



UNIVERSITY OF CALGARY
CUMMING SCHOOL OF MEDICINE

Department of Medicine Annual Report **2017**

April 1, 2016 – March 31, 2017

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MISSION

To be widely recognized for advancing health and wellness, attracting the best doctors, leading innovation, creating technologies, and disseminating knowledge.

Message from the Department Head

It is my privilege, as Department Head, to present the 2016-2017 Department of Medicine Annual Report. Section Heads, Vice Chairs and the Internal Medicine Residency Program Director have worked hard to provide individual reports that are sufficiently detailed but relevant to the clinical, educational, academic and administrative activities going on in these respective areas. I thank them for their contributions. Most of all though, I want to thank Stormy Marshall and his team of senior administrative support staff, and Sam Ridgway at Sigma Marketing, for collating these reports into a single, coherent and visually appealing document that we hope will be of broad interest to all readers.

It has been another good year for the Department of Medicine, as evidenced by the number of prestigious awards to Department members. Among these were Dr. Gabe Fabreau, who was chosen as one of Calgary's Top 40 Under 40 by Avenue Magazine in 2016, and Dr. Brenda Hemmelgarn, who was awarded a prestigious 2016 Killam Annual Professorship. Dr. Bill Ghali was named as a new Fellow of the Royal Society of Canada in 2017 and was the recipient of a CIHR Foundation

Scheme grant. Dr. Jane Lemaire received the 2016 CMA Physician Misericordia Award for her work on physician wellness and its importance to patient care. Dr. John Conly was honoured with the AMA Medal for Distinguished Service in 2016, and Dr. Aleem Bharwani received the RCPSC (Region 1) 2016 Mentor of the Year Award.

Dr. Nairne Scott-Douglas was recognized for his outstanding clinical contributions, leadership and overall excellence with the 2016 Physician of the Year Award from the Foothills Medical Staff Association.

Such external awards may be deceiving if they were to mask internal deficiencies in patient care, poor delivery of medical education, or lack of academic productivity. I am happy to confirm that this is not the case and that these awards, and the many others received by members of the Department for excellence in patient care, medical education and scholarship, are indeed a true testament to the outstanding work being done by Department members on a daily basis.

During the reporting period under review, three new Section Chiefs were appointed; Drs. Jayna Holroyd-Leduc in Geriatrics, Dr. Ward Flemons in Respiratory Medicine,

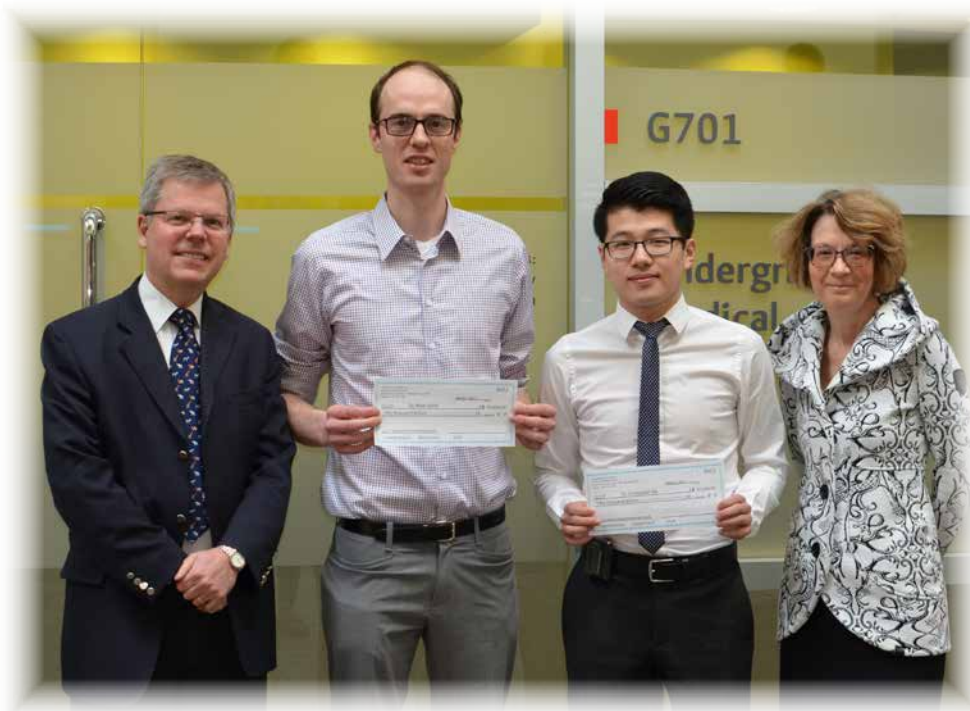


RICHARD LEIGH, MBChB, MSc, PhD, FCP (SA), FRCPC
PROFESSOR AND HEAD, DEPARTMENT OF MEDICINE
CUMMING SCHOOL OF MEDICINE
UNIVERSITY OF CALGARY AND ALBERTA HEALTH SERVICES

and Dr. Dan Muruve in Nephrology. They each lead clinically vibrant and academically strong Sections, which continue to excel under their respective leadership.

Dr. Paul MacMullan was confirmed as our Site Lead at Richmond Road Diagnostic and Treatment Centre (RDTC) which, until now, has not had a Departmental Site Lead, despite it being home to four of the ten Sections within the Department of Medicine (Rheumatology, Endocrinology & Metabolism, Dermatology and General Internal Medicine). Paul shares my view that the opportunities and the potential for enhanced patient care at the RRDTC are substantial, and he is already leading a number of initiatives in this regard, along with operational leadership at that site.

This past year has also seen the appointment of Mr. Stormy Marshall as the new Department of Medicine Manager. Stormy comes into the role having previously been the Senior Financial Analyst within the Department. His understanding of the Department operations, finances and resources has been a major asset. Together with his team of senior administrators, he is leading a number of initiatives that include an optimized physician recruitment process, streamlining AHS leadership contracts and stipends to ensure equity and transparency as to how these are awarded, and a new focus on a transparent engagement and enhanced management of the ~120 AHS administrative support staff within the Department. We also welcomed Mr. Craig Day as our new permanent Senior Financial Analyst, and Craig has ensured that the very substantial Departmental budget continues to be rigorously managed with a < 1% variance. Craig recently led the drive to ensure that the ~220 new AMHSP contracts were drawn up and signed in a 'record-fast' time!



As promised in the previous Annual Report, the Department has implemented a number of innovative initiatives that we believe will allow us to better fulfil our mandate in enhancing patient care, medical education, and academic scholarship. We have established an Analytics, Quality Improvement and Patient Safety Office, under the direction of Dr. Ward Flemons. As part of this initiative, we have hired a Senior Data Analyst to work with Dr. Flemons in this role and together they have established a Health Analytics Working Group (HAWG) with representation from each of the ten Sections. HAWG is looking at performance measures and best practice and strategies to inform comprehensive short, medium and long-term workforce planning within the Department. This office has already established close ties to the Calgary Zone Quality Council and to the Analytics group at Alberta Health Services, and is poised to take a leadership role in quality improvement initiatives within the Calgary Zone. We have also established an Office of Medical Education, with Dr. Karen Fruetel serving as Vice –Chair of Medical Education for the Department. The intent of this office and portfolio is to foster

educational excellence, to promote educational scholarship, and to prepare for and facilitate Competency By Design (CBD) medical education within the Department, both within the core Internal Medicine Residency Program (IMRP) but also within the ten sub-specialty Sections that make up the Department of Medicine. Dr. Fruetel has developed comprehensive, evaluable metrics by which to assess faculty members' educational contributions. These metrics will be critically important moving forward, not only to ensure greater accountability within the new AMHSP framework, but also to appropriately recognize the many faculty members who provide outstanding education within the Department of Medicine and the Cumming School of Medicine. The Office of Medical Education is also playing a central role in mentoring junior and mid-career faculty who are interested in developing academic careers in medical education.

The Research Office is supported by Dr. Christina Hirota, PhD, and Dr. Ann Clarke, as Vice-Chair for Research. The establishment of the research office is to support faculty in navigating the sometimes complex research process (ethics, legal, RSO, research & trust accounting, etc.), and has the mandate to oversee Departmental research and scholarship awards. In this regard, the Department has reinvigorated the Clinical Scholar Program, and in 2016-17 doubled the funding to the Subrata Ghosh Fellowship (\$50,000 to \$100,000) to fund two outstanding young trainees to pursue advanced training at Harvard and MIT, respectively. The Department matched each of the four Helios Scholarship awards given to trainees within the Department of Medicine, with an additional \$40,000 per award. These opportunities allow the recipients to pursue additional training in Cambridge, Oxford and Memorial Sloan Kettering Cancer Center, among others, before returning to Calgary. This initiative is consistent with my leadership vision within the Department of Medicine to identify and mentor trainees who are likely to become the academic leaders of tomorrow.

The Department recognizes that the practice of medicine can be extremely rewarding, but also very stressful. There are times when a member of the Department may feel the need to seek advice or a second opinion from a colleague. We also recognize that our members are our most valuable assets and feel strongly that members should be supported when going through a difficult time. The Department has initiated an Advice and Support program, under the leadership of Dr. Jane Lemaire who is our Vice-Chair of Physician Wellness. The program consists of an Advice and Support Team, consisting of a small group of experienced Departmental members, who would make themselves available for a phone call or a meeting. The encounters are confidential and considered an opportunity for members to discuss ideas, seek advice, or simply share. Dr. Lemaire is also leading a Senior Physician Initiative within the Department aimed at meeting the late-career needs of faculty transitioning their clinical practice towards retirement.

Members of the Department continue to provide outstanding clinical care to Calgarians and to the people of southern Alberta, eastern British Columbia and western Saskatchewan. The Department oversaw 12,617 inpatient admissions in 2016-17, a net increase of 2% over the previous year. Nonetheless, the average length of stay (LOS) decreased from 10.06 days in 2015-2016 to 9.75 days in 2016-2017, with the data being skewed by the quaternary-level care provided by Hematology, where the LOS also decreased from 18.21 days in 2015-16 to 16.77 days in 2016-17. It should be noted that the bulk of the inpatient admissions are cared for by four Sections, namely General Internal Medicine, Respiratory

Medicine, Nephrology and Gastroenterology. In 2016-17, members of the Department also provided 16,712 inpatient consultations, which is a net increase of 4.1% over the period 2015-16.

The number of ambulatory clinic referrals continues to increase year-over-year, and increased by 7% over the period 2015-2016, with referrals to Respiratory Medicine increasing by 12% and referrals to Rheumatology increasing by 19%. In a strategic effort to better manage these increased numbers of referrals, the Department has been an enthusiastic participant in the Specialist Link program. This program has been established to connect primary care physicians and specialists via telephone to improve efficiency and enhance the coordination of patient care delivery; currently five of the eight services offered by Specialist Link are within the Department of Medicine. Departmental leadership has engaged with primary care physicians, through the PAN-PCN leadership, and has been at the forefront of the roll-out of e-Consult & e-Referral, through regular engagement with Jodi Glassford and her team.

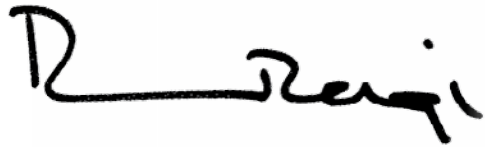
The Department continues to have a strong focus on patient care and in community engagement among our vulnerable populations. Members of the Department continue to provide specialist clinics at the Calgary refugee clinic, the Calgary Urban Project Society (CUPS) centre, the Alexandra Community Health Clinic, the Calgary Zone tuberculosis clinic, the Stoney Health Centre and Elbow River Healing Lodge, as well as at the Southern Alberta Clinic for patients with HIV. Moreover, this past year residents in the Internal Medicine Residency Program, and members of the Departmental Administrative team each spent a half-day at the Calgary Drop-In Centre, raising funds, making meals, and repairing infrastructure, etc. The annual Department of Medicine Summer BBQ raised funds for the Calgary Drop-In Centre, and the total funds raised by the resident and Departmental activities in 2017 was in the order of ~\$10,000.

The Internal Medicine Residency Program is under the skilled leadership of Dr. Marcy Mintz, the Program Director. It is a vibrant and highly sought after training program that currently has 105 residents – spanning the range for PGY1 – PGY4. Each year the program accepts ~30 first residents into the program and in 2016 there were more than 450 Canadian medical graduates who applied to the IMRP in Calgary. Major reasons as to why trainees from across the country choose to come to Calgary for their residency include the breadth of clinical excellence across the sub-specialty areas in the Department of Medicine, as well as in the core areas of Critical Care, Cardiology and Neurology, and the opportunity to engage in advanced simulation-based training and point-of-care ultrasound training. Competency By Design (CBD) in medical education is a major challenge facing all core internal medicine training programs across the country at this time, and I am happy to report that Dr. Mintz and her Associate Program Directors are well prepared for the roll-out of CBD in Calgary. Moreover, Dr. Karen Fruetel, in her role of Vice-Chair for Medical Education, will play a key oversight role in helping training programs within the Department of Medicine transition to CBD-based programs.

Total research revenue within the Department continues to increase (\$27.1M in 2017 compared to \$18.4M in 2015), and this includes both CIHR revenue and (\$5.6M in 2017 vs. \$4.5M in 2015) and clinical research revenue (\$14.0M in 2017 vs. \$3.9M in 2015). Similarly, there has been an increase in the overall number of publications, as well as in the average number of publications per full-time equivalent (FTE) within the Department; thus in 2016, the Department of Medicine produced 5.7 publications per FTE vs. 4.8 publications per FTE in 2014. Similarly, the average number of citations per FTE has increased over the last 3 years. Taken together, these metrics attest to the robust research environment within the Department, as well as to the benefits of an AMHSP funding model as a means to enhance academic scholarship.

Looking forward, I am confident that the Department of Medicine is well positioned to lead in innovative patient care, medical education and in outcomes clinical research in the coming years. We have developed a robust 3-year rolling workforce plan, and the Department has recently appointed Dr. Kelly Zarnke to the newly created position of Vice-Chair, Workforce Planning. We have also recently appointed Dr. Aleem Bharwani as the Vice-Chair, Strategic Planning, Mentorship and Diversity, and will look to roll-out a formal mentorship and onboarding program within the next 12 months. The Department has initiated periodic external reviews of the ten sub-specialty Sections, and has completed reviews in Gastroenterology, Nephrology and General Internal Medicine. These reports have proven to be useful in identifying key issues within the respective Sections, and we plan to do similar reviews for the Sections of Infectious Diseases and Rheumatology in 2018.

Respectfully submitted,



Richard Leigh, MBChB, MSc, PhD, FCP (SA), FRCPC
Professor and Head, Department of Medicine
Cumming School of Medicine
University of Calgary and Alberta Health Services



Operations Report

During the past year we have initiated a number of clinical and operational projects. The DOM has made significant strides in creating a number of new clinical pathways and increased access to care. We have engaged with the PAN-PCN to enhance Specialist Link with 5 of the 6 current services offered within the Department of Medicine. We have been at the forefront of the Calgary Zone roll-out of e-Consult & e-Referral. Significant work has been done at the Peter Lougheed Hospital regarding Pulmonary Function to increase utilization and patient booking. The DOM continues to be leaders in creating and adapting to new models of care to focus on patient care and safety.

The Department of Medicine's 100.65 of unionized administrative support staff (93% full time) provide services at Foothills Medical Centre, Rockyview Hospital, South Health Campus, Peter Lougheed Hospital, Sunridge Landing, and Richmond Road Diagnostic and Treatment Centre. Staff are funded through Alberta Health Services (31%) and the Academic Medical Health Services Plan (69%) with all positions having direct activities in the areas of clinical and leadership support, educational support, and academic support. The 16 of non-union staff have responsibilities to provide management, data analysis, project, and financial support to the Departmental Leadership.



STORMY MARSHALL
CLINICAL DEPARTMENT MANAGER
CALGARY ZONE

We realigned staff in the administrative area of the DOM to focus on key initiatives. We have begun to resource an Education Office, Research Office, and Analytics Group. The DOM hired a Team Lead for Analytics to focus our resources towards meaningful projects and to ensure data integrity for research and operational decisions. In our Internal Medicine Residency Program, we changed the support staff dynamic with collaboration with the Cumming School of Medicine. The addition of an experienced University staff member to the team has allowed greater knowledge transfer between the organizations.

