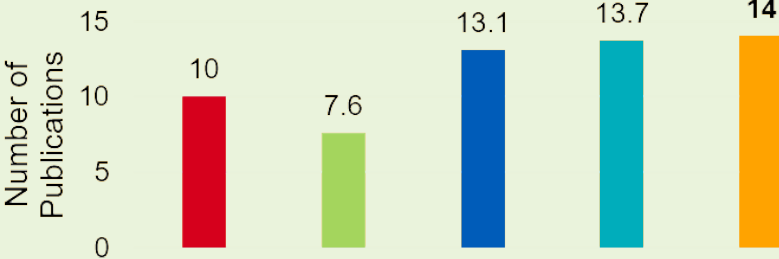
■ CSM ■ Basic Sciences ■ Clinical AMHSP ■ Clinical non-AMHSP ■ Medicine

FULL-TIME ACADEMIC (GFT) PUBLICATIONS COMPARISON

Publications per GFT ³

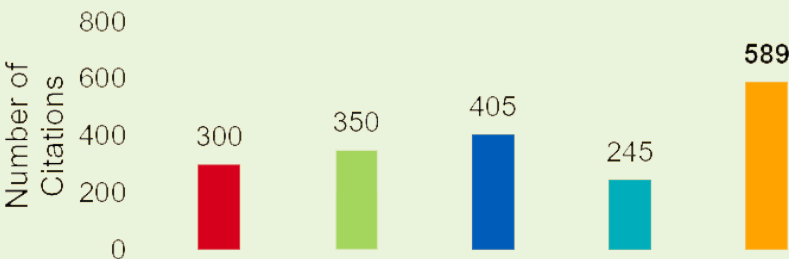


Publications per RE ⁴



FULL-TIME ACADEMIC (GFT) CITATIONS COMPARISON

Annual Citations per GFT ⁵



1. Source: Department of Medicine Gizmo

2. Source: Department of Medicine Gizmo

3. GFT: full-time academic faculty members with ranks of professor, associate professor, or assistant professor. Source: Web of Science

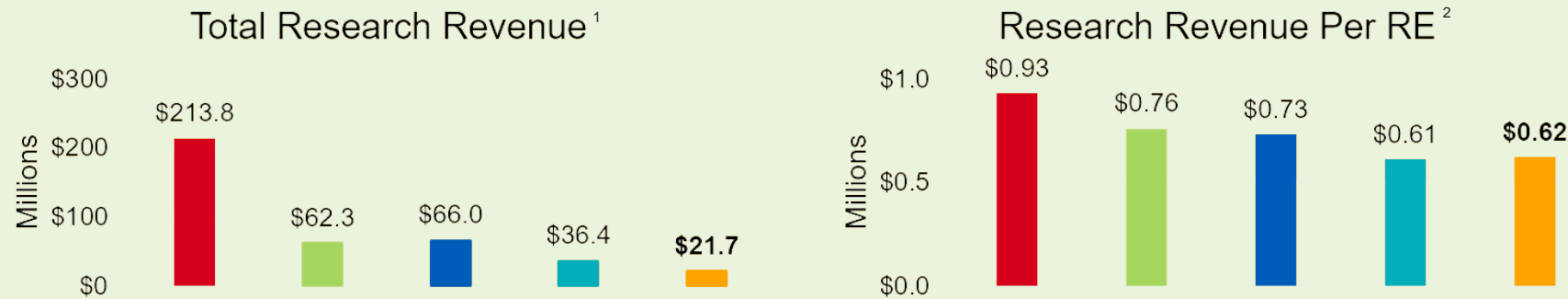
4. RE: average research time allocation for GFT faculty members, divided by 100 and multiplied by the number of GFT faculty. Source: Web of Science

5. GFT: full-time academic faculty members with ranks of professor, associate professor, or assistant professor. Source: Web of Science

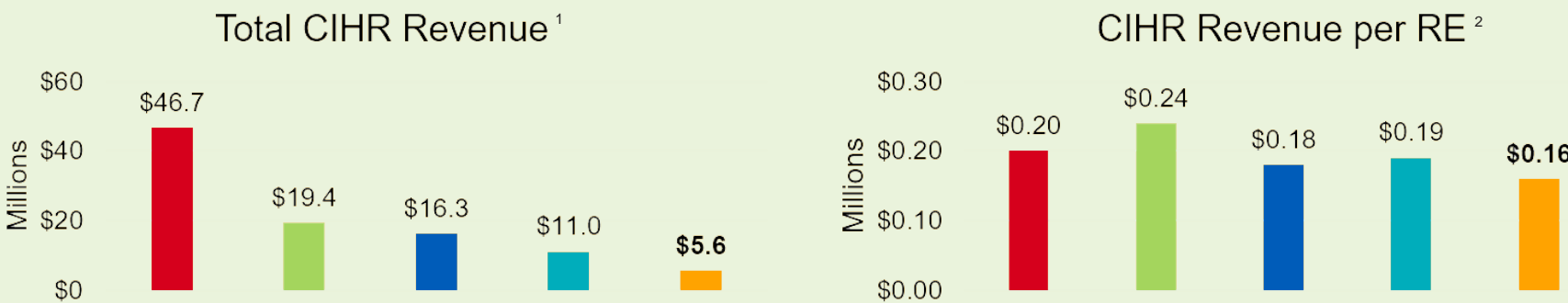
RESEARCH REVENUE DATA

■ CSM ■ Basic Sciences ■ Clinical AMHSP ■ Clinical non-AMHSP ■ Medicine

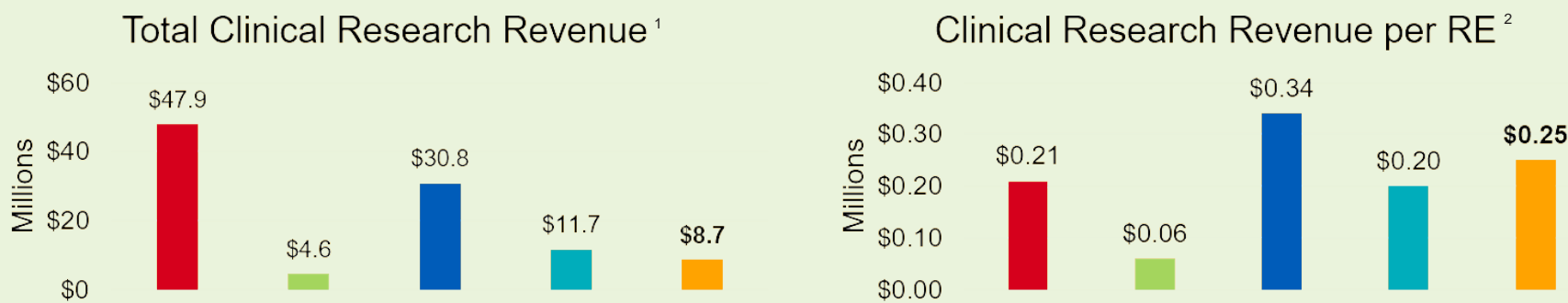
TOTAL RESEARCH REVENUE COMPARISON



CIHR RESEARCH REVENUE COMPARISON



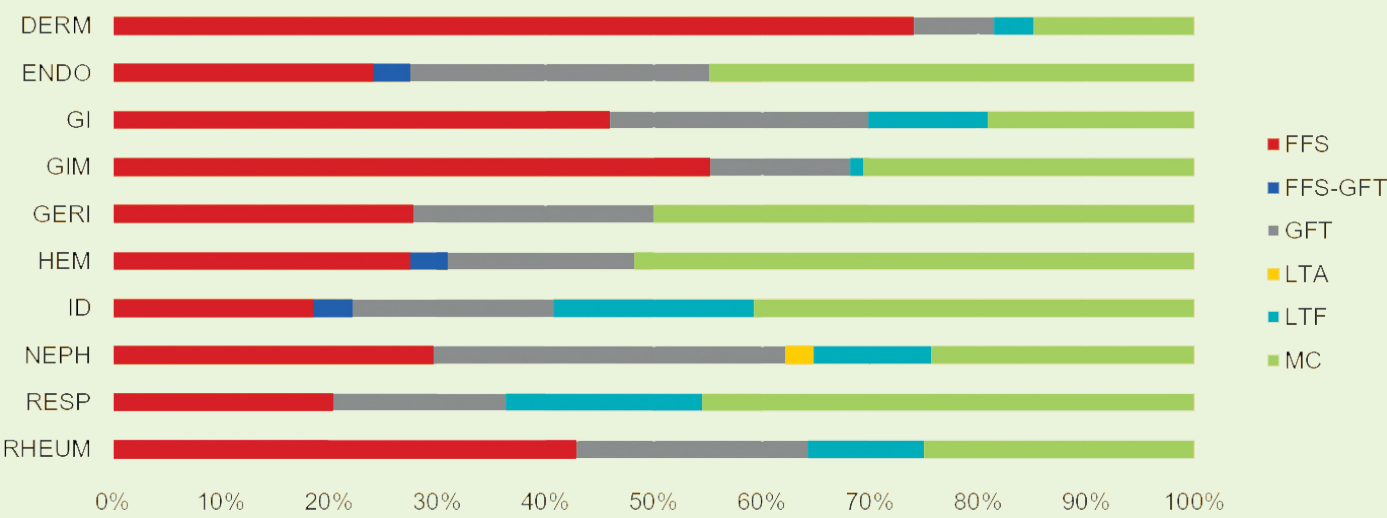
CLINICAL RESEARCH REVENUE COMPARISON



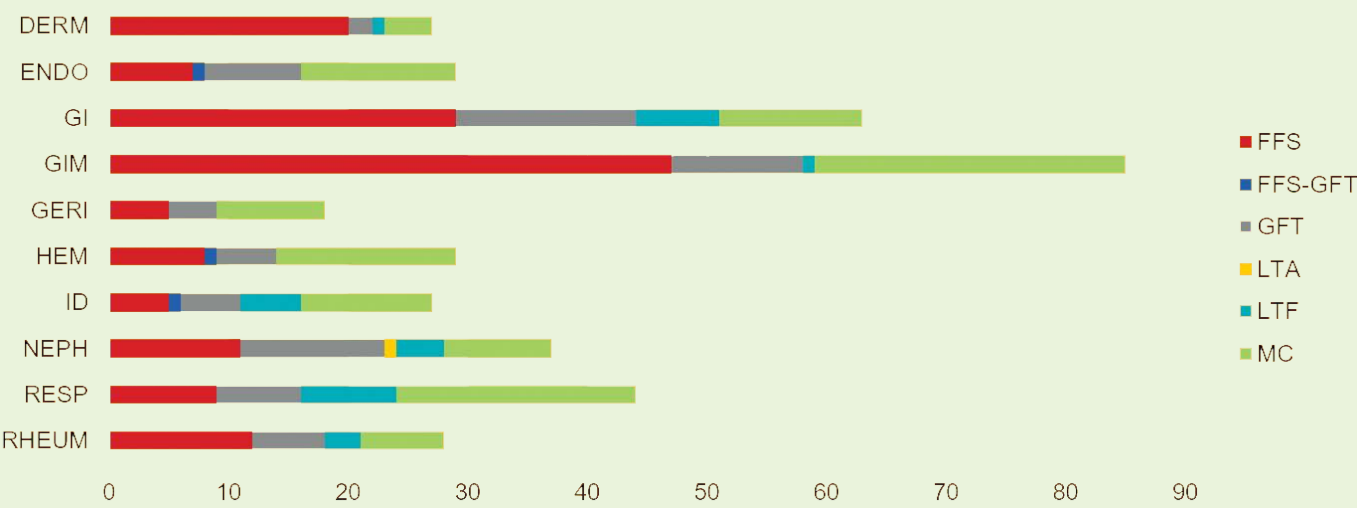
1. Annual Research Revenue assigned to a Department / Comparator Group based on the Project Department. Source: Enterprise Reporting / Research & Trust Accounting datamart.
2. RE: average research time allocation for GFT faculty members, divided by 100 and multiplied by the number of GFT faculty. Source: Enterprise Reporting / Research & Trust Accounting datamart