Our 2016-17 training focus continues to be for staff to meet the diverse needs of physicians and their clinical practices and academic activities. Using internal and external training opportunities; 41% of our employees accessed internal learning resources and 1% accessed external providers to enhance their skills. All Departmental leaders support continual learning and work with staff to identify educational/training opportunities. We believe a highly functioning staff workforce requires a supportive environment to learn and grow professionally and ensure our staff are given every chance to succeed.



The DOM 2016-17 AMHSP fiscal year end closed with less than a 1% variance to budget. We refined our internal financial processes and developed a closer working relationship with the Cumming School of Medicine and Alberta Health Services Medical Affairs to achieve continued success in the stewardship of our financial resources. Also, the Department substantially reduced the AHS operational spending by transitioning physician reporting from an external system (STAR) to a University-based system (ARO). The ongoing efforts by the DOM to find cost savings will continue this trend into future years.

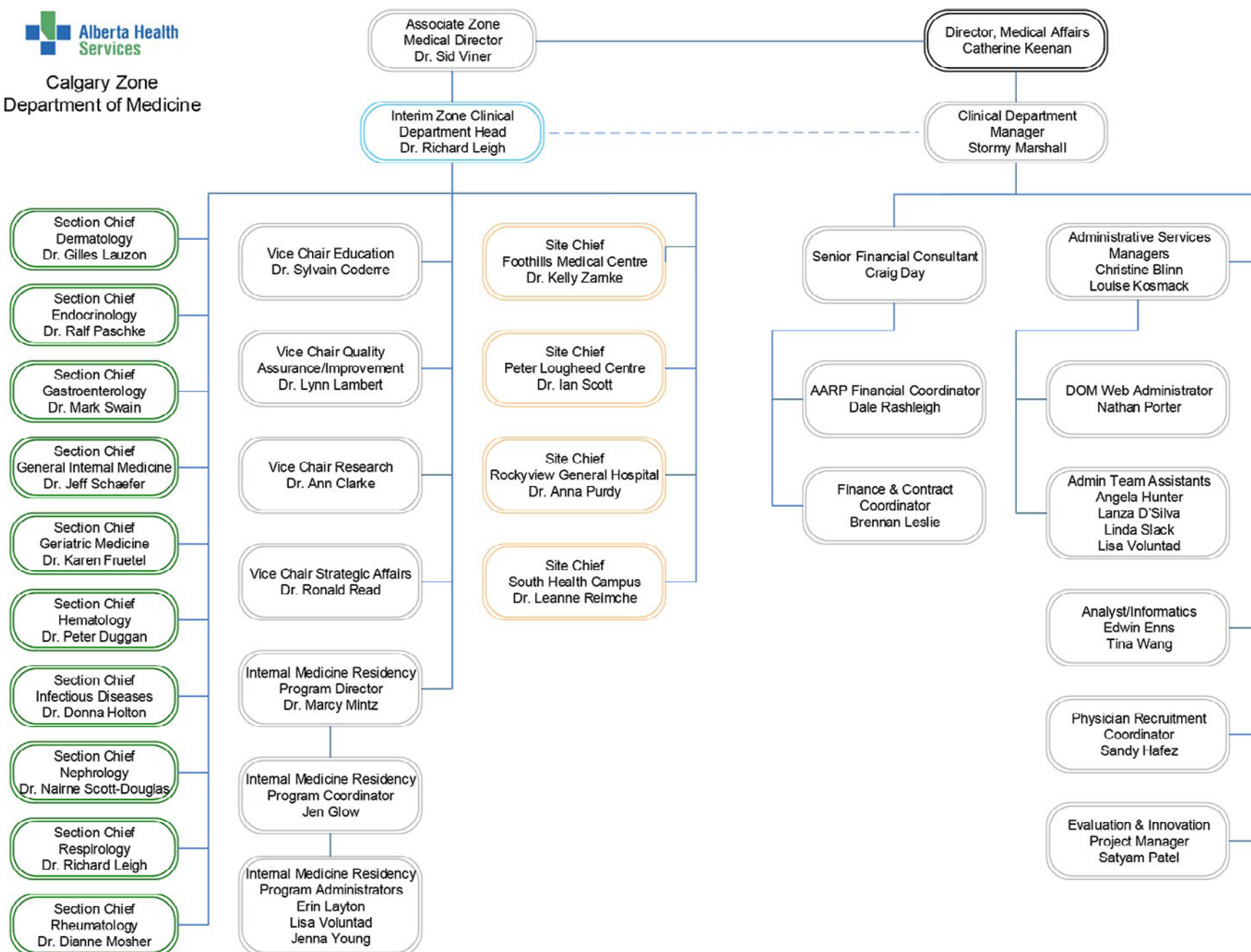
The next year for the Department of Medicine will continue to provide fulfilling and rewarding work for the administrative support staff towards physician support in all areas. A new training method for the staff will be implemented with a focus on short lunch and learn sessions focused on specific needs. The financial situation in the DOM will continue to be a focus towards find cost savings and use those savings to drive innovation.

Our commitment to patient care initiatives will continue into next year and the DOM is committed to find efficiencies in innovative solutions.

EMPLOYEE POSITION TYPE	ALBERTA HEALTH FUNDED	AMHSP FUNDED	TOTAL
Administrative Support III	1	6.9	7.9
Administrative Support IV	18.7	52.6	71.3
Administrative Support V	6.8	7.65	14.45
Administrative Support VI	4	2	6
Assistant	1	1	2
Coordinator	3	4	7
Data Analyst		1	1
Finance		2	2
Lead		1	1
Manager	2	1	3
Web Administrator		1	1
GRAND TOTAL FTE	36.5	80.15	116.65

Organization Chart

 **Alberta Health Services**
Calgary Zone
Department of Medicine



Section Members by Gender

Primary Division	Total	Male		Female	
		Count	%	Count	%
Dermatology	22	13	59%	9	41%
Endocrinology	26	12	46%	14	54%
Gastroenterology	62	38	61%	24	39%
General Internal Medicine	71	39	55%	32	45%
Geriatric Medicine	14	4	29%	10	71%
Haematology	32	18	56%	14	44%
Infectious Diseases	25	19	76%	6	24%
Nephrology	32	21	66%	11	34%
Respirology	39	25	64%	14	36%
Rheumatology	26	9	35%	17	65%
Total	349	198	57%	151	43%

Note: Includes Physicians who are primarily appointed to the Department of Medicine that provide any amount of clinical care within AHS facilities. Locums are excluded.

Age Groups by Gender

Age	Total	Male		Female	
		Count	%	Count	%
31-40	106	48	45%	58	55%
41-50	109	52	48%	57	52%
51-60	74	48	64%	26	35%
61-70	46	37	80%	9	20%
71-80	15	13	93%	1	7%
81+	1	1	100%	0	0%
Total	350	199	57%	151	43%

Faculty Ranks by Gender

Rank	Total	Male		Female	
		Count	%	Count	%
Clinical Assistant Professor	125	60	48%	65	52%
Clinical Associate Professor	70	40	57%	30	43%
Clinical Lecturer	52	22	42%	30	58%
Professor	45	41	91%	4	9%
Associate Professor	24	13	54%	11	46%
Clinical Professor	14	12	86%	2	14%
Assistant Professor	10	5	50%	5	50%
Unknown	7	4	57%	3	43%
Adjunct Assistant Professor	2	1	50%	1	50%
No Appointment	1	1	100%	0	0%
Total	350	199	57%	151	43%

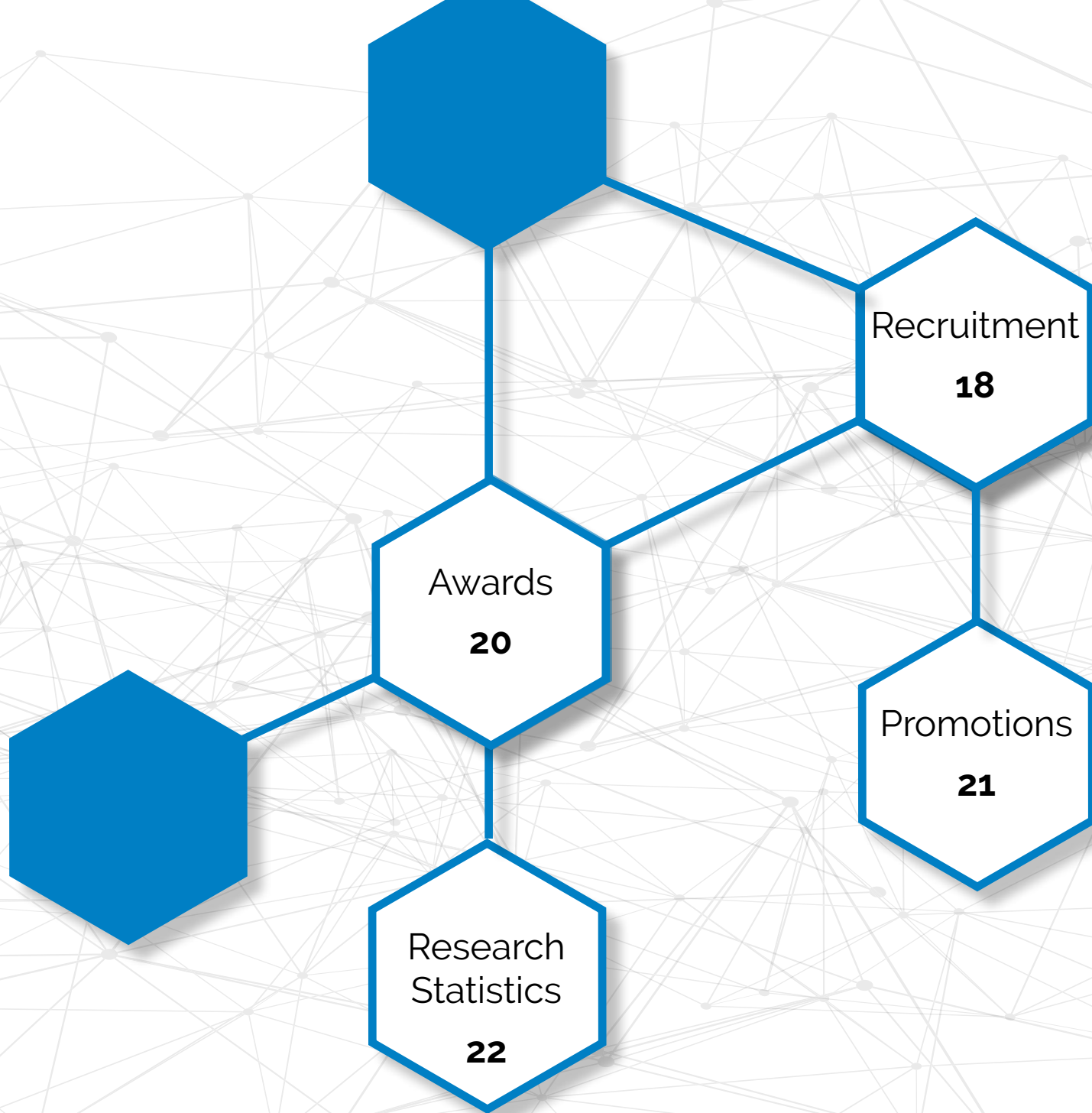
Divisional Funding Sources

Primary Division	Total	ARP	FFS	ARP FTE	ARP Recruitment (no locum)	ARP Resignee	FFS Recruitment	Locum
Dermatology	22	6	16	6.0	0	0	0	0
Endocrinology	26	21	5	19.3	0	0	0	1
Gastroenterology	62	28	34	27.0	2	0	0	3
General Internal Medicine	71	37	34	34.2	0	0	1	4
Geriatric Medicine	14	13	1	11.6	0	0	0	0
Haematology	32	22	10	20.2	0	0	0	3
Infectious Diseases	25	15	10	14.6	0	0	0	1
Nephrology	32	20	12	20.0	0	0	0	3
Respirology	39	26	13	25.5	1	0	1	2
Rheumatology	26	18	8	17.3	0	0	1	2
Total	349	206	143	195.6	3	0	3	19

Faculty Rank by Division

Rank	Dermatology	Endocrinology	Gastroenterology	General Internal Medicine	Geriatric Medicine	Haematology	Infectious Diseases	Nephrology	Respirology	Rheumatology	Total
Adjunct Assistant Professor	0	0	1	0	0	0	0	0	1	0	2
Assistant Professor	1	2	2	2	0	0	0	0	1	2	10
Associate Professor	0	1	4	5	2	3	3	5	0	1	24
Clinical Assistant Professor	6	8	27	26	7	12	10	8	18	3	125
Clinical Associate Professor	7	5	9	11	3	8	3	8	6	9	69
Clinical Lecturer	5	3	8	22	1	4	0	2	4	3	52
Clinical Professor	2	1	2	2	0	1	1	0	4	1	14
Professor	1	6	9	3	1	3	3	8	5	6	45
No Appointment	0	0	0	0	0	0	0	1	0	0	1
Unknown	0	0	0	0	0	1	5	0	0	1	7
Total	22	26	62	71	14	32	25	32	39	26	349

Workforce Overview



Recruitment



Primary Section	Last Name	First Name	Start Date	University Appointment	Locum	FFS	ARP Member
General Internal Medicine	Fabreau	Gabriel	January 1, 2016	Assistant Professor			1
Infectious Diseases	Rennert-May	Elissa	April 15, 2016		1		
Rheumatology	Erum	Uzma	May 1, 2016	Clinical Lecturer	1		
Gastroenterology	Shaheen	Abdel Aziz	July 1, 2016	Assistant Professor			1
General Internal Medicine	Vlasschaert	Meghan	July 1, 2016	Clinical Lecturer		1	
Rheumatology	Moran-Toro	Christina	July 1, 2016	Clinical Lecturer		1	
Rheumatology	Carter	Erin	July 1, 2016	Clinical Lecturer	1		
Hematology	Jamani	Kareem	July 1, 2016	Clinical Lecturer	1		
Gastroenterology	Milne	Kaylee	July 1, 2016	Clinical Lecturer	1		
Respiratory	Phang	Sen Han	July 1, 2016	Clinical Lecturer	1		
Respiratory	Shieh	Benjamin	July 1, 2016		1		
General Internal Medicine	Shrum	Jeffrey	July 1, 2016	Clinical Lecturer	1		
General Internal Medicine	Tabassum	Roolan	July 1, 2016	Clinical Lecturer	1		
Endocrinology	Yamamoto	Jennifer	July 1, 2016	Clinical Lecturer	1		
Endocrinology	Butalia	Sonia	July 1, 2016	Assistant Professor			1

Primary Section	Last Name	First Name	Start Date	University Appointment	Locum	FFS	ARP Member
General Internal Medicine	Brown	Gordon	July 18, 2016	Clinical Lecturer	1		
Gastroenterology	Forbes	Nauzer	July 19, 2016	Clinical Assistant Professor	1		
Respiratory	Mitchell	Patrick	July 21, 2016	Clinical Assistant Professor			1
Gastroenterology	Razik	Roshan	August 31, 2016		1		
Nephrology	Dumaine	Chance	September 6, 2016		1		
Nephrology	Mann	Bikaramjit	October 1, 2016	Clinical Lecturer	1		
Hematology	Tay	Jason	October 1, 2016	Associate Professor			1
Endocrinology	Leung	Alex	November 1, 2016	Assistant Professor			1
General Internal Medicine	Desy	Janeve	December 1, 2016	Clinical Lecturer	1		
Nephrology	Chun	Justin	December 26, 2016	Clinical Lecturer	1		
Hematology	Cerquozzi	Sonia	January 1, 2017	Clinical Assistant Professor		1	
Hematology	Davies	Gwynivere	January 31, 2017		1		
Gastroenterology	Lu	Cathy	February 1, 2017	Clinical Assistant Professor			1
Respiratory	Hurter	Agnes	February 2, 2017	Clinical Assistant Professor		1	
Geriatrics	Goodarzi	Zahra	March 31, 2017	Clinical Assistant Professor			1
Total					18	4	8

Internal Awards

Dr. Mark Gilrie – *2017 Dr. Subrata Ghosh Fellowship Award*
Dr. Chris Ma – *2017 Dr. Subrata Ghosh Fellowship Award*
Dr. Laurie Parsons – *2016 AARP Merit Award, Dermatology*
Dr. Greg Kline – *2016 AARP Merit Award, Endocrinology*
Dr. Maitreyi Kothanaraman –
2016 AARP Merit Award, Gastroenterology
Dr. Karen Fruetel – *2016 AARP Merit Award, Geriatric Medicine*
Dr. Ghazwan Altabbaa & Dr. Maria Bacchus –
2016 AARP Merit Award, General Internal Medicine
Dr. Deepa Suryanarayan –
2016 AARP Merit Award, Hematology
Dr. John Conly – *2016 AARP Merit Award, Infectious Diseases*
Dr. Adam Bass & Dr. Louis Girard –
2016 AARP Merit Award, Nephrology
Dr. Doug Helmerson –
2016 AARP Merit Award, Respiratory Medicine
Dr. Glen Hazlewood – *2016 AARP Merit Award, Rheumatology*
Dr. Elizabeth Mackay – *2016 Dr. Howard McEwan Award (PLC)*
Dr. John Gill – *2016 Dr. John Dawson Award (FMC)*
Simulation Program –
2016 Dr. John M. Conly Innovation Award (PLC)
Dr. Paula Pearce – *2016 Dr. Terry Groves Award (RGH)*
Dr. Regine Mydlarski – *2016 Dr. Tom Enta Award (Community)*
Dr. Scott Samis – *2016 Ectopic Award*
Dr. Paul Leblanc – *2016 Golden Bull Award*
Dr. Ward Flemons – *2016 Professionalism Award*
Dr. Alejandra Boscan – *2016 QI and Patient Safety Award*

Dr. Ben Wilson – *2016 Repeat Offender Award*
Dr. Kara Nerenberg – *2016 Research Preceptor Award*
Dr. Julia Tien – *2016 Rookie of the Year Award*
Dr. Ralph Hawkins – *2016 SHC Clinical Excellence Award*
Dr. Rahim Kachra – *2016 Silver Finger Award*
Dr. Rob Quinn – *2016 Silver Tongue Award*
Dr. Gabe Fabreau – *2016 Teambuilder of the Year Award*
Dr. Jeff Schaefer – *2016 Work Life Balance Award*

External Awards

Dr. Ward Flemons – *2015 FMC Clinician of the Year Award*
Alex Leung – *New Investigator Award, Hypertension Canada*
Dr. Jane Lemaire – *Canadian Medical Association*
Misericordia Award
Dr. Aleem Bharwani – *2016 Mentor of the Year Award,*
Region 1
Dr. Gabe Fabreau – *2016 Top 40 Under 40,*
Avenue Magazine
Dr. Brenda Hemmelgam – *2016 Killam Annual Professor Award*
Dr. John Conly – *AMA Medal for Distinguished Service*
Dr. Amita Mahajan – *CIHR Health Research Award*

Promotions

Clinical Lecturer to Clinical Assistant Professor

Juri Janovcik
Emily Kwan
Susan Poleman

Clinical Assistant to Clinical Associate Professor

Adam Bass	Paula Pearce
Eliana Castillo	Lynne Robertson
Louis-Philippe Girard	Patricia Tang
Douglas Helmersen	Chandra Thomas

Clinical Associate to Clinical Professor

Habib Kurwa
Willis Tsai

Assistant Professor to Associate Professor

Cheryl Barnabe	Carolyn Owen
Carla Coffin	Sachin Pendharkar
Matthew James	Robert Quinn

Associate Professor to Full Professor

Kelly Burak



Kelly Burak, promoted to Full Professor

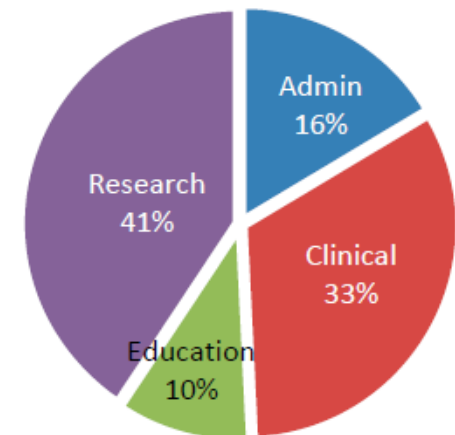
Research Statistics

2017 marked the first year in which the DOM moved to a single reporting tool, the Annual Report Online (ARO), which has fully replaced the previous STAR Report and eliminated the burden of double-reporting for many of our members, particularly our academic members. This year, in time for the ARO evaluation process, we also implemented a standardized research evaluation matrix, which was used to help gauge the successes of our members, based on what was entered into the ARO, on the amount of protected time for research and with consideration of each member's career stage and previous productivity (when applicable). We broke this down into two major categories: the first order category containing peer reviewed outputs and the second order category containing non-peer reviewed outputs.

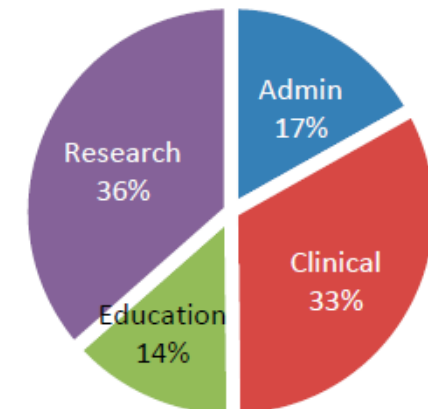
Herein, we report data strictly from the first order category, namely Funding and Publications, but we know that it is critical to measure other research-related outputs and we hope that next year's annual report will be able to comment on some of these other second order measures. For example, knowing how many and what types of trainees are being mentored by our faculty members provides a window into the future of our department; knowing how often and to whom research projects and results are being discussed (e.g. at conferences, meetings and rounds) gives us a glimpse of the reach and influence of our department. Other measures, such as involvement in collaborative research networks, media interactions, conference organization, participation in review panels, and technology commercialization all provide valuable insights into how well our department engages with patients, the public, external peers and the commercial sector.

Out of 386 members with a primary appointment in Medicine (as of the end of December, 2016), we had 74 members with full-time academic appointments. On average, these members spent 41% of their time on research activities, while members in other clinical departments with an Alternative Academic Relationship Plan (AARP) spent, on average, 36% of their time in research-related activities.

**Activity Profile 2016
Department of Medicine**



**Activity Profile 2016 - Clinical
with AARP**



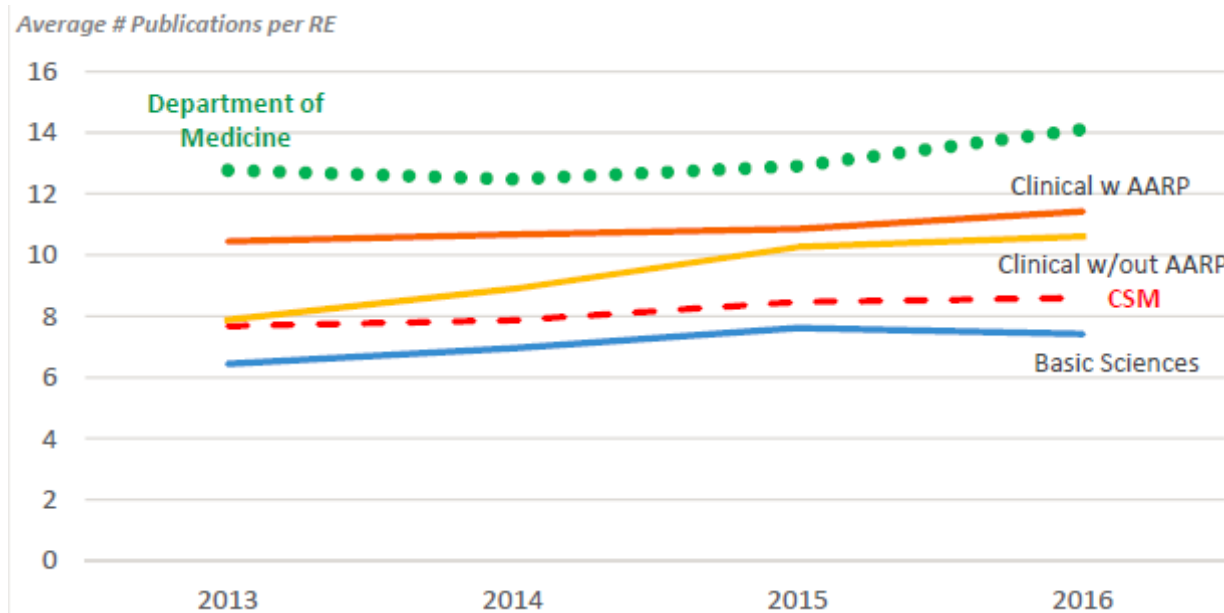
This research activity has led to a total of \$27.1 M being brought into the University by DOM members, which amounts to 16.5% of the Cumming School of Medicine's total research revenue for the 2016-2017 fiscal year. Fully half of this research revenue has come from clinical research studies (including grant-sponsored clinical trials), while another 20% has come from CIHR, which, as one of the federal tri-council funding agencies, represents the top level of funding for research in Canada. To look at these numbers in a different and, arguably, more meaningful way, DOM members with full-time academic appointments brought in substantially more research revenue per research equivalent (defined as the annual sum of % time for research/100) than other departments, at \$0.9 M per research equivalent (compare at \$0.8 M per research equivalent for the entire CSM).

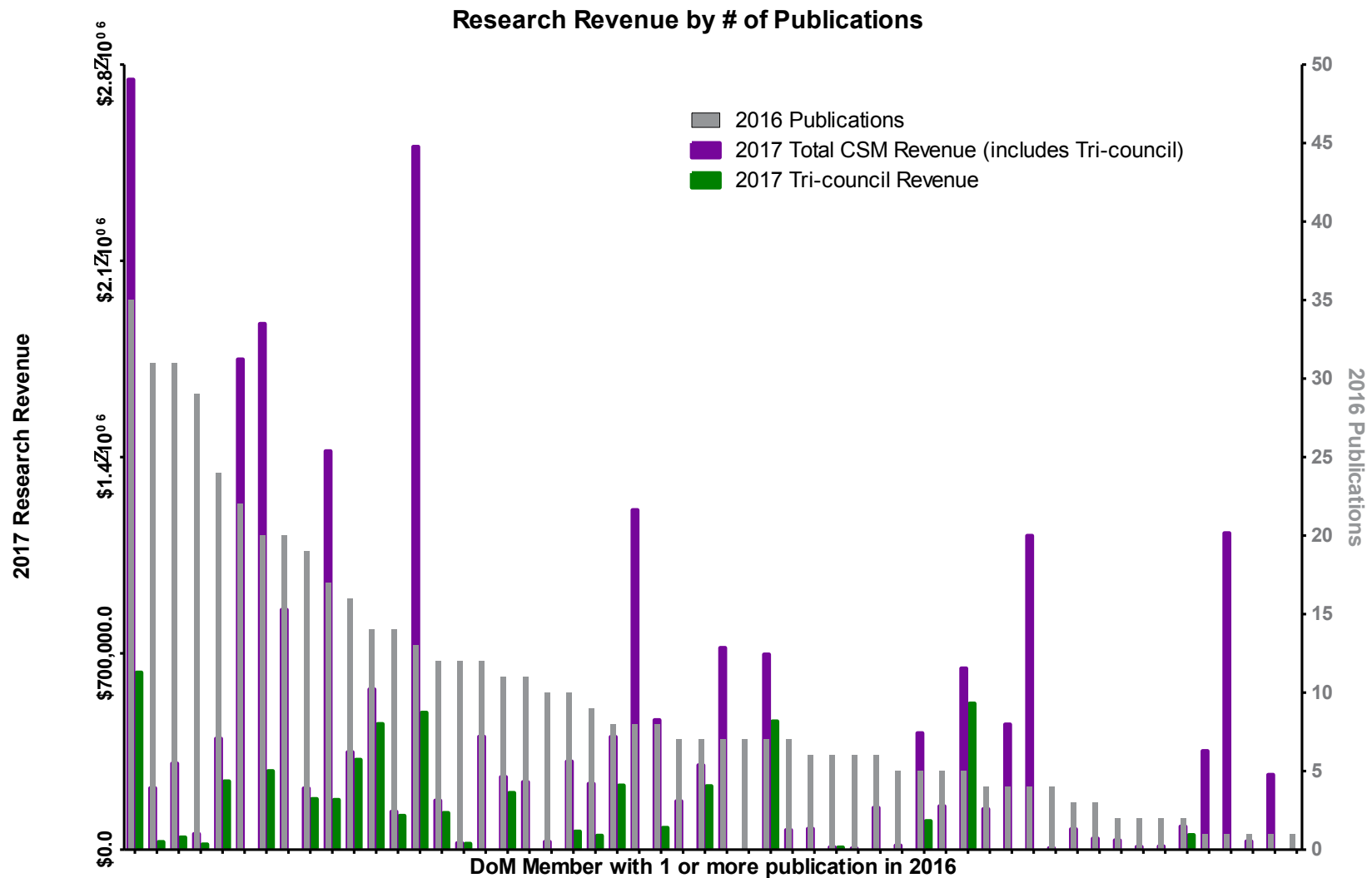
Although not counted in the 2017 revenue data, we would like to highlight some notable successes for early career faculty members during the most recent CIHR Project competition: Claire Barber (Rheumatology) is co-leading a 2-year project to develop a patient-centred balanced scorecard to improve the quality of care for patients with rheumatoid arthritis, while Paul MacMullan (Rheumatology) is co-PI on a 5-year project led by members in the Chemistry Department that aims to develop peptide-based biosensors to detect arthropathy-associated crystals. One of our non-academic early career members, Deepa Suryanarayan (Hematology), was recently awarded a CanVECTOR Pilot Trial award to conduct a Canadian multi-site feasibility study of two different treatments for catheter related thrombosis in cancer patients. These are only a few examples of the bright future ahead for the Department of Medicine.

When it comes to publications, DOM members have been consistently above average for several consecutive years, no matter how you look at the numbers, and 2016 was no exception. In 2016, our full-time academic members averaged 5.7 publications each (compare to 3.9 publications per academic member in a basic science department), which translates as 14.1 publications per research equivalent, for a total of 422 publications. DOM members

were cited on average over 350 times each (compare to just over 240 citations each for academic members in a basic science department). Of papers published by DOM members in the last 5 years, 106 of these publications had been cited more than 49 times by the end of 2016.