PHYSICIAN FUNDING DATA

Funding Source by Subspecialty (%)¹



Funding Source by Subspecialty (count)²



Funding Source	DERM	ENDO	GI	GIM	GERI	HEM	ID	NEPH	RESP	RHEUM	Grand Total
FFS	20	7	29	47	5	8	5	11	9	12	153
FFS-GFT		1				1	1				3
GFT	2	8	15	11	4	5	5	12	7	6	75
LTA								1			1
LTF	1		7	1			5	4	8	3	29
MC	4	13	12	26	9	15	11	9	20	7	126
Grand Total	27	29	63	85	18	29	27	37	44	28	387

1. Source: Department of Medicine Gizmo

2. Source: Department of Medicine Gizmo

INPATIENT DATA



1. Source: Sunrise Clinical Manager.

2. Source: Sunrise Clinical Manager (SCM). Inpatients will have consecutive attending physicians during their hospital stay. The “attending” is the physician responsible for the patient during the attending period. This table captures all the patients for which any Internal Medicine subspecialty physician was an attending physician during the patients’ stay.

3. Source: Sunrise Clinical Manager (SCM). Consults ordered for inpatients are as per SCM data. Usually, the consult is ordered with a physician’s name attached. However, sometimes the order includes only a group name (e.g. SHC GIM Medical Teaching Unit). Either are accepted but restricted so that there is no double counting. Geriatric medicine consults entered on SCM under the geriatric nurse practitioner but seen in consult with the geriatrician are not accurately captured in this data.

INPATIENT DATA

CONTINUED

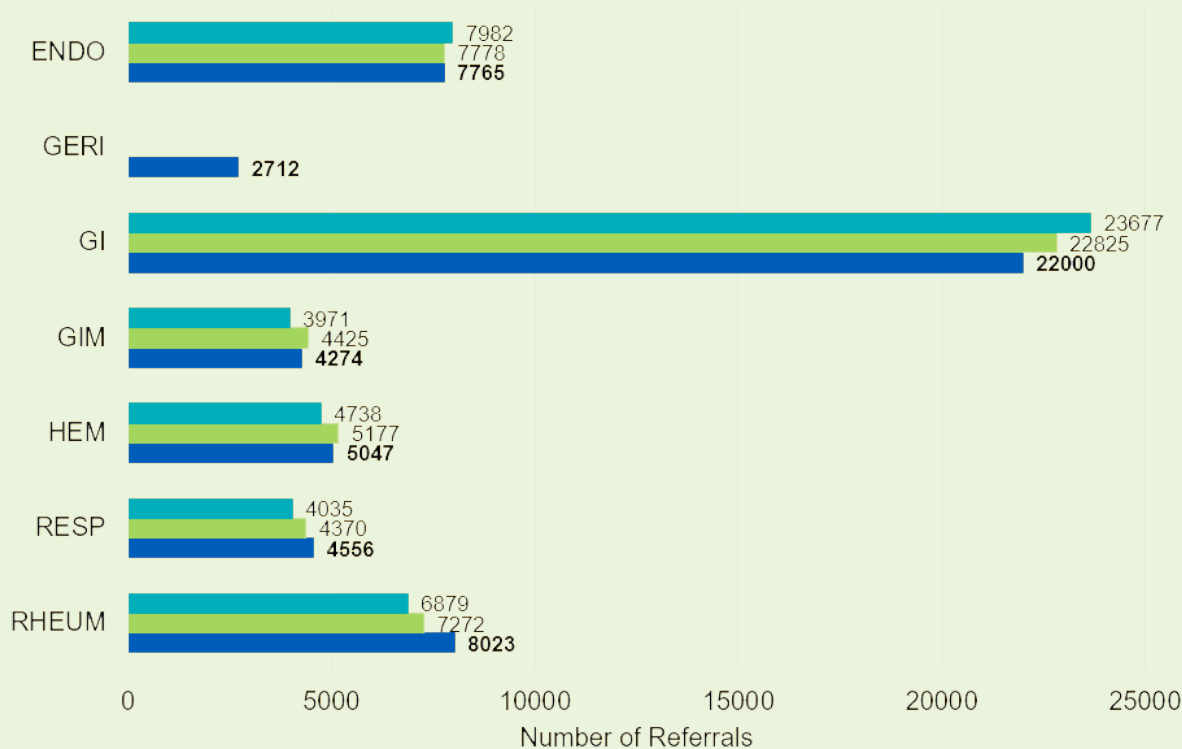
Rate of Face to Face Patient Encounters per SCM Inpatient Consult ¹

Subspecialty	FMC	PLC	RGH	SHC
DERM	1.4	1	1.1	1
ENDO	4.1	1.4	1.5	1
GERI	3.2	2.4	3	2.7
GI	2.7	1.5	1.7	2.1
GIM	3.2	4.3	2.4	2.7
HEM	3.1	2.2	1.4	1.8
ID	3.4	4.3	2.8	3.3
NEPH	6.9	8.8	4.7	4.4
RESP	2.2	3.8	3	3
RHEUM	1.9	1.4	1.6	1.9