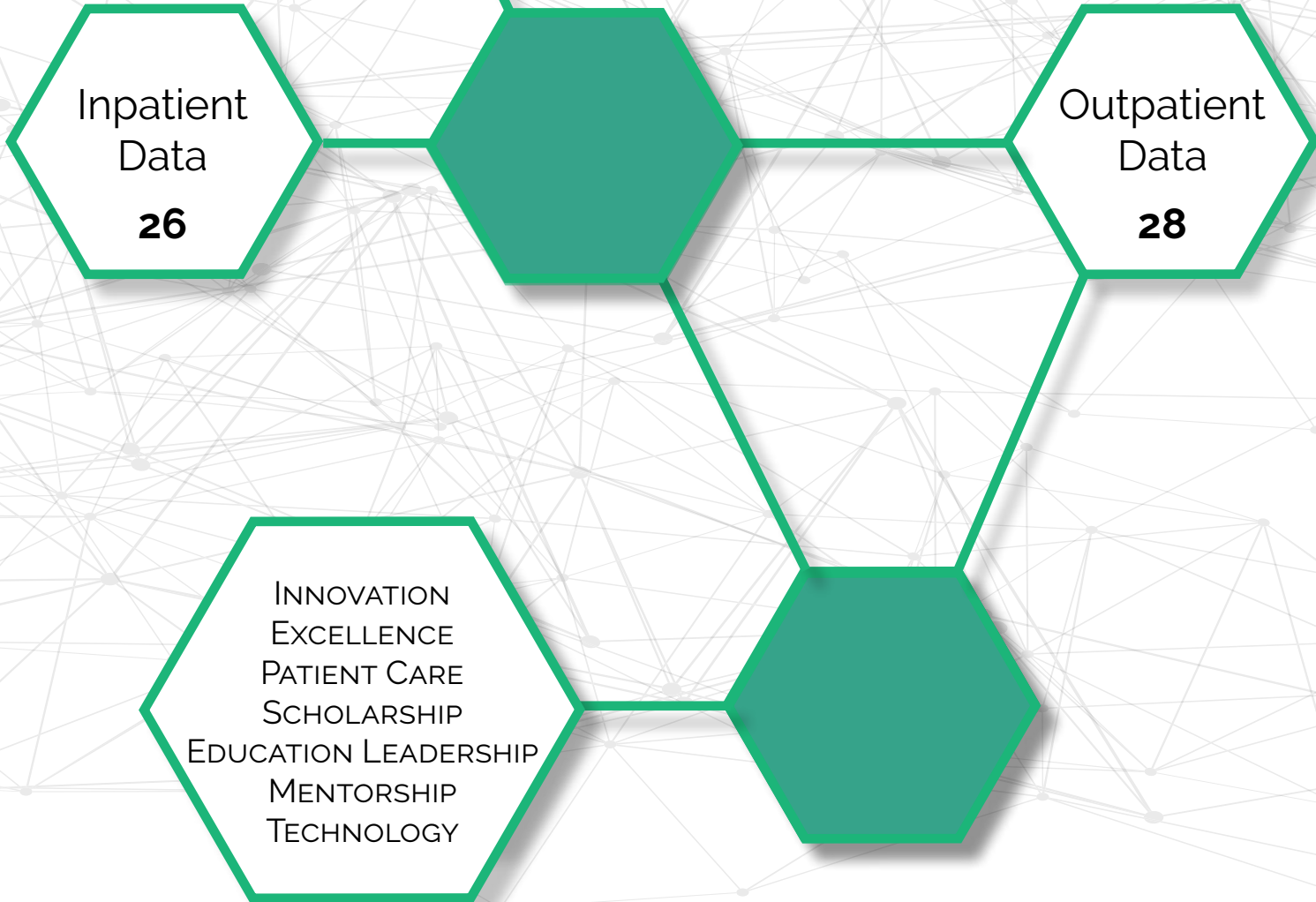
Several DOM members were very prolific last year, with 21 DOM members contributing authorship to 10 or more publications each. Of note, Drs. Cello Tonelli, John Gill and Gil Kaplan each contributed to more than 30 publications in 2016, appearing in such notable journals as JAMA, Circulation, Lancet, Clinical Infectious Diseases, and Gastroenterology.





Finally, it may seem obvious that there should be a link between research revenue and number of publications, but we decided to look a little closer. This figure shows the distribution of individual member Research Revenue (2017 fiscal year) broken down according to number of publications in 2016. While there are a handful of DOM members who contribute to publications with little or no external funding, it stands that we could not be as prolific as we are without significant external investment. Indeed, amongst our members, there is a significant correlation between total amount of research revenue and number of publications ($r^2 = 0.56$ for total revenue; $r^2 = 0.60$ for Tri-council revenue). Even more telling is the higher correlation when 2016 publications are compared to Research Revenue from the 2016 fiscal year – $r^2 = 0.66$ for total revenue; $r^2 = 0.62$ for Tri-council revenue – that is to say, this year's publications are more likely to reflect last year's funding.

Patient Flow Data



Inpatient Data

Inpatient Discharge Summary		
Division	2015-16	2016-17
Dermatology	-	-
Endocrinology	59	35
Gastroenterology	1010	946
Geriatric Medicine	-	-
General Internal Medicine	7704	7971
Hematology	926	942
Infectious Diseases	64	71
Nephrology	983	1064
Respirology	1624	1588
Rheumatology	-	-
Yearly Changes (+/-)	10.2%	2.0%

The following tables and graphs present a brief summary of inpatient data for the Department of Medicine (DOM). This information was taken from the Health Record Discharge Abstract Database (DAD). The sectional inpatient discharges were counted by the medical service (specialty) of the Most Responsible Physician per discharged inpatient. Information of a physician's Medical Service in Health Record is provided by the Medical Staff Office. As the database only contains one current Medical Service per physician, there may be a few instances where patients treated by cross appointed physicians, or physicians changed their Medical Service, and were not updated immediately in the system, which may affect the counts of discharges, consults, and average acute length of stay by divisions. A physician consult occurring during a patient's hospital stay is counted when the patient is discharged from the hospital, regardless of the time the consult actually provided. The electronic Health Record only stored information up to the eighth physician involved with a patient's hospital stay. A consult made by a subsequent physician would not be included.

Inpatient Consults

Division	2015-16	2016-17
Dermatology	151	136
Endocrinology	471	470
Gastroenterology	3566	3624
Geriatric Medicine	961	1133
General Internal Medicine	3788	3828
Hematology	642	690
Infectious Diseases	3054	3177
Nephrology	875	1022
Respirology	2140	2226
Rheumatology	402	406
Total	16050	16712

Department of Medicine physicians also provided more than 16,712 consults for the inpatients discharged during the fiscal year 2016-17. Compared to the previous fiscal year 2015-16, the total consults of DOM in 2016-17 increased around 4.1%. Among all sections, the consults of Hematology increased 7.4%, the consults of respirology increased 4%, and the number of consults in other sections changed insignificantly compared to previous fiscal year.

Average Acute Length of Stay (Days)

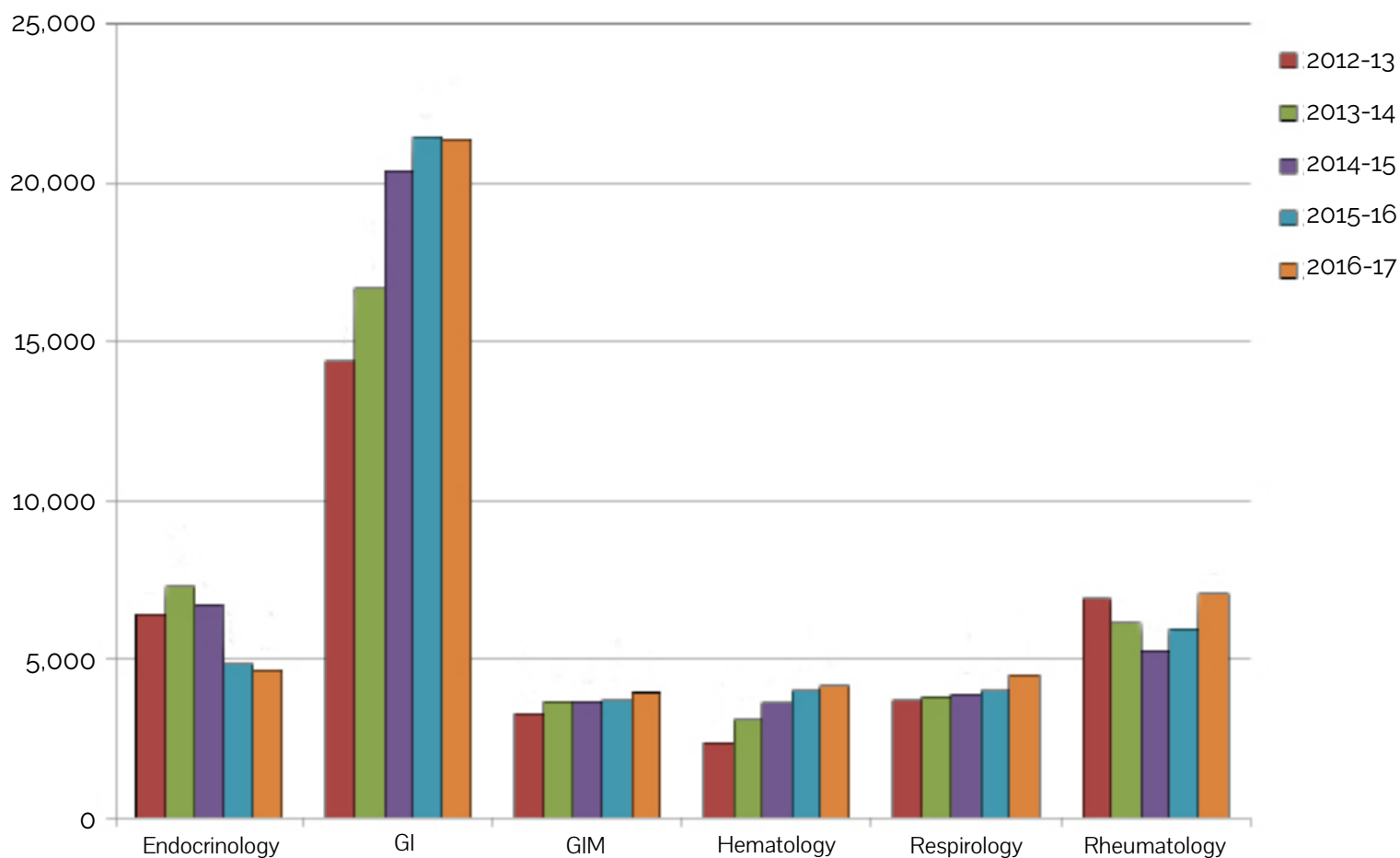
Division	2015-16	2016-17
Dermatology	-	-
Endocrinology	-	-
Gastroenterology	4.93	4.88
Geriatric Medicine	-	-
General Internal Medicine	7.58	7.54
Hematology	18.21	16.77
Infectious Diseases	-	-
Nephrology	11.64	11.30
Respirology	7.92	8.25
Rheumatology	-	-
Total	10.06	9.75

For the average of Acute Length of Stay of 2016-17, Respirology increased 4.1%, Hematology decreased 7.9%, the other three sections dropped from the range of 0.5% to 2.9% separately compared to the previous fiscal year 2015-16, the general average of Acute Length of Stay of DOM dropped around 3% in the fiscal year of 2016-17 compared to its previous fiscal year.

Outpatient Data

Total referrals of GIM increased 7% compared to the previous year, the total referrals of Hematology increased 4%, the total referrals of Respiratory medicine increased 12%, and the total referrals of Rheumatology increased 19%.

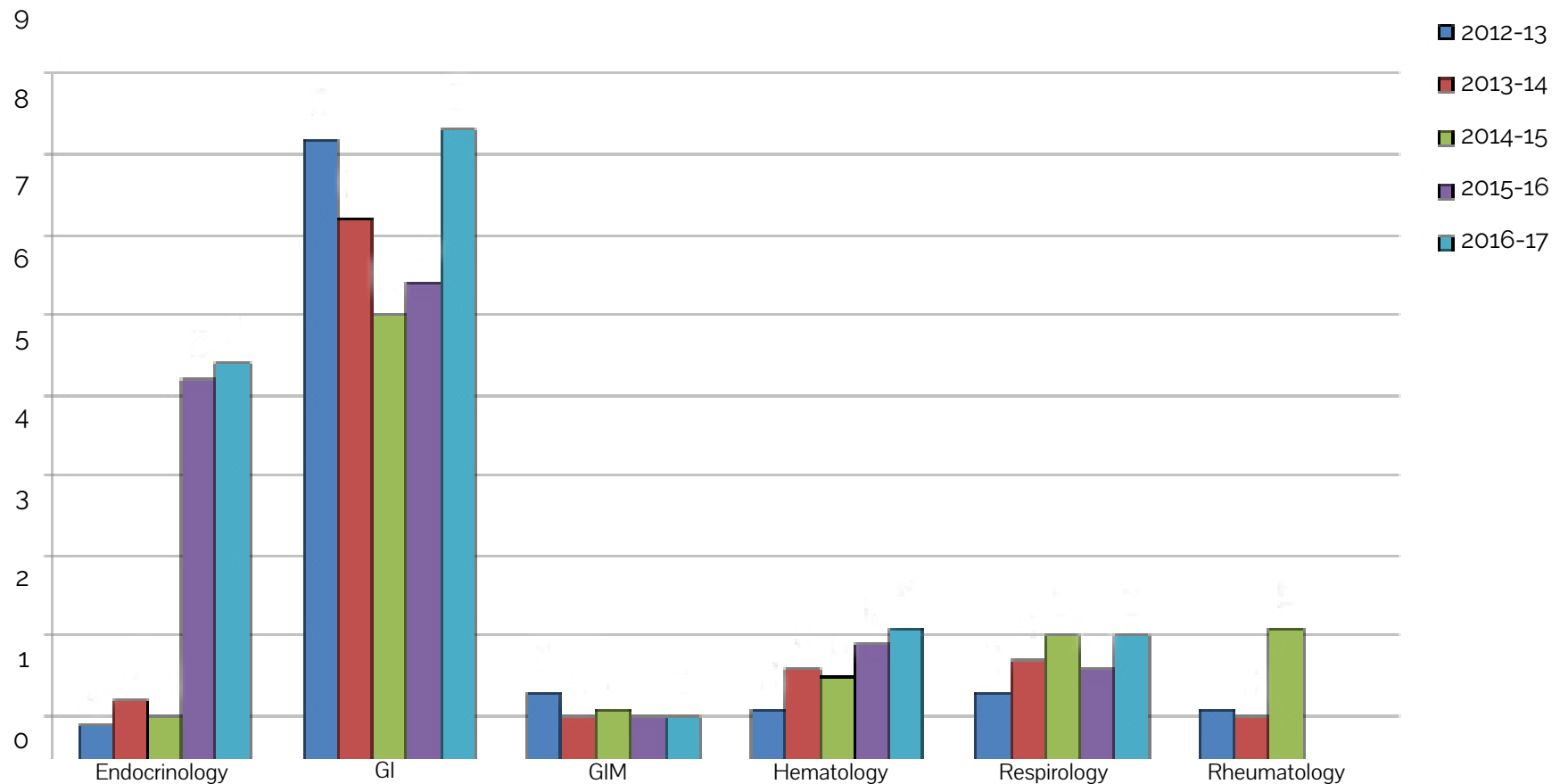
Central Triage Outpatient Clinic Referrals*
FY2012-13 to FY2016-17



Information on DOM outpatient clinic referrals was provided by Central Access & Triage and GI Central Triage. It should be noted that information was not available for all Sections or for physicians who do not participate in the Central Triage process. Respiratory Medicine data is only included from Dec. 2010 onward (when all sites participated in Central Triage). Gastroenterology (GI) data does not include screening colonoscopies performed at the Colon Cancer Screening Centre.

For the urgent referrals in 2016-17, the median wait time of GI increased 30%, the median wait time of Endocrinology increased 4%, the median wait time of Hematology increased 11%, and the median wait time of respirology increased 25% compared to what was reported in 2015-16. However, the median wait time of GIM remained unchanged. The median wait time of Rheumatology of urgent referrals are not available for 2016-17 as is changed to semi-urgent referrals.

Urgent Referrals: Time Between Referral and Initial Appointment* FY2012-13 to FY2016-17

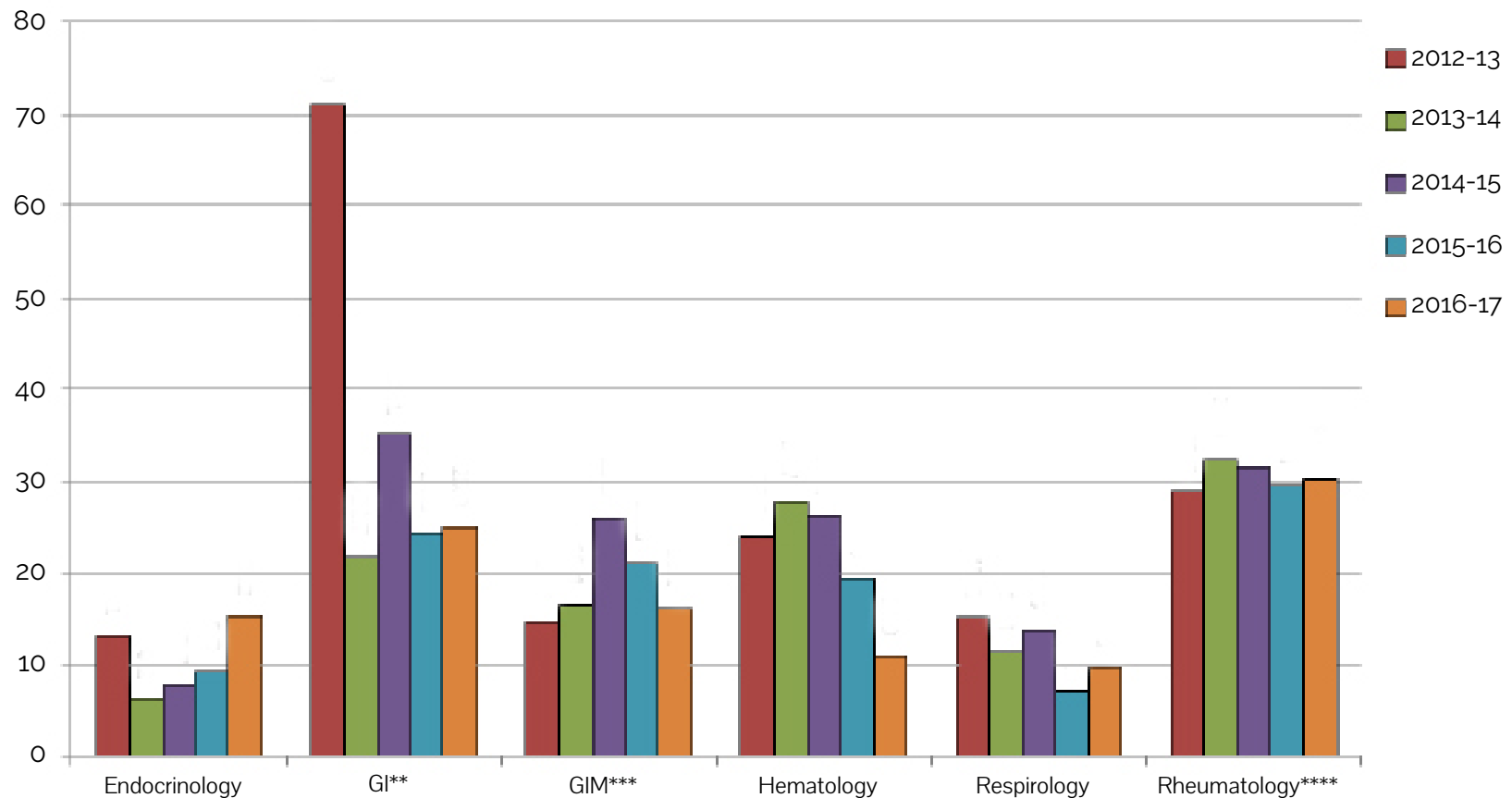


* Wait times are median wait time by weeks between the referral and the initial appointment.

** Rheumatology urgent referrals are changed to semi-urgent referrals during 2015-16.

For the routine referrals in 2016-17, the median wait time of Endocrinology increased 65%, the median wait time of GI increased 3%, the median wait time of GIM increased 23%, the median wait time of Hematology decreased 44%, the median wait time of Respiriology increased 35%, and the median wait time of Rheumatology increased 2% compared to the previous results in year 2015-16.

Routine Referrals: Time Between Referral and Initial Appointment*
FY2012-13 to FY2016-17

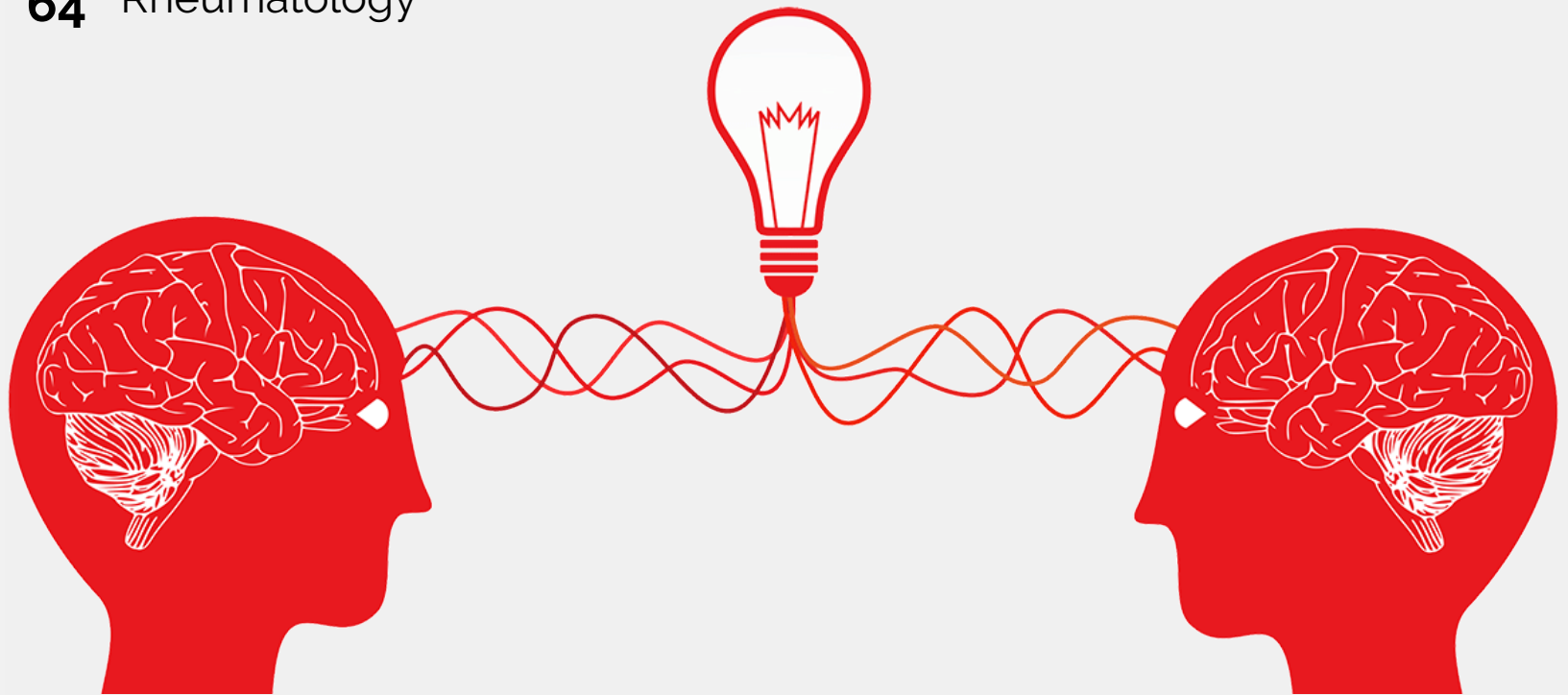


* Wait times are median wait time by weeks between the referral and the initial appointment. Due to outliers, the average wait time will typically be longer than the median wait time. GI reports wait time separately for moderate and routine referrals.

**Rheumatology routine referral wait times include Mod-Routine referrals.

Division Reports

32	CUPS Report	75	Gastroenterology	102	Nephrology
38	Dermatology	80	Respiratory Medicine	114	Physician Wellness
43	Endocrinology & Metabolism	87	Infectious Diseases	120	Office of Education
53	General Internal Medicine	94	Hematology & Hematologic Malignancies	121	Internal Medicine Residency Program
57	Geriatric Medicine			125	Future
64	Rheumatology				



Calgary Urban Project Society

Expected Outcomes

To improve access to specialist care for marginalized patients by addressing a gap in services to this population and to provide “hands on” advice and education for CUPS clinicians.

Dr. Karen Tang
General Internal Medicine



“We are extremely pleased with the level of support from our specialist colleagues and know that they endeavor to advocate for our patients both at an individual and population level within their own circles of influence. We would like to thank all the specialists who are taking the time to come to us and we look forward to continued collaboration with all of them.”

Dr. Van Nguyen
Health Director

CUPS Visiting Specialists

Internal Medicine

Dr. Janet Gilmour – one half day monthly April-August 2016,
then on sabbatical

Dr. Karen Tang and Dr. Gabriel Fabreau – one to two half days
monthly February-March 2017

Rheumatology

Dr. Liam Martin – one half day quarterly

Internal Medicine in Obstetrics

Dr. Eliana Castillo – one half day monthly

Cardiology

Dr. Edward O'Brien – one half day monthly

Gastroenterology

Dr. Kerri Novak and Dr. Michelle Buresi – share one half
day monthly

Nephrology through Southern Alberta Renal Clinic

Nurse Practitioner Ellen Novak – one full day monthly

	# clinic days	# patient visits	2016/17 Avg visits/day	2015/16 Avg visits/day	2016/17 # no-shows	2016/17 no-show rate (%)	2015/16 no-show rate (%)
Internal Medicine	7	21	3	3.2	5	23.8	31.3
Rheumatology	4	25	6.3	5	10	40	35
Internal Med/OB	6	21	3.5	3.7	5	23.8	29.7
Cardiology	5	26	5.2	4.2	9	34.6	52.4
Gastroenterology	6	46	7.7	5	14	30.4	46.7
Nephrology	6	42	7	–	11	26.2	–

Table 1. Average number of visits per clinic day and no-show rates from 2016-17 compared to 2015-16 for specialists located at CUPS within the Department of Medicine

For over 10 years, CUPS health clinic has held a valuable partnership with many of our Calgary specialist physician colleagues. This partnership strengthens a model of care which emphasizes timely access to specialist consultation and quality of care for a vulnerable population at risk of increased morbidity and mortality due to poverty and other risk factors. CUPS delivers health, housing, and education supports for low-income Calgarians through integrated, inter-professional teams with the goals of addressing the root causes of poverty.

Specialist visits within the Department of Medicine made up 5% of total patient visits. Other visiting supports or consultants to the health clinic include Neurology, Dietician, and Chronic Disease Management Nurse from Alberta Health Services, Optometrists, Gynecologist and Geriatric Nurse from the Calgary West Central Primary Care Network.

In the 2016-17 fiscal year, CUPS health clinic saw over 37,000 patient visits across its various health programs

Women's Health and
Prenatal/Postpartum
Care

Pediatric
Care

Primary
Health Care

Hepatitis C
Clinic

Shared Care
Mental Health
Clinic

Outreach
Clinics

Diabetes
Program

Social Work

Optometry

Foot Care



CUPS COMMUNITY HEALTH
CLINIC MURAL, LOCATED IN
DOWNTOWN CALGARY

The health clinic assisted 4,952 unique patients in this past year and is delivering a medical/health home model of care that encourages patient attachment to one primary care provider (Nurse Practitioner or Family Physician) or primary health care team. In this term-based model, we are striving for continuity of care, enhanced access to services and improved health outcomes. In addition to patients who fall within a primary care panel, approximately 60% of our patients fall within our 'walk-in' group. Reflecting the population who are not ready for attachment yet, these patients are often episodic in their health care needs or already have an established primary care provider elsewhere.

Many of our patients are homeless or live in unstable housing and therefore have little in the way of reliable contact information. Most do not have cell phones or fixed addresses in which to easily arrange appointments, especially when appointments for specialists are often months or years away. No-show rates are likely high with external specialists or programs due to barriers of communications, transportation, poverty, competing housing needs (housing, food insecurity), concurrent unstable mental health or active addictions and stigma. Specialist co-location at CUPS provides a welcoming environment where patients are already comfortable with staff, the clinic environment, and are familiar

with the location. Our staff are all trained in cultural diversity, trauma-informed care, gender diversity and harm reduction, which helps us to deliver care with a non-judgmental, patient-centered approach. Our reception staff know the patients well and are experts at finding patients to remind them of appointments. This year, we saw a 30% average no-show rate for the specialist clinics above, a 9% reduction compared to the previous 2015-16 fiscal year, with an average no-show rate of 39%. The overall clinic average no-show rate for all primary care providers at CUPS is 27% in comparison. We continue to use quality improvement processes to reduce our no-show rates and improve access to care for patients, which include utilizing our community partners to support patients with appointment reminders and attendance. When patients no-show, every attempt is made to squeeze in a same-day consult, or specialists may use the time to discuss cases with CUPS clinicians.



Finally, CUPS patients are very complex and most have a number of concurrent diagnoses that include mental health and active addiction issues. These diagnoses add an additional barrier for patients to attend appointments and understand or follow-through with specialist advice. Having on-site specialist consultation allows for collaboration and improved communication around patient care plans that are otherwise very challenging to do with off-site specialists. It provides an open-door environment for CUPS clinicians to receive informal teaching or mentorship and reciprocally, allows the specialists to access experienced wrap-around supports for patients. Many of the specialists are open to receiving emails or phone calls from CUPS clinicians, again, breaking down those communication barriers and establishes a collegiality that allows for easier access for collaborative team care.

CUPS actively participates in many local and provincial initiatives aimed at improving the health of vulnerable populations. Some examples include...

Collaboration with the University of Calgary Cumming School of Medicine through the SPaCE program (Strategic Partnerships and Community Engagement).

University of Calgary post-graduate medical education, family medicine, R3 Enhanced Skills in Global Health, addictions and public health residency programs. New this year are internal medicine residents in the Health of Vulnerable Populations program who are spending time at CUPS

Calgary Case Management Group – Inter-agency working group whose goal is to intensively case manage homeless clients who are frequent users of multiple systems – EMS, acute care, transit, corrections, police encounters. This group meets once monthly.

Calgary Recovery Services Task Force – Started in January 2015, with participation across 26 community agencies to explore the health needs of Calgary’s chronically homeless and develop recommendations to improve their care. The Task Force commissioned a research study in partnership with the University of Calgary and the School of Public Health to determine the health care gaps in 299 homeless participants. Seven recommendations were established which span harm reduction, outreach services, women and children, Indigenous populations and information sharing. These recommendations are supported from all levels of municipal and provincial government and were released in a media event in January 2017. A full report can be found at www.recoveryyyyc.ca

Harm reduction, health services, information sharing and women/children working groups of the Recovery Services Task Force have membership from various CUPS health clinic staff.

Naloxone working group – Under the lead of Alberta Health Services, this group has rolled out a Calgary-wide naloxone program to clients who are opiate users at risk of opiate overdose.

Completion of year 1 of the Connect 2 Care program (formally the Coordinated Care Team) and successful funding acquired for a 3-year program expansion through Alberta Innovates - Health Solutions. The expansion embarks on an exciting front-line partnership with Calgary Alpha House and research partnership with the O’Brien Institute for Public Health. This program is an intensive case management team which supports patients who are high users of the emergency department in Calgary with transitions of care between hospital and community. It has seen early successes in housing and primary care attachment for some of Calgary’s most vulnerable people and will aim to reduce acute care utilization and improve patient health outcomes.

Launch of the Calgary Allied Mobile Palliative Program (CAMPP) in October 2016. This program completed a 6-month pilot in this fiscal year and helped patients with an end-of-life diagnosis who were homeless or

vulnerably housed, connect to housing, palliative care and community resources. With funding from a private donor through the University of Calgary, this program was a partnership between CUPS, Alberta Health Services (AHS) and Mount Royal University.

Calgary Complex High Needs Population (CHNP) Oversight Committee – This committee meets quarterly and is comprised of AHS leaders and CHNP project leads. The goal of this committee is to provide coordination and oversight of the various projects aimed at managing complex high needs patients. The progress of the CUPS Connect 2 Care (C2C) program is updated at each meeting.

Calgary Coalition on Supervised Consumption Services – With overdoses and deaths on the rise from opioids/fentanyl, this group has been tasked by Alberta Health with the coordination of program development for supervised consumption/injection services in Calgary. The goals of this group are to conduct a Calgary needs assessment amongst drug users in preparation for an application to Health Canada for supervised consumption services.

Participation on the Sexually Transmitted Infection and Blood Borne Illnesses (STBBI) provincial strategy.

The C2C program and clinicians at Alpha House are working closely with the Community Paramedics City Center Team.

Dermatology

CLINICAL

Dr. Regine Mydlarski served as the Director of the Immunodermatology Clinic at the University of Calgary. This is a tertiary referral clinic for complex medical dermatology patients with primarily connective tissue diseases and immunobullous disorders. The clinic accepts referrals from Dermatologists, Rheumatologists and other allied specialists in Calgary, Western Canada, Central Canada, and parts of the United States. It has gained national and international recognition as a centre of excellence in bullous diseases. As Director of Transplant Dermatology for the Southern Alberta Transplant Program (ALTRA), Dr. Mydlarski continued to provide dermatologic assessment to high-risk solid organ transplant recipients, in a collaborative effort with Dr. Gilles Lauzon.