OUTPATIENT DATA

2017/18 2018/19 2019/20

Central Access & Triage (CAT) Outpatient Clinic Referrals ²

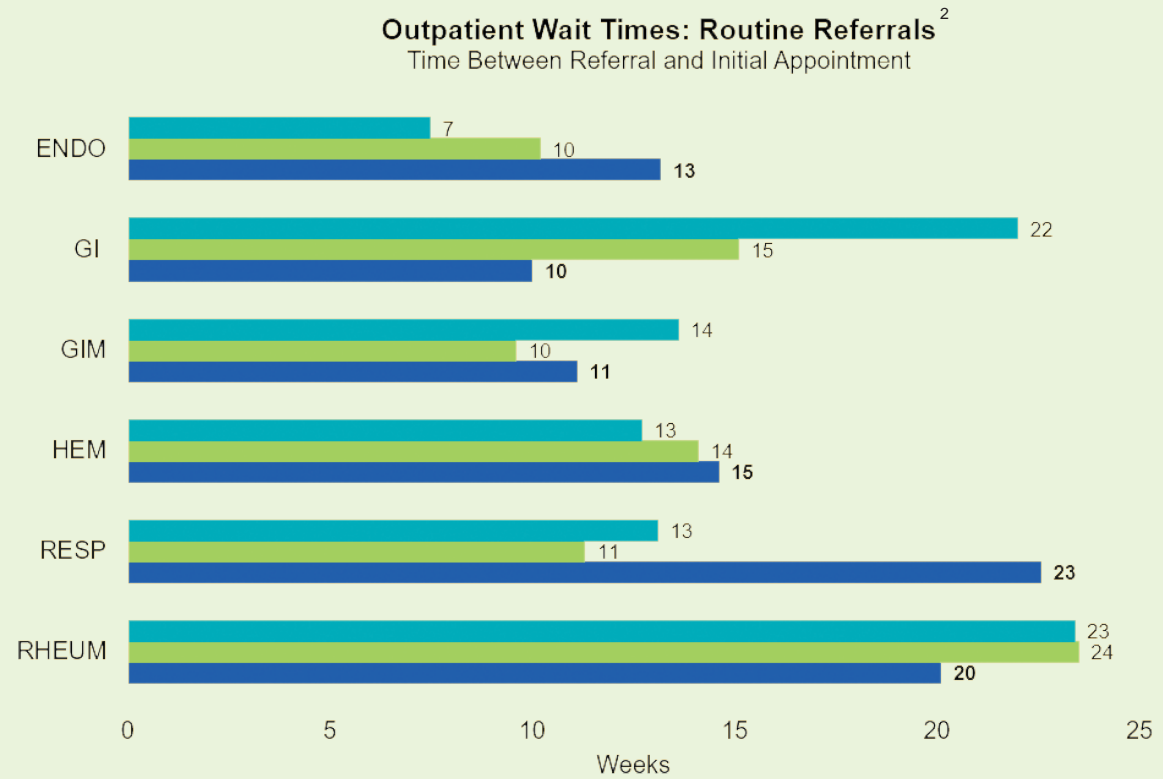
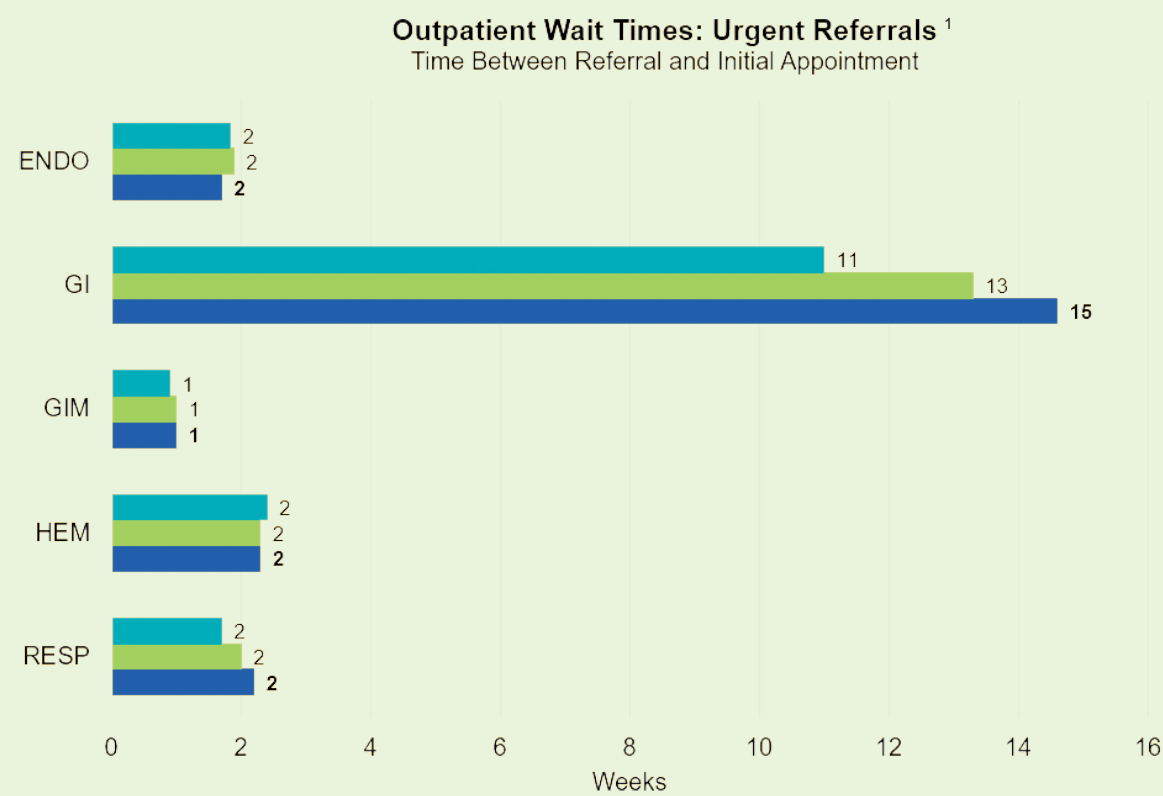


1. Source: Physician Billing. Consults ordered do not reflect how many patient encounters occurred. The rate table is based on Physician Billing data and shows for each consult ordered how many face to face encounters are likely to occur.

2. Source: Central Access & Triage and Seniors Health One-line (Geriatric Medicine data only). Outpatient departmental services that do not participate in the Central Access & Triage or Seniors Health One-line are not captured.