Dr. Laurie Parsons ran three subspecialty patch testing clinics per week with referrals from Dermatologists throughout Southern Alberta. She also participated in three multidisciplinary wound care clinics as part of her role as Medical Director of the University of Calgary Wound Care Clinic at the Sheldon Chumir Health Center and one general dermatology clinic per week. She continued to be active in Telehealth, providing wound care Telehealth sessions.

Dr. Richard Haber conducted two and one-half general Dermatology clinics per week and two pediatric dermatology clinics weekly at the Alberta Children's Hospital. He also conducted weekly Telehealth Dermatology consultation clinics for Siksika first nation and for High Level, Alberta.

Dr. Habib Kurwa ran a Mohs' micrographic surgery service to treat complex skin malignancies at the Richmond Road Diagnostic and Treatment Centre. He currently conducts four Mohs' surgical clinics per week and two Dermatologic Surgery (Non-Mohs') clinics per week, which includes providing photodynamic therapy. In addition, he does one surgical consultation clinic per week and was also Dermatology lead for Quality and Safety.

Dr. Lynne Robertson conducted four medical dermatology clinics per week including establishing a specialized pigmented lesion/melanoma clinic using a Fotofinder mole mapping device. Dr. Robertson also supervised a weekly Senior Dermatology Residency Clinic. She became the Dermatology Residency Program Director July 1, 2016.

Dr. Gilles Lauzon, Calgary Zone Chief, Section of Dermatology and Divisional Chief, University of Calgary, founded the cutaneous lymphoma clinic which has operated since January 2016 and which aims to enlist all cutaneous lymphoma patients in the southern half of Alberta. Dr. Lauzon also conducted one cutaneous transplant clinic per week and two wound clinics at the Sheldon M Chumir Health Centre.

Dr. Vim Prajapati was Co-Director & Co-Founder of the Multidisciplinary Pediatric Psoriasis Clinic, Alberta Children's Hospital Calgary, Co-Director & Co-Founder of the Multidisciplinary Pediatric Scleroderma Clinic, Alberta Children's Hospital Calgary, and Director & Founder of the Rapid Access Psoriasis Clinic, Institute for Skin Advancement Calgary.

RESEARCH HIGHLIGHTS

Dr. Regine Mydlarski, Director of Dermatologic Research, conducted research studying the skin microbiome and its relevance to cutaneous malignancy. Dr. Habib Kurwa was co-researcher with Dr. Mydlarski regarding projects addressing skin cancer, and was primarily involved in the collection of cutaneous samples for the creation of a skin cancer tissue bank. Dr. Gilles Lauzon held a research grant from the Canadian Dermatology Foundation addressing the characterization of microvesicles derived from melanoma cells. He also collaborated with Dr. Robert Gniadecki, University of Alberta, regarding the generation of a tissue and blood bank from patients with cutaneous lymphoma, an endeavor supported by ethics approval.

Drs. Parsons, Robertson and Haber were co-investigators in a Venous Leg Ulcer Study sponsored by Smith and Nephew/Healthpoint. Dr. Laurie Parsons developed the Contact Dermatology Database, which is up and running. This endeavor was supported in part by a grant from the Business Cost Program, Department of Medicine. This database will greatly enhance research opportunities in contact dermatitis.

Dr. Lynne Robertson was involved in the Skin Cancer Screening Education Study (SCSES), a major European and North American endeavor. Dr. Andrei Metelitsa was very active in clinical trials. He was principal investigator in one clinical drug trial and investigator in seven other drug trials.

During this reporting period, the Section published 20 peer-reviewed publications, one book chapter, 14 non-peer reviewed publications and 8 abstracts/posters. The Section of Dermatology consisted of 6 full-time ARP members (2 GFT and 4 Major Clinical) and 21 community-based dermatologists during the reporting period. Twenty-one members of the Section of Dermatology held a University of Calgary academic appointment through the Department of Medicine.



Dr. H Kurwa, Dr. R Mydlarski, and Dr. L Robertson
Dermatology

EDUCATION

The Section of Dermatology is heavily invested in medical education, as follows:

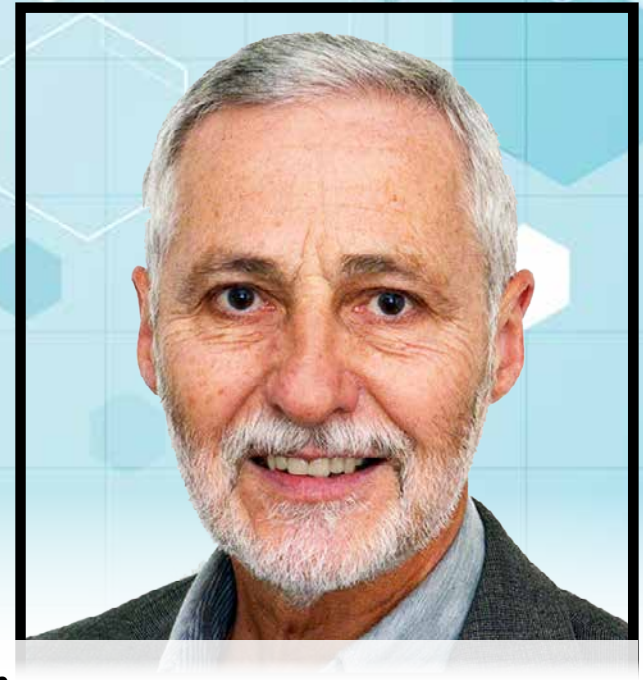
1. The dermatology residency training program enrolled 15 residents; our program is highly sought by medical students across the country for its cordial learning environment and high quality of advanced dermatologic education.
2. The Section offered a dermatology elective program for Internal Medicine residents (one resident per block), undergraduate medical students, family medicine residents and residents in other specialties, including medical genetics, plastic surgery, geriatrics and pediatrics.
3. The Section sponsored the 11th Annual Day in Dermatology CME on October 17, 2016. This event was attended by over 160 family physicians and approximately 20 final year family practice residents.

Individual members were invited as speakers at national and international symposiums, conferences and so forth:

Dr. Richard Haber, Dr. Lynne Robertson, Dr. Habib Kurwa, Dr. Vim Prajapati, Dr. A. Metilitsa, Dr. PR Mydlarski, Dr. Laurie Parsons, Dr. Gilles Lauzon.

UNDERGRADUATE EDUCATION

Dr. Parsons acted as the MSK/Derm UME Course Coordinator at the University of Calgary, November/December 2016. She received Cummings School of Medicine teaching award for undergraduate teaching. She also revamped the curriculum for the Cummings School of Medicine undergraduate dermatology course. The Undergraduate Course MSK/DERM, Course 2 also had contributions by Drs. Poelman, Remington, Robertson, Woolner, and Zip.



Dr. G Lauzon
Chief of Dermatology

GRADUATE EDUCATION

Dr. Regine Mydlarski was the module coordinator for IMM-3, Autoimmunity and Immunodeficiency (MDSC 639.03) and was also involved in the training of one Research Fellow.

OTHER EDUCATIONAL CONTRIBUTIONS

Dr. Gilles Lauzon was co-chair of the national DRIVE Program, a preparatory program for the Royal College certifying examinations and addressed to senior dermatology residents across Canada. Dr. Lauzon was also co-chair of the yearly national BoSS program (Basics of Skin Science) which all dermatology residents across Canada are invited to attend; Dr. Regine Mydlarski and Dr. Laurie Parsons contributed as participating faculty at the 2016 BoSS program.

ADMINISTRATION

DR. LAURIE PARSONS

Medical Director – Wound Clinics, Sheldon Chumir Health Centre,
Chair and coordinator of the Undergraduate
Course MSK/DERM, Course 2

Organizer of the city-wide Journal Club, Division of Dermatology
Member of EMIS User Working Group, Wound Advisory Committee and
Best Practice Committee, Department of Medicine
Chair of the National Dermatology Undergraduate Education Working
Group, Canadian Professors of Dermatology
Dermatology representative on the ARP Management Committee
Chair of the Selection Committee, Dermatology Residency
Program, University of Calgary
Cross-appointment with the Department of Family Medicine
Holds faculty position, University of Toronto for the International
Interprofessional Wound Care Course (IIWCC)

DR. REGINE MYDLARSKI

Program Director of the Dermatology Residency Training Program at the
University of Calgary until June 30, 2016
Medical Co-Director of the Medical Advisory Council of the
Canadian Pemphigus and Pemphigoid Foundation
Member of the Advisory Board of the Skin Malignancy Working Group in
Transplantation
Medical Advisor for the Medical Advisory Council of the
International Pemphigus and Pemphigoid Foundation
Director of Immunodermatology for the Section of Dermatology
Director of Transplant Dermatology for the Southern
Alberta Transplant Program
Director of Research in the Section of Dermatology and managed the
dermatology basic research laboratory in that capacity
Chair of Research for the Residency Program Committee,
University of Calgary

DR. LYNNE ROBERTSON

Dermatology Residency Program Director, effective July 1, 2016
Dermatology Specialty Committee, Royal College of Physicians and
Surgeons of Canada

DR. HABIB KURWA

Surgical Chair, Dermatology Residency Program Committee,
University of Calgary
Section of Dermatology representative to the QA/QI Committee,
Department of Medicine, University of Calgary
Dermatology Representative on RRDTC Site Executive
Member of Provincial Mohs Surgery Guidelines Working Group

DR. GILLES LAUZON

Calgary Zone Chief, Section of Dermatology
Chief, Division of Dermatology, University of Calgary
Co-chair and co-founder, National Basics of Skin
Science (BoSS) Program
Co-chair and co-founder of DRIVE Program

DR. RICHARD HABER

Chair, Resident Evaluations, Residency Program Committee,
Dermatology, University of Calgary
Representative TUCFA
Medical Telehealth Zone Advisor

DR. MIKE KALISIAK

Calgary Zone AMA Representative Forum Delegate
Board member, Specialist Care Alliance/Specialty Care Forum
Member of PARISC (Provincial Approach to Reducing the
Incidence of Skin Cancer) Steering Committee and participated in the
annual Provincial Cutaneous Tumor Team Meetings

AWARDS AND ACCOMPLISHMENTS

The Dermatology Residency Training Program entered its 8th year in 2016 and received full accreditation by the Royal College of Physicians and Surgeons of Canada in February 2015. Ten residents have now successfully completed postgraduate training in dermatology in the program. There have been no failures.

Dr. Metelitsa was awarded the 2017 Certificate of Excellence, Top 3 Dermatologists (Calgary) at ThreeBestRated.ca. Dr. Metelitsa was awarded the 2016 Calgary Doctors' Choice Award in Dermatology (City Winner), Doctors' Choice Awards. Dr. Mydlarski was awarded the Dr. Tom Enta Award for Clinical Excellence 2016.

CHALLENGES AND FUTURE DIRECTION

The Richmond Road Diagnostic and Treatment Centre makes available six clinical examination rooms, four surgical assessment rooms and two surgical rooms. This does not allow full-time faculty to satisfy their clinical requirements (based on their respective contracts) such that three have had to conduct clinics at other sites, a situation which affects the cohesiveness of the group and the quality of resident education. The Section of Dermatology at RRDC has available a phototherapy unit which cannot be used due to budgetary constraints. This makes it difficult to provide comprehensive management for patients attending the cutaneous lymphoma clinic, necessitating outside referrals for this important treatment modality for cutaneous lymphomas. There is a need to recruit young dermatologists to the academic Division of Dermatology to complement an aging group. Accordingly, Dr. Jori Hardin will join the academic division effective the fall of 2017, Dr. Hardin obtained her Royal College certification in Dermatology in the spring 2017 and aspires to an academic career involving medical education.

WORKFORCE PLANNING AND DIVISION RECRUITMENT

There is an urgent need for a full-time pediatric dermatologist in Calgary. The Section of Dermatology has struggled to fulfill this need since 2005. Dermatology residents must now complete mandatory pediatric dermatology training at distant sites (Edmonton and/or Toronto). This is a priority for dermatology in Calgary. There is little opportunity for the Section of Dermatology to recruit more full-time, academic AARP dermatologists due to funding, space (administrative and clinical) and support staff restrictions. These restrictions affect in particular the recruitment of another Mohs micrographic surgeon on site at RRDC, a need that is urgent since the entire dermatology surgery training program and clinical service depends on one single individual. The academic dermatology group requires a Dermatology Nurse Practitioner to complement physician activities at RRDC; physicians are presently involved in activities best served by a Nurse Practitioner. The present Division Chief plans to retire imminently and the Division will be initiating an active process for recruitment to this position.

DIVISION REPORT

The Division of Endocrinology presently consists of 21 ARP members and four fee-for-service members who maintain offices in Richmond Road Diagnostic and Treatment Centre (RRDTC), Health Sciences Centre Foothills Medical Centre (FMC), Peter Lougheed Centre (PLC), South Health Campus (SHC), and in the Associate Clinic Gulf Canada Square. The majority of the clinical work is conducted in the Endocrine Clinics at RRDTC, in proximity to the Diabetes Centre and the Osteoporosis Centre.

CLINICAL

The Division of Endocrinology continues to provide both in-patient and out-patient consultative and chronic care in all areas of the specialty. In the past year, the Endocrinology Central Access and Triage (CAT) received 7600 out-patient referrals for MD appointments (not including Diabetes in Pregnancy).

The Division provided clinical services in a wide diversity of settings. Clinics for Diabetes in Pregnancy at all four acute care sites, General Endocrinology, Osteoporosis and Metabolic Bone Disease, Thyroid Cancer (TBCC), Neuroendocrine Tumour (TBCC), Solid Organ Transplant.

The Division maintains a weekly “Community Access Physician” Program to assist with urgent referrals. Dr. Shelly Bhayana serves as the CAT director and auditor. Each week, an Endocrinologist is available during business hours to assist triage staff, to take all requests for phone advice and to see any urgent referral such as new-onset Type I Diabetes. This has been well received in the community and is felt to have streamlined the ability of community physicians to get immediate access to endocrinology services. The 25% of CAT referrals that are not booked into a clinic appointment are dealt with by the Community Access Physician who offers phone consultation or a letter to assist the referring physician in such cases. Urgent type 1 Diabetes patients as outpatient see an educator the same day or are seen by an Endocrinologist within 24 hours. Urgent referrals are seen in less than 2 weeks or less if needed.

Non-urgent Diabetes patients are seen within 6 weeks. Endocrine patients in about 4 weeks, Osteoporosis patients within 4-6 weeks. Daily inpatient service is provided by the on call Endocrinologist to all four hospitals in Calgary. New in this period is commitment of the Division to Specialist Link, an AHS initiative to connect community physicians with appropriate on call specialists. The community access physician is connected to Specialist Link for endocrinology. Endocrinology joined Specialist Link in October 2016, and has since received 219 calls.

The Division maintains and supervises the Regional Endocrinology Testing Unit (ETU) under the direction of Dr. Bernard Corenblum where specialized metabolic testing is performed. The majority of such tests are done for endocrinology patients but the Testing Unit also supports some work by Nephrology and General Medicine.

There has been a marked increase in demand for this unit arising from the marked increase in the number of clinical endocrinologists in the region. There is associated demand from more generalized physicians who have some access to some of the tests.

During the past fiscal year, the Unit performed over 387 specialized endocrine test protocols (which typically take one half to one full day) and provided 135 additional patients with specialized parenteral out-patient endocrine therapies and education not otherwise available in Day Medicine.

As of now, we have 3 nurses with FTE 2.0 which is an improvement over May 2016. With 3 nurses there is better support for holidays or future unexpected leaves. The unit is now back to near normal function. The backlog is being cleared and the waiting times are now more appropriate. Pulsatile GnRH ovulation induction is needed to be re-established, as it is a unique program (the only one available west of Ontario) and the alternate therapy is more expensive and with greater morbidity.

The Endocrinology Division maintains primary responsibility for the Diabetes Centre Calgary (DCC) under the direction of Dr. Julie McKeen. In the past year, the DCC received 4,477 referrals. The DCC staff (diabetes educators) conducted 18,975 patient care visits including initial assessments and follow-up appointments (face-to-face and telephone follow-ups).

The DCC continues to deliver a large number of community diabetes education programs and supportive training modules to help the various PCNs maximize up-to-date diabetes management in the community setting. The DCC Education Consultants engage with internal AHS (CDM, endocrinology) and external partners (PCNs, private pharmacies, private endocrine clinics) to assist with consults, improve patient care transitions and experiences, share program information and collaborate on projects. Diabetes Centre Calgary seeks to enhance diabetes care in the Calgary zone by providing community healthcare professionals access to resources (diabetes educator workshops, online learning modules/quizzes, emailed diabetes educator updates, educator rounds, educator tools/resources as well as online patient audio/video education).

Inpatient DCC educators provide diabetes services in the four Calgary zone acute care sites. In the past year, the DCC educators conducted 2,550 care visits in the inpatient setting.



Dr. R Paschke
Chief of Endocrinology

The inpatient diabetes liaison educators also facilitate the transition of patients from acute care back to the community.

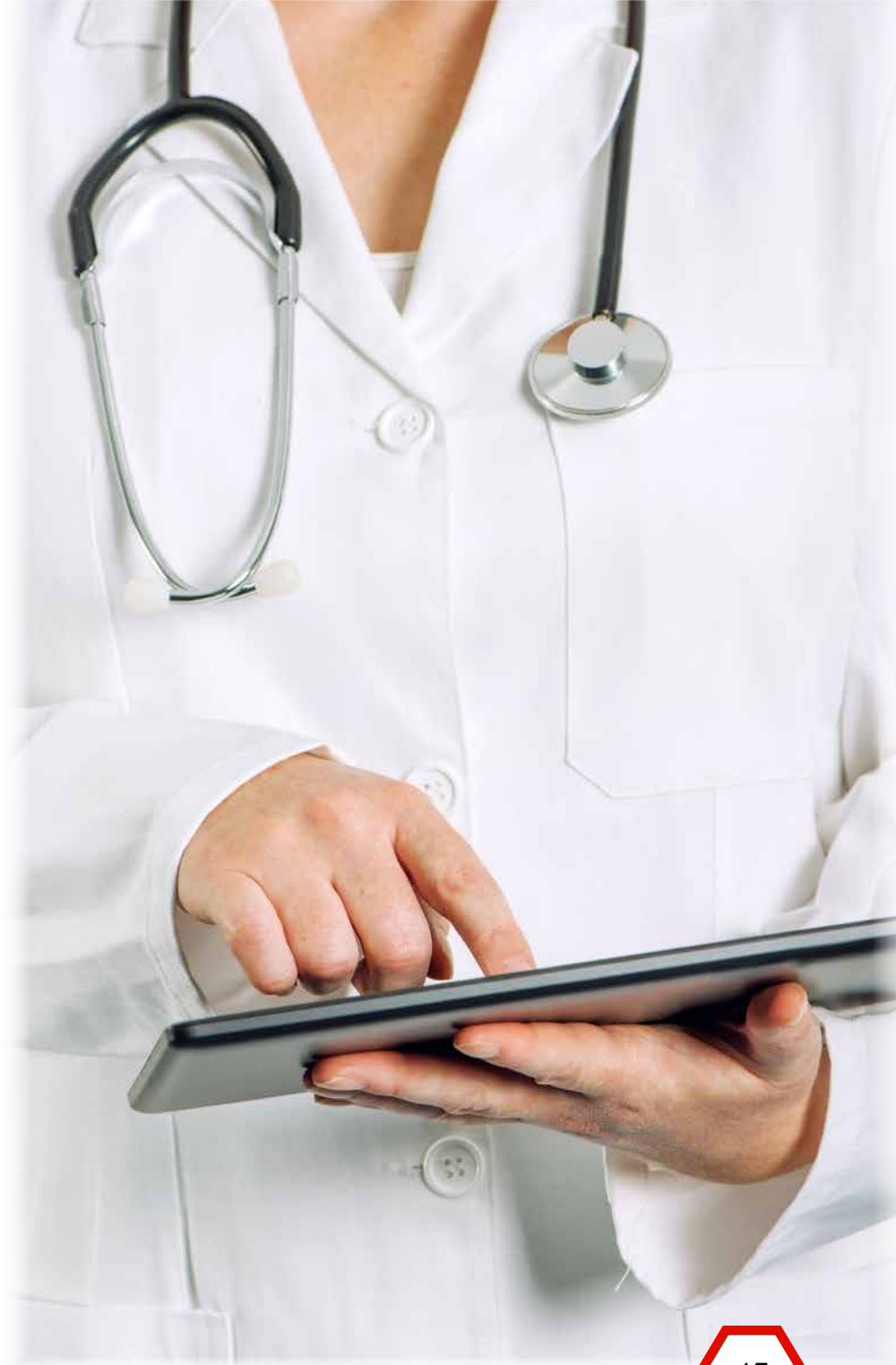
Endocrinologists on-call can access, via an urgent pager, DCC urgent assessment appointments for patients with a new diagnosis of Type 1 diabetes or decompensated Type 2 thus avoiding unnecessary hospitalizations.

Five diabetes educators participated in small group teaching sessions in the Cummings School of Medicine Endocrinology Course 4, highlighting the importance of the multi-disciplinary team based care for diabetes.

A position for Liaison between Endocrine Division & Diabetes Centre Calgary and Primary Care Networks within the Calgary Zone was created in 2017. Goals include increasing awareness of the services the division may provide to primary care doctors, allied healthcare providers and patients within the PCNs, facilitate the process of e-referral and e-advice, explore educational needs and opportunities for care providers within the PCN, explore opportunities for shared care for diabetes, explore innovative care programs, and as a longer term goal map resources available for patients with diabetes.

The Provincial Inpatient Diabetes Management Initiative is led by the Diabetes Obesity Nutrition Strategic Clinical Network (DON SCN), <http://www.albertahealthservices.ca/scns/Page10970.aspx>. Dr. Julie McKeen (Medical Lead of the overarching project) and Dr. Karmon Helmle (Physician Champion for the BBIT Project) are part of the small core team involved in the project, whose goal is to standardize and improve diabetes management at acute care sites throughout Alberta, based on best evidence. This is a multipronged initiative with multiple collaborator groups involved (Pharmacy, NFS, Lab POCT, etc.).

A provincial Glycemic Policy has been approved by AHS Clinical Operations Executive Committee (COEC), which will support all aspects of this initiative including the transition from the use of subcutaneous sliding scale insulin (SSI) alone to basal bolus insulin therapy.



A Guide to Evidenced-Based Implementation of Basal Bolus Insulin Therapy (BBIT) and Improved Glycemic Management has been created using a knowledge translation implementation strategy and an extensive toolkit has been created to support the process (www.bbit.ca). Guidelines for the safe use of insulin pumps in hospital have also been created (www.ipumpit.ca).

Implementation has occurred at a number of early adopter sites across the province and including the Calgary Hospitalist group (GO Project), and several sites (urban and rural) are in the pre-implementation phase.

Evaluation is a key component and early outcomes so far have been very positive. Within the Calgary Zone, the SSI order set has been removed from SCM (June 22, 2017) supporting this best practice and educational support via a Train-the-Trainer Day event and rounds were provided. Other project components are underway including development of provincial guidelines for the peri-operative management of patients with diabetes and transition of patients with diabetes to and from acute care.

The number of women that our Diabetes in Pregnancy clinics provides service to under the direction of Dr. Lois Donovan continues to increase. This follows a consistent increase in Diabetes in Pregnancy services provided by the Division for the last 10 years and represents a 14% increase in patients served in our Diabetes in Pregnancy Clinics in the last year after a 7% increase the previous year.

During pregnancy, close follow up of these individuals is required with multiple in person and phone contacts required. We are the only Diabetes in Pregnancy Service in the city that provides 24 hour in-patient and out-patient services to women with diabetes in pregnancy. Pregnancy outcomes in women with diabetes (especially Type 1 and 2) continue to be poorer than women without diabetes.



Dr. K Helmle
Endocrinology

Our DIP Clinics have been strong supporters of local, provincial, national, and international led research in contributing to advancing better care for these women and their children. Calgary was the top recruiter of pregnant women in a JDRF funded international clinical trial of women with Type 1 diabetes in pregnancy that has just been completed and submitted for publication. This has resulted in the Calgary site being recognized as a well-organized and coordinated site to conduct clinical trials in Diabetes in Pregnancy. The result is that preliminary discussions have begun regarding international collaboration of the use of advanced diabetes technologies in pregnancy with international co-investigators and funding agencies. Dr Yamamoto's training in Cambridge with Dr. Helen Murphy in 2017 and 2018 will further strengthen these relationships and opportunities for international collaboration.

Furthermore, Calgary Endocrinologists have had a strong presence in knowledge translation activities such as national guideline development for Diabetes in Pregnancy with Diabetes Canada (Dr. Donovan) and in the Canadian Diabetes in Pregnancy Study Group (a special interest group of Diabetes Canada) (Drs. Yamamoto and Donovan).

The Lipid Clinic was initiated during the fall of 2016, and was followed by applications to several interested parties including AHS. The project came under the auspices of Research Services within the University of Calgary and was accepted as a Precision Health Alberta Demonstration Project titled, "A Clinic to Identify Individuals and Families with Genetic Familial Hypercholesterolemic". The clinic will focus on Familial Hypercholesterolemia (FH), with plans to broaden to other areas of dyslipidemia. The rationale for the focus on FH is that this genetic disease affects roughly 5000 Calgarians but yet less than 1% are known to the medical community. Data collected will be added to the national database located in McGill University for FH care delivery.

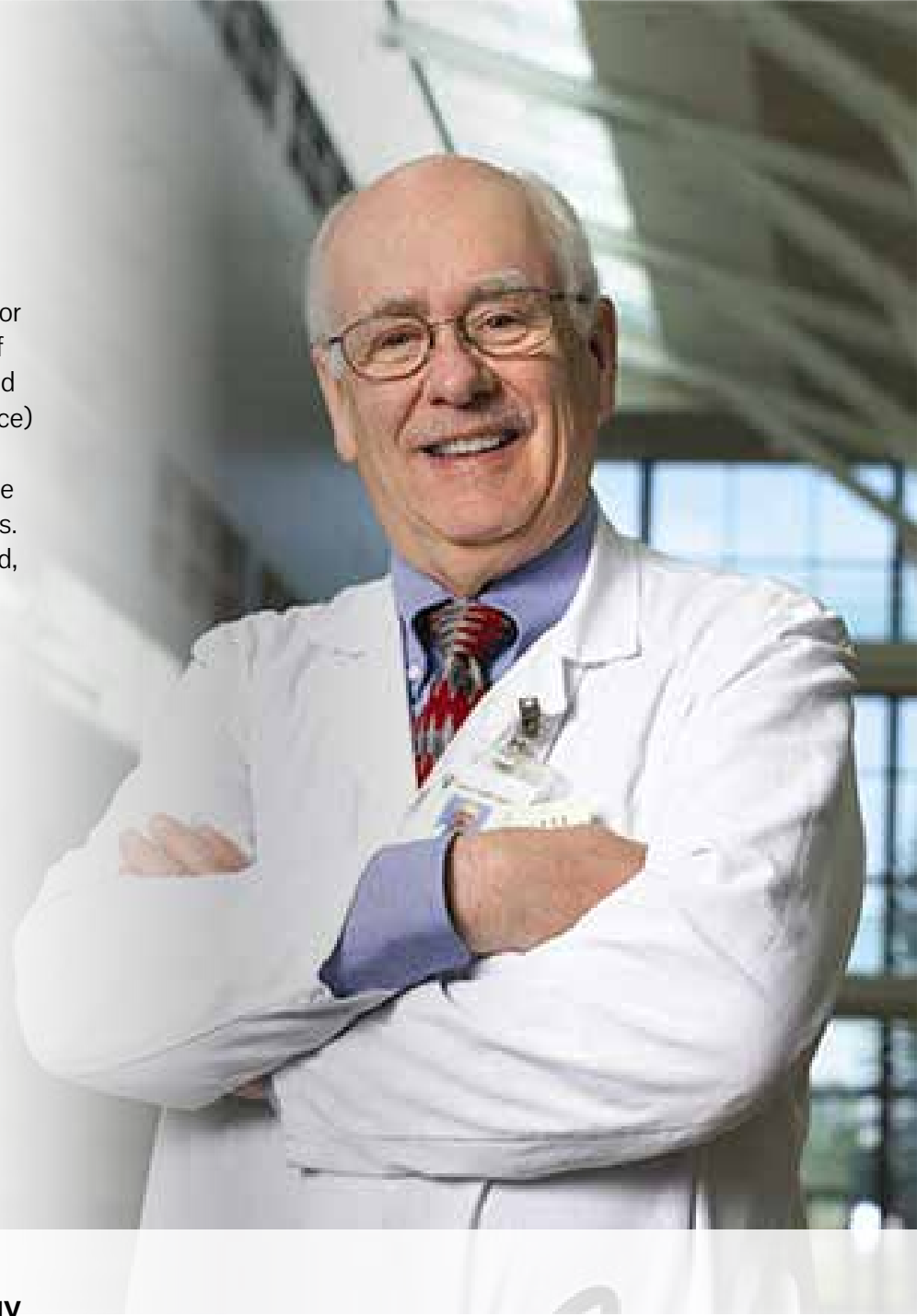


The Dr. David Hanley Osteoporosis Centre has produced a year of innovation and successful outcomes to a number of initiatives.

1. Clinical work – continues to run 5 to 6 half day osteoporosis/metabolic bone clinics per week. The time to third next appointment is less than 3 weeks.
2. Education – OP clinic staff have developed and delivered OP content-presentations to both patients and community health care providers. We run approximately 4 -5 half day education sessions per month for patients and 1-2 community outreach education sessions per month. Our staff have forged links with various PCNs for both clinical support and education and have now begun to provide support to the growing FLS (Fracture Liaison Service) that addresses osteoporosis in hospitalized patients.
3. Innovation – launched the clinic website (www.osteoporosiscalgary.com) in late 2016. This has been a tremendous value to patients and primary care providers. With over 2,000 hits, and over 6,000 internal links clicked, it is highly accessed, including expressions of interest from Eastern Canada, USA and even Asia.
4. Innovation – completed the “Self-Consult Program” pilot study at the end of March 2017. Near target enrollment was reached (72) and patient outcomes, feedback and provider feedback has been excellent. Two abstracts were submitted to a local Quality Improvement meeting and an international bone meeting (ASBMR).

Next steps – a larger research program could be supported but funding is needed. Roll out of the Self-Consult Program across province is possible but funding and buy-in from PCNs are needed.

The Neuroendocrine Tumor (NET) Clinic is held at the Tom Baker Cancer Clinic (TBCC) on the Foothills Hospital campus site.



Dr. Hanley
Endocrinology

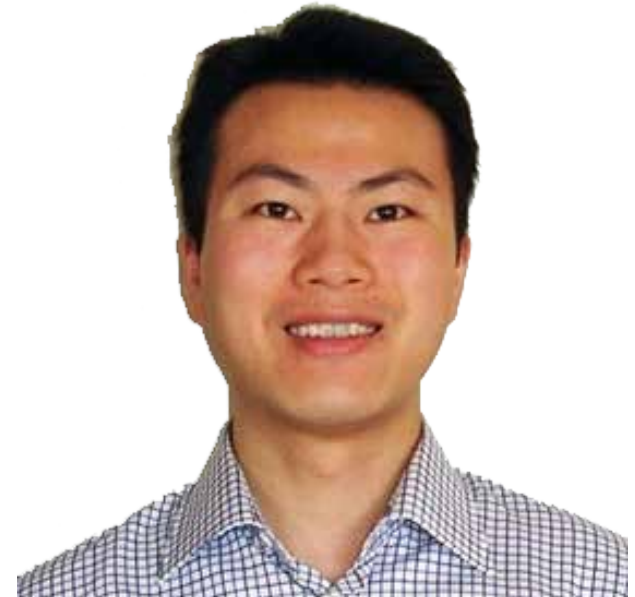
During 2016 to 2017, the specialists regularly attending scheduled clinics were Drs. Rorstad and Parkins (Endocrinology) and Dr. Pasioka (Surgery). Ms. France Singleton is our registered nurse dedicated to the clinic. The NET Clinic is held on the second Tuesday afternoon of a month with Drs. Rorstad and Parkins attending. On the fourth Tuesday afternoon of a month Dr. Pasioka also joins the NET Clinic team. We endeavor to schedule patients requiring an expert surgical assessment to the clinic attended by Dr. Pasioka. Preceding each of the two NET Clinics per month the multidisciplinary Neuroendocrine TumorBoard includes regular representation from Endocrinology, Surgery, Medical Oncology, Nursing, Diagnostic Imaging, and Nuclear Medicine. The NET Board meeting is teleconferenced with physicians, usually medical oncologists, in Regina, Saskatoon, and Lethbridge, depending on need. Patients for discussion are brought forth by members of the Tumor Board or the off-site oncologists. If an expert opinion on tumor pathology is required, Dr. M. Khalil, Dept. of Pathology, kindly attends on request.