OUTPATIENT DATA

CONTINUED



1. Source: Central Access & Triage. Outpatient departmental services that do not participate in the Central Access & Triage are not captured.
2. Source: Central Access & Triage. Outpatient departmental services that do not participate in the Central Access & Triage are not captured.

PROMOTIONS

Promotion to Professor

- Dr. Gwyn Bebb
- Dr. Irene Ma
- Dr. Doreen Rabi

Promotion to Clinical Professor

- Dr. Karen Rimmer

Promotion to Associate Professor

- Dr. Sonia Butalia
- Dr. Glen Hazlewood
- Dr. Andrew Howarth

Promotion to Clinical Associate Professor

- Dr. Hanan Bassyouni
- Dr. John Chan

- Dr. Ryan Chuang
- Dr. Stephen Congly
- Dr. Andrew Grant
- Dr. Michelle Grinman
- Dr. Kerri Johannson
- Dr. Andrew Johnson
- Dr. Lesley Street
- Dr. Mitesh Thakrar
- Dr. Stephen Vaughan

Promotion to Clinical Assistant Professor

- Dr. Sandra Dumanski
- Dr. Kirstie Lithgow
- Dr. Cristina Moran Toro
- Dr. Shannon Ruzycki
- Dr. Nathalie Saad
- Dr. Steven Thomson

AWARDS

Dr. Sofia Ahmed

- University of Calgary Equity, Diversity, Inclusion Award (Team Award)
- American Physiological Society Select Award

Dr. Ghazwan Altabbaa

- Nominee for the Rockyview General Hospital Award of Excellence
- University of Calgary UME Clerkship teaching award
- University of Calgary 2019 Star Educator Award

Dr. C. Maria Bacchus

- University of Calgary UME Associate Dean's Letter of Excellence for Clerkship Teaching

Dr. Christine Banage

- University of Calgary 2019 Honour Roll - Outstanding Teaching

Dr. Claire Barber

- Canadian Rheumatology Association Emerging Investigator Award
- University of Calgary Peak Scholar for 2019

Dr. Cheryl Barnabe

- Arthritis Care and Research Outstanding (top 5%) Reviewer

Dr. Susan Barr

- University of Calgary UME Bronze Teaching Award

Dr. Leila Barss

- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core

Dr. Adam Bass

- University of Calgary Gold Star Award
- University of Calgary UME Associate Dean Letter of Excellence - Lecture
- University of Calgary UME Associate Dean's Letter of Excellence - Small Group

Dr. Hanan Bassyouni

- CFMS Culture Changer Award
- University of Calgary Gold Star Teaching Award for Course 4

- University of Calgary Gold Star Teaching Award as Master Teacher
- University of Calgary Class Jersey Award
- University of Calgary Dr. Michael Tarrant Award

Dr. Barry Baylis

- University of Calgary UME Bronze Teaching Award

Dr. Aleem Bharwani

- Fellow of the Royal College of Physicians of London (UK)
- Cumming School of Medicine Alumnus of Distinction for Excellence in Education
- University of Calgary Postgraduate Medical Education (PGME) Appreciation Award
- University of Calgary UME Gold Star Teaching Award

Dr. Shelly Bhayana

- University of Calgary UME Associate Dean's Letter of Excellence for Small Group Teaching
- University of Calgary UME Gold Star Award
- University of Calgary Faculty Award for Excellence in Clerkship Teaching

Dr. Emma Billington

- American Society for Bone & Mineral Research Early Investigator Award

Dr. Ronald Bridges

- Canadian Association of Gastroenterology 2020 Distinguished Service Award
- Canadian Association of Gastroenterology 2019 Fellowship Award

Dr. Christopher Brown

- Alberta Blood and Marrow Transplant Program / Alberta Cancer Foundation Tricia Antonini Award

Dr. Kristen Brown

- University of Calgary UME Bronze Award

Dr. Kelly Burak

- Canadian Association for the Study of the Liver Education Excellence Award
- University of Calgary UME 2020 Gold Star Award
- University of Calgary UME 2019 Honour Roll
- Canadian Liver Foundation 2019 LIVERight Gala Honoree
- Canadian Liver Foundation 50th Anniversary Recognition Medal
- University of Calgary 2020 UME Associate Dean's Letter of Excellence for Lecturing
- University of Calgary 2020 UME Associate Dean's Letter of Excellence for Clinical Core
- University of Calgary 2020 UME Silver Award (26 hours direct teaching)

Dr. Darren Burbuck

- University of Calgary UME Associate Dean's Letter of Excellence for Small Group Teaching
- University of Calgary Platinum Award for Teaching Hours

Dr. Sonia Butalia

- Diabetes Canada New Investigator Award (in progress)
- University of Calgary 2020 Diversity Award

Dr. Eliana Castillo

- Royal College of Physicians and Surgeons of Canada (RCPSC) International Collaboration Award

Dr. John Chan

- University of Calgary UME Bronze Award
- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core

Dr. Sophia Chou

- University of Calgary UME Bronze Award
- Nominee for the 2019 Royal College AMS Donald Richards Wilson

Award for CanMEDS Integration

Dr. Justin Chun

- University of Calgary UME Honour Roll - Teaching

Dr. Sylvain Coderre

- Canadian Federation of Medical Students (CFMS) Champion: for contribution to a positive learning environment
- University of Calgary UME Gold Star Award (Class of 2021)
- University of Calgary UME Gold Star Award (Class of 2020)
- University of Calgary UME Lifetime Achievement Award (Class of 2020)
- University of Calgary UME Lifetime Achievement Award (Class of 2019)

Dr. Carla Coffin

- Expertscape World Expert in Hepatitis B (based on publications since 2009)
- American Association for the Study of Liver Disease Hepatitis B Special Interest Group At-Large Steering Committee
- International Coalition to Eliminate HBV (ICE-HBV)
- World Health Organization (WHO) Essential Medicines Committee Renewal On Call Advise
- University of Calgary Office of the Provost Academic Leadership Academy
- Alberta Society of Gastroenterology Distinguished Researcher Award
- 2019 International HBV Meeting Best Poster Presentation

Dr. Stephen Congly

- The Liver Meeting 2019 Presidential Poster of Distinction
- University of Calgary UME Silver Award

Dr. John Conly

- Association of Medical Microbiology and Infectious Disease (AMMI) Canada Fellowship (FAMMI)

- Alberta Health Services 'Doc of the Week' Recognition
- World Health Organization (WHO) Chair of IPC Research and Innovation Working Group

Dr. Erica Dempsey

- Department of Medicine Quality Improvement & Patient Safety Award
- University of Calgary UME Teaching Honour Roll

Dr. Janeve Desy

- University of Calgary UME Behind the scenes award for significant contributions to pre clerkship course 6
- University of Calgary UME Gold Star Award for Clerkship Teaching
- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core

Dr. Lois Donovan

- Diabetes Canada Canadian Diabetes in Pregnancy Study Group Award of Excellence

Dr. Sandra Dumanski

- International Nephrocardiology Conference Top Research Abstract
- Canadian Institutes of Health Research (CIHR) Travel Award for OSSD/IGM 2019
- Canadian Institutes of Health Research (CIHR) Early Career Researcher Observership
- Canadian Institutes of Health Research (CIHR) Sponsored Investigator, 6th INMD Early Career Investigator Meeting
- Renal Research Institute Nephrology Research Fellow Travel Award
- University of Calgary Diversity Award- Team Category (CV&Me)
- NIH/FDA Travel Award for OSSD

Dr. Stephen Duncan

- University of Calgary UME Associate Dean's Letter of Excellence for Small Group Teaching

AWARDS

CONTINUED

- University of Calgary UME Silver Award

Dr. Gabriel Fabreau

- University of Calgary UME 2019 Honour Roll for Excellence in Pre-Clerkship Teaching
- Nominee – 2020 Alberta Medical Association Award for Compassionate Service
- Nominee – 2019 Alberta Medical Association Award for Compassionate Service

Dr. Aurore Fifi-Mah

- Department of Medicine South Health Campus Award for Clinical excellence

Dr. Ward Flemons

- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core

Dr. Nauzer Forbes

- University of Calgary UME Gold Star Award for Medical Student Teaching
- Division of Gastroenterology Excellence in Endoscopy Teaching Award

Dr. Kristin Fraser

- University of Calgary UME Bronze Teaching Award

Dr. Karen Fruetel

- University of Calgary UME Associate Dean's Letter of Excellence for Small Group Teaching
- University of Calgary UME Platinum Award for Teaching

Dr. Paul Gibson

- University of Calgary UME Gold Star Award

Dr. M. John Gill

- As elected regional representative to EACS invited attendee at European AIDS meetings in Basel (Ch) as to HIV meeting in Bucharest (Ro)

Dr. Louis-Philippe Girard

- University of Calgary UME Associate Dean's Letter of Excellence
- University of Calgary UME Bronze Contribution - Course IV
- University of Calgary UME Honor Roll for Outstanding Teaching - Cumming School of Medicine

Dr. Marilyn Dawn Goodyear

- University of Calgary UME Gold Teaching Award
- University of Calgary UME Faculty Appreciation 'Honor Roll'

Dr. Michelle Grinman

- Rockyview General Hospital Medical Staff Association Outstanding Team Builder Physician Recognition Award
- Canadian Society of Internal Medicine First Prize in Quality Improvement poster competition

Dr. Richard Haber

- Canadian Dermatology Association Award of Merit

Dr. Stacey Hall

- Internal Medicine Residency Program (IMRP) Work Life Balance Award
- University of Calgary UME Associate Dean's Letter of Excellence for Small Group Teaching

Dr. Patrick Hanly

- University of Calgary Faculty of Graduate Studies Great Supervisor Award
- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core
- University of Calgary UME Bronze Award

Dr. Steven Heitman

- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core
- University of Calgary N.B. Hershfield Chair in Therapeutic Endoscopy

Dr. Karmon Helmle

- Alberta Health Services President's Excellence Nominee: Improved Inpatient Diabetes Management Provincial Team

Dr. Chris Hergott

- Respiration Journal The Chris Bolliger Award
- University of Calgary UME Associate Dean's Letter of Excellence

Dr. Robert Herman

- University of Calgary Undergraduate Teaching Award

Dr. Naushad Hirani

- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core
- University of Calgary UME Bronze Teaching Award

Dr. David Hogan

- Alberta Medical Association Medal for Distinguished Service
- Alberta Health Services 25 Years of Service
- University of Calgary UME Bronze Award

Dr. Susan Huan

- University of Calgary UME Platinum Award

Dr. Kareem Jamani

- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core

Dr. Julie Jarand

- Peter Lougheed Centre Medical Staff Association Clinical Teaching Award
- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core

Dr. Deirdre Jenkins

- University of Calgary UME Honour Roll Certificate
- University of Calgary UME Associate Dean's Letter of Excellence for Lecturing
- University of Calgary UME Associate Dean's Letter of Excellence for Small Group Teaching
- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core
- University of Calgary UME Gold Award for Teaching

Dr. Humberto Jijon

- University of Calgary UME Teaching Award - Clerkship

Dr. Kerri Johannson

- University of Calgary Medical Group (UCMG) Clinical Faculty Renewal Fund Travel Grant
- University of Calgary UME Dr. David Stather Award for Excellence in Clinical Core Teaching (Class of 2020)
- University of Calgary UME 'Boop Whoop Award' for Teaching Excellence, Course 3 (Class of 2020)
- University of Calgary UME Faculty Honour Roll for Teaching, Course 3 (Class of 2020)

Dr. Rahim Kachra

- University of Calgary Honourable Mention - Teaching in the IM Clerkship
- Internal Medicine Residency Program Golden Bull Award
- University of Calgary UME Award for Clinical, Adjunct and Research Faculty
- Alberta College of Pharmacy and the Alberta Pharmacists' Association Friend of Pharmacy Award

Dr. Gilaad Kaplan

- University of Calgary Cumming School of Medicine Watanabe Distinguished Achievement Award for Overall Excellence

Dr. Joseph Kim

- University of Calgary UME Associate Dean's Letter of Excellence for Lecturing
- University of Calgary UME Bronze Award for Teaching
- University of Calgary UME Star Educator

Dr. Gregory Kline

- University of Calgary Office of CME Top Teacher 2019 Award
- University of Calgary UME Honour Roll Teaching Award for Course 4

Dr. Maitreyi Kothandaraman

- Canadian Association of Gastroenterology Fellow

Dr. Emily Kwan

- University of Calgary UME Silver Award

Dr. Gilles Lauzon

- Canadian Dermatology Association Lifetime Achievement Award

Dr. Samuel Lee

- Department of Medicine Innovation Award
- Canadian Liver Foundation 50th Anniversary Gold Medal

Dr. Richard Leigh

- University of British Columbia David Bates Distinguished Lecturer
- Queens University Dr. Peter Munt Distinguished Lecturer
- Division of Respiratory Medicine Bob Cowie Award

Dr. Jane Lemaire

- Royal College of Physicians and Surgeons

of Canada (RCPSC) International Collaborator Award, Global Health

Dr. Alex Leung

- University of Calgary UME Associate Dean's Letter of Excellence
- University of Calgary UME Behind the Scenes Award, for significant "behind-the-scenes" contributions to Course IV: Renal, Endocrine & Obesity (MDCN 380), for lecture and small group content development, in recognition of outstanding enthusiasm, significant contributions, dedication and support to Course IV
- University of Calgary UME Honour Roll for Pre-clerkship Teaching

Dr. Pin Li

- University of Calgary UME Associate Dean's Letter of Excellence

Dr. Andrea Loewen

- University of Calgary Promotion to Clinical Associate Professor

Dr. Tara Lohmann

- University of Calgary UME Associate Dean's Letter of Excellence
- University of Calgary UME Associate Dean's letter of Excellence for Clinical Core
- University of Calgary UME Gold Award

Dr. Cathy Lu

- Top Downloaded Paper for 2018-2019 in Journal of Ultrasound in Medicine and within top 10% of all downloaded papers from John Wiley and Sons Publishers

Dr. Irene Ma

- Internal Medicine Residency Program (IMRP) Research Preceptor Award

Dr. Chris Ma

- University of Calgary UME Gold Star Teaching Award

Dr. Paul MacEachern

- University of Calgary UME Internal Medicine Clerkship Unsung Hero Award
- University of Calgary UME Limpkins Honor Roll
- University of Calgary UME Associate Deans Letter of Excellence for Small Group Teaching
- University of Calgary UME Associate Dean's Letter

AWARDS CONTINUED

- of Excellence for Clinical Core
- University of Calgary UME Silver Award

Dr. Dr. Paul MacMullan

- University of Calgary UME Teaching Excellence Award

Dr. Jennifer MacRae

- Department of Medicine John Dawson Award for Clinical Excellence at FMC

Dr. Mary Malebranche

- Royal College of Physicians and Surgeons of Canada (RCPSC) Detweiler Travelling Fellowship Award
- University of Calgary John A. Buchanan Chair in General Internal Medicine

Dr. Braden Manns

- Inducted as a Fellow of the Canadian Academy of Health Sciences (CAHS)

Dr. William (Liam) Martin

- University of Calgary UME Bronze Award

Dr. Julie McKeen

- Department of Medicine Dr. Tom Enta Award for Clinical Excellence in the Calgary Community
- University of Calgary UME Associate Dean's Letter of Excellence for Small Group Teaching

Dr. Kevin McLaughlin

- University of Calgary UME Associate Dean's Letter of Excellence for Lecturing
- University of Calgary UME Associate Dean's Letter of Excellence
- University of Calgary UME Platinum Award
- University of Calgary UME "Behind-the-Scene" Award
- University of Calgary UME Gold Star teaching award in Course 4,
- University of Calgary UME Honour roll certificate for excellent contribution to UME
- University of Calgary UME Jones Award for Leadership Excellence in Undergraduate Medical Education Program

Dr. Bonnie Meatherall

- University of Calgary UME Faculty Clerkship Teaching Award (Class of 2019)
- University of Calgary UME Honor Roll for Outstanding Teaching in Pre-Clerkship

Dr. Marcy Mintz

- University of Calgary Cumming School of Medicine Workplace based assessment funding award- for the IM program
- University of Calgary Cumming School of Medicine Simulation and Infrastructure Award
- University of Calgary Office of Health and Medical Education Scholarship (OHMES) Research award

Dr. Christopher Mody

- Alberta Health Services Dr. Clarence Guenter Award for Lifetime Academic and Leadership Contributions to the Division of Respiriology
- FMC Medical Staff Association Service Recognition Award

Dr. Gary Morris

- University of Calgary UME Letter of Recognition

Dr. Dianne Mosher

- Alberta Medical Association Distinguished Rheumatologist Award

Dr. P. Régine Mydlarski

- Canadian Dermatology Foundation 50th Anniversary Lectureship

Dr. Yasmin Nasser

- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core
- University of Calgary UME Bronze Award

Dr. Kara Nerenberg

- Institute for Clinical Evaluative Sciences of Ontario (IC/ES) Dataset Creation Plan Award
- University of Calgary Diversity Award - Team Award for Staff
- University of Calgary Promotion to Associate Professor (July 1, 2019)

Dr. Kerri Novak

- Crohn's & Colitis Canada Physician of the Year - Specialist Physician of the Year
- Mackid Symposium Specialist Physician of the Year
- University of Calgary Promotion to Clinical Associate Professor of Medicine

Dr. Remo Panaccione

- Alberta Medical Association Shine a Light Award

Dr. Laurie Parsons

- University of Calgary UME Gold Star Award

Dr. Paula Pearce

- University of Calgary Cumming School of Medicine Faculty Appreciation Award

Dr. Sachin Pendharkar

- University of Calgary UME Pre-Clerkship Course 3 Teaching Honor Roll (Class of 2021)

Dr. P. Timothy Pollack

- Canadian Journal of Cardiology Top 10 Reviewer

Dr. Man-Chiu Poon

- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core (Blood course)
- University of Calgary UME Silver Award (Blood Course)
- University of Hong Kong Department of Pathology Honorary Professorship
- Tianjin Institute of Hematology, Peking Union Medical College, Chinese Academy of Medical Sciences Honorary Professorship
- Southern Medical University Nanfang Hospital Honorary Senior Advisor, Hemophilia Program

Dr. Elissa Rennart-May

- University of Calgary Community Health Sciences Achievement Award
- Alberta Innovates Clinician Fellowship Award

Dr. Lynne Robertson

- Department of Medicine Dr. Martin Atkinson Award for Clinical Excellence
- PARA Clinical Teaching Award - Honourable Mention

Dr. Shannon Ruzycki

- Internal Medicine Residency Program Rookie of the Year Award

Dr. Natalia Rydz

- Department of Medicine Team Builder of the Year Award
- University of Calgary UME Associate Dean's Letter of Excellence, Awarded

- for teaching excellence in Course 1

- University of Calgary UME Silver Award, Teaching Contributions in Course 1

Dr. Heidi Schmaltz

- University of Calgary Cumming School of Medicine Continuing Medical Education Award for Clinical Adjunct and Research Faculty

Dr. Cynthia Seow

- American Gastroenterology Association Vice Chair of IMIBD Section

Dr. Mona Shafey

- Leukemia Lymphoma Society of Canada Health Professional of the Year

Dr. Aziz Shaheen

- University of Calgary Gastroenterology and Hepatology Fellowship Program Research Mentor Award

Dr. Leslie Skeith

- INVENT-VTE International Thrombosis Research Network Dragons Den Competition (Research Project) at the International Society on Thrombosis & Haemostasis Conference, Australia

Dr. Kate Skolnik

- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core

Dr. Kevin Solverson

- Mody Advanced Fellowship Award

Dr. Melanie Stapleton

- University of Calgary UME Associate Dean's Letter of Excellence for Lecturing
- University of Calgary UME Bronze Teaching Award
- University of Calgary Gastroenterology & Hepatology Residency Program Award for Formal Teaching

Dr. Deepa Suryanarayan

- Canadian Institutes of Health Research (CIHR) Early Career Investigator Observership Program

Dr. Mark Swain

- Inducted as a Fellow of the Canadian Academy of Health Sciences (CAHS)
- Canadian Liver Foundation 50th

- Anniversary Recognition Medal (for those whose achievements or distinguished service to the Canadian Liver Foundation have benefited their fellow citizens, their community and their country)
- Canadian Association for the Study of the Liver (CASL) President Elect

Dr. Christopher Symonds

- University of Calgary UME Honour Roll for Excellent Teaching

Dr. Karen Tang

- University of Calgary UME Associate Dean's Letter of Excellence for Clerkship Teaching
- University of Calgary UME Honourable Mention Faculty Award (Internal Medicine Clerkship)

Dr. Mitesh Thakrar

- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core
- University of Calgary UME Bronze Award - Course 3
- University of Calgary PGME ICU - Best "Off-Service" Teacher

Dr. Chandra Thomas

- Alberta Health Services Doc of the Week

Dr. Alain Tremblay

- University of Calgary UME Associate Dean's Letter of Excellence for Clinical Core
- University of Calgary UME Bronze Award
- Respiration (Journal) Chris Bolliger Award

Dr. Steven Vaughan

- AMMI Trainee Oral Presentation Award for best presentation by a student (Supervision of student)
- University of Calgary Residents Choice Oral Presentation Award for best presentation by a student (Supervision)
- EECMD Clinical Grand Rounds Travel Award (Supervision)
- University of Calgary UME Dean's Letter of Excellence
- University of Calgary UME Bronze Star Award
- University of Calgary UME Honour Roll

CREDITS

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LEGEND

Cardiac	Cardiac Sciences	AMHSP	Academic Medicine Health Services Plan
Cell Bio & Anat	Cell Biology & Anatomy	ADJ	Adjunct Member
Clin Neuro	Clinical Neurosciences	Adj. Asst. Prof	Adjunct Assistant Professor
Comm Health	Community Health Sciences	Adj. Prof	Adjunct Professor
Crit Care	Critical Care Medicine	Asst. Prof	Assistant Professor
Emerg Med	Emergency Medicine	Assoc. Prof	Associate Professor
MIID	Microbiology, Immunology & Infectious Diseases	Prof	Professor
Ob Gyn	Obstetrics & Gynaecology	Clin. Lecturer	Clinical Lecturer
Onc	Oncology	Clin. Asst. Prof	Clinical Assistant Professor
Paeds	Paediatrics	Clin. Assoc. Prof	Clinical Associate Professor
Lab Med	Pathology & Laboratory Medicine	Clin. Prof	Clinical Professor
Phys Pharm	Physiology & Pharmacology	FFS	Fee-For-Service Member
Psych	Psychiatry	GFT	Geographic Full-Time (Full-Time Academic Faculty)
Rad	Radiology	LTA	Locum Tenens – AMHSP funded
		LTF	Locum Tenens – FFS funded
		MC	Major Clinical AMHSP Member
		DERM	Dermatology
		ENDO	Endocrinology
		GERI	Geriatric Medicine
		GI	Gastroenterology & Hepatology
		GIM	General Internal Medicine
		HEM	Hematology & Hematological Malignancies
		ID	Infectious Diseases
		NEPH	Nephrology
		RESP	Respiratory Medicine
		RHEUM	Rheumatology
		RE	Research Equivalent