The Calgary Thyroid Cancer Team, headed by Dr. Symonds, and the Provincial Endocrine Tumour Team, chaired by Dr. Ralf Paschke, implemented the following guideline based pathway changes for thyroid nodules and thyroid cancer in Calgary with the aim to reduce treatment variability and over-diagnosis and over-treatment of thyroid cancer:

1. Ultrasound malignancy risk assessment for thyroid nodules FNA malignancy risk assessment for Bethesda categories
2. Histology review for NIFTIP
3. Lobectomy strategy for patient selection and follow up
4. Thyroid cancer triage rounds since April 2016 for the initial recurrence risk assessment and stratified treatment recommendation and risk adapted standardised care for all new thyroid cancer patients (not only the 20% currently seen at TBCC)
5. Assessment of the impact of molecular FNA diagnostics with a new 29 gene Maldi-Tof panel
6. Created databases and obtained ethics for the prospective evaluation of thyroid nodule ultrasound findings, molecular FNA diagnostics and thyroid cancer diagnosis and treatment
7. Started a phase 2 study with Lenvatinib the first TKI for radioiodine resistant thyroid cancer available in Canada



**Dr. V Parkins and Dr. A Leung
Endocrinology**



RESEARCH

This was a successful year for researchers in the Division of Endocrinology and Metabolism, in a very competitive funding environment. The Division produced a total of 146 peer-reviewed papers, primarily in excellent journals and nine book chapters. Division members collectively delivered 18 local, 20 provincial, 15 national, and 11 international invited presentations. There were seven new peer-reviewed grants, and approximately 40 ongoing funded studies. External funding sources for these grants included the Canadian Institutes of Health Research, National Institutes of Health, Alberta Health, Alberta Innovates-Health Solutions, Public Health Agency of Canada, Juvenile Diabetes Foundation International, Agency for Health Research and Quality, Diabetes Canada, The Lawson Foundation, MSI Foundation, and industry.

A key research-related recruitment to the Division of Endocrinology and Metabolism was Dr. Alexander Leung. He is a clinical endocrinologist and population-health researcher. His primary research interest is in cardiometabolic disorders with a major focus in hypertension. He began his position as Assistant Professor in the Departments of Medicine and Community Health Sciences, effective November 1, 2016. He received the 2016 Hypertension Canada New Investigator Award and the 2017 Jacques de Champlain New Investigator Award. Dr. Markus Eszlinger heads the Division's wet lab. He was promoted to research Assistant Professor. This will allow him to continue to submit his own grant applications and to build his career in Calgary.

Several division members are playing leading roles in the development of the 2018 Diabetes Canada guidelines. Dr. Doreen Rabi is co-chair of the Independent Methods Review committee, which also includes Drs. Alexander Leung, Sonia Butalia and David Campbell. Dr. Ron Sigal chairs the writing committee of the Physical Activity chapter; he was also co-chair of the writing committee for the American Diabetes Association's 2016 Position Statement on Physical Activity/Exercise. Dr. Sonia Butalia is a co-author of the chapter on Pharmacological Therapy of Type 2 Diabetes, and Dr. Lois Donovan is a co-author for the Diabetes in Pregnancy chapter of the 2018 Diabetes Canada guidelines. Drs. Sigal and Butalia also serve on the Dissemination and Implementation Committee. Dr. Doreen Rabi is also the chair of the Hypertension Canada guidelines committee and serves on the Canadian Cardiovascular Harmonized Guideline Initiative Endeavour panel.

Dr. Paschke chaired the task force for the development of the European Thyroid Association Molecular FNA diagnostics guideline which was published in 2017. It is the first guideline for this subject. Dr. Paschke was invited again as a member of the task force for the revision of the AACE/AMA Thyroid nodule guideline.

Adrenal and hypertension research continues to be an area of new growth within the divisional research profile. In addition to their work on the adrenal hypertension section of the Hypertension Canada guidelines, Drs. Alex Leung and Greg Kline successfully published original work in such journals as Hypertension, CMAJ and Lancet Diabetes & Endocrinology. A multi-year prospective study on novel diagnostic methods in adrenal hypertension was brought to launch and the division began negotiations for formal collaboration with other international investigators in the field.

EDUCATION

Postgraduate medical education (PGME) in the division of endocrinology is tasked with two main purposes. The first is the maintenance of the Royal College of Physicians and Surgeons of Canada accredited specialty training program in adult endocrinology and metabolism. The second is the provision of endocrinology training to other PGME programs within the University of Calgary. The day-to-day administration of the program and related tasks are under the purview of the program administrator, Ms. Rebekah Bootsvelde. The program director is Dr. Vicky Parkins.

In 2016, the Division saw a number of superior achievements. The fellowship program graduated two academic endocrinologists. Dr. Alexander Leung and Dr. Jennifer Yamamoto were able to secure a coveted research fellowship with Dr. Helen Murphy in Oxford, UK for the next year. We had the pleasure of welcoming Drs. Xin Feng and Kirstie Lithgow into the program in July 2016. Continuing in their final year of the program are Drs. Sana Ghaznavi and Laura Hinz (who was on maternity leave Aug 2015-2016). Dr. Ghaznavi was accepted for a thyroid cancer post graduate fellowship at Memorial Sloan Kettering Hospital in New York. Dr. Feng received a national award for his case presentations at the CSEM/CDA meeting.

The majority of our commitment is to the core Internal Medicine (IM) program. We hosted 31 core IM residents for full 4- week block rotations. In addition, we were able to accommodate 3 elective residents from core IM programs across the country with an interest in our specialty training program. We also provided clinical experiences for a further 69 trainees from various programs (Obstetrics, PGY-4/5 GIM fellows, Medical Disorders of Pregnancy fellows). We provided a 2 week experience for the undergraduate medicine clerks in their clinical year. We were able to host 23 clinical clerks for their rotation consisting of a combination of clinics, inpatient rotation and allied health member experiences. All told, this equates to a total of 854 half day clinics (131-specialty trainees, 491-rotating trainees and 232- clinical clerks).

The inpatient service was also an important focus of the division's educational contribution with 812 half days (176- specialty trainees, 535-rotating trainees and 101- clinical clerks). Further didactic sessions are provided on a regular basis to the internal medicine clerks and the core IM training program on scheduled half days.

In collaboration with the Care of the Adult unit in Family Medicine Residency program, we have created an endocrine experience with 2-6 clinics each block for 2-3 FM trainees. For 2017, we are looking to create more spots for core IM trainees. We hope to accomplish this with an innovative dual call system with the specialty trainees. We will also be actively engaged with the core IM program in implanting pilot competency-based medical education initiatives. The Royal College has introduced CanMeds 2015 competency-by-design program that will go live with the core IM program in July 2018.

ADMINISTRATION & LEADERSHIP

Dr. Ralf Paschke
Division Head
Chair of the Provincial Endocrine Tumour Team

Dr. Peter Grundy
Chair of the ARP Management Committee for the Department of Medicine

Dr. Julie McKeen
Medical Director of the Diabetes, Hypertension and Cholesterol Centre

Dr. Lois Donovan
Medical Director of the Diabetes in Pregnancy Program

Dr. Greg Kline
Medical Director of the Calgary Osteoporosis and Metabolic Bone Program

Dr. Chris Symonds
Chair of the Calgary Endocrine Tumour Team

Dr Otto Rorstad
Representative for endocrinology at the Neuroendocrine Tumour Clinic

Dr. Vicky Parkins
Program Director for PGME, in the Division of Endocrinology

Dr. Shelly Bhayana
Director and Auditor of the Endocrinology Central Access and Triage

Multiple members sit on national and international committees in metabolic bone disease, diabetes care, hypertension, thyroid cancer and thyroid nodules and molecular diagnostics of thyroid nodules and obesity.

INTRODUCTION

The Calgary Section/Division of General Internal Medicine (Calgary GIM) includes 85 physician members, 12 clinical assistants, along with an administrative staff that are active at the four acute adult hospitals, AHS clinics, and several community practices throughout the Calgary Zone and surrounding communities.

FTE BREAKDOWN

CARE PILLAR	Section FTE (n=84)	SECTION %	AARP FTE	AARP % (n=37)
Clinical	51	66	17	50
Admin/Leadership	7	9	4	13
Research	9	12	7	21
Education	10	13	6	16
Totals	78	100	35	100
Mean FTE/Physician	78/85 = 0.92		35/38 = 0.92	
Gender				
Female	36 (43%)		20 (49%)	
Male	48 (57%)		21 (51%)	



Dr. J Schaeffer
Chief of General Internal Medicine

HIGHLIGHTS

Completion of a strategic plan entitled GIM 2025 (see: Future Directions); Quality and Safety Initiatives (eg. Lose the Tube 50% reduction of urinary catheterization); Obstetrical Internal Medicine Group Expanded to 6 Faculty Members; Point of Care Ultrasonography Scholarship and Education; Maturation of GIM Subspecialty Residency Program; Maturation of Chronic Complex Disease Management Clinic at Peter Lougheed Centre; Provision of Care to Socially Disadvantaged Patients at East Calgary Health Centre/Mosaic PCN, as well as the Southern Alberta HIV Clinic; Maureen Sorensen (Section Administrator) retired after 18 years of service

CLINICAL

Calgary GIM provides Most Responsible Physician (attending) care to patients at the adult hospitals, including Foothills Medical Centre (3 medical teaching units), Peter Lougheed Centre (3 medical teaching units), Rockyview General Hospital (2 medical teaching units, 1 general medical unit), and South Health Campus (1 medical teaching unit, 2 general medical units).

Medical teaching units: attending staff, residents, clinical clerks for 18-22 patients. General medical units: attending staff, clinical assistants, nurse practitioners for 15-18 patients.

Calgary GIM provides inpatient consultative care at the adult hospitals, including Foothills Medical Centre (2 GIM consultation services/pre-admission clinic and 1 obstetric internal medicine consultation service), Peter Lougheed Centre (2 GIM consultation services/pre-admission clinic), Rockyview General Hospital (2 GIM consultation services/pre-admission clinic), and South Health Campus (1 GIM consultation services/pre-admission clinic).

AHS Outpatients at RRDTC includes Urgent Assessment Clinic, General Internal Medicine Clinic, and Resident Clinics.

Internists – 2,455 visits (2,095 unique patients)

Core Residents – 538 visits (484 unique patients)

Subspecialty Residents – 363 visits (326 unique patients)

Totals – 3,356 visits (2,905 unique patients)

Outpatients also consulted upon at:

Pre-admission clinics (estimated 6/day x 250 days x 4 sites = 6,000 per year)

Obstetric Internal Medicine Clinics (275 clinics per year)

Atrial Fibrillation (90 clinics/year)

Additional clinical involvement includes:

Medical Assistance in Dying (1 member)

Palliative Care Consultation Service (2 members)

ADMINISTRATION/LEADERSHIP (GIM MEMBERS)

SECTION/DIVISION CHIEF

Dr. Jeffrey P Schaefer (commenced Jan 18, 2016)

DEPARTMENT OF MEDICINE CLINICAL (AHS) DEPUTY CHAIR

Dr. Jeffrey P Schaefer

DEPARTMENT OF MEDICINE VICE CHAIRS

Dr. Jane Lemaire – Physician Wellness

Dr. Kelly Zarnke – Physician Resource Planning

Dr. Aleem Bharwani – Strategy and Innovation

DEPARTMENT OF MEDICINE SITE CHIEFS

Dr. Kelly Zarnke – Foothills Medical Centre

Dr. Ian Scott – Peter Lougheed Centre

Dr. Anna Purdy – Rockyview General Hospital

Dr. Leanne Reimche – South Health Campus

DIVISION OF GENERAL INTERNAL MEDICINE SITE/SERVICE CHIEFS

Dr. Fiona Dunne – Foothills Medical Centre

Dr. Troy Pederson – Peter Lougheed Centre

Dr. Anna Purdy – Rockyview General Hospital

Dr. Ralph Hawkins – South Health Campus

Dr. Steve Duncan – Richmond Road Diagnostic/Treatment Centre

Dr. Lee-Ann Hawkins – Obstetric Internal Medicine Service

MAJOR RESEARCH LEADERSHIP POSITIONS

Dr. William Ghali – Director, O'Brien Institute for Public Health

Dr. William Ghali – Buchanan Chair, General Internal Medicine

MAJOR POLICY LEADERSHIP POSITIONS

Dr. Aleem Bharwani – Director, Public Policy and
Strategic Partnerships, CSM

Dr. Aleem Bharwani – Scientific Director, Leadership
Development Office, CSM

MAJOR EDUCATION LEADERSHIP POSITIONS

Dr. Marcy Mintz – Internal Medicine Residency Program Director

Dr. Ghazwan Altabbaa – Internal Medicine Residency Program Associate
Director (RGH)

Dr. Paul Leblanc – Internal Medicine Residency Program
Associate Director (PLC)

Dr. Paul Davis – Internal Medicine Residency Program
Associate Director (SHC)

Dr. Irene Ma – Internal Medicine Residency Program
Assistant Director

Dr. David Sam – Medical Teaching Unit Director

Dr. Ghazwan Altabbaa – Medical Teaching Unit Director,
Assistant Program Director

Dr. Ben Wilson – Medical Teaching Unit Director

Dr. Paul Davis – Medical Teaching Unit Director

Dr. Mike Fisher – General Internal Medicine Residency
Program Director

Dr. Rahim Kachra – Clerkship Director, Cumming School
of Medicine

Dr. Rahim Kachra – Director of Teaching Innovation,
Cumming School of Medicine

Dr. Maria Bacchus – Chair, Examination Committee, RCPSC

MAJOR CLINICAL OPERATIONS LEADERSHIP POSITIONS

Dr. Evin Minty – Calgary Zone Informatics Lead

Dr. Evan Minty – AHS Clinical Knowledge
Architecture & Analytics Lead

Dr. Evan Minty – Clinical Information Technology Repository Lead

Dr. Peter Sargious – Senior Medical Director, Obesity, Diabetes, Nutrition
Provincial Strategic Clinical Network

EDUCATION

CORE INTERNAL MEDICINE (PGY 1-3, N=100)
PGY 1: 6 blocks of GIM Medical Teaching Unit
(Jr. Resident)

PGY 2-3: 5 blocks of GIM Teaching Unit (Sr.
Resident)

Simulation Based Education
Point of Care Ultrasound Education

GIM SUBSPECIALTY PROGRAM
7 PGY-4 GIM Subspecialty Residents during
period
7 PGY-5 GIM Subspecialty Residents during
period
2nd Annual GIM – Resident Research Day
(May 31)

UNDERGRADUATE MEDICAL EDUCATION
(CLERKSHIP)
Clinical Clerks: 1 block of medical teaching
unit for each and electives/selectives

CONTINUING PROFESSIONAL DEVELOPMENT
HIGHLIGHTS
Co-leadership of Annual Rockymountain ACP
Internal Medicine Conference
(Banff, AB)
Point of Care Ultrasound Courses
for Faculty
Monthly Calgary GIM Journal Club
(established 1994)

AWARDS

ROYAL SOCIETY OF CANADA NEW FELLOWS 2017
Dr. William Ghali – Academy of Science, Life
Science Division

DEPARTMENT OF MEDICINE ANNUAL AWARDS
Dr. Elizabeth MacKay – Dr. Howard
McEwen Award for Clinical Excellence (PLC)
Dr. Ralph Hawkins – South Health
Campus Clinical Excellence Award
Dr. Ghazwan Altabbaa – AARP Merit Award
Dr. Ghazwan Altabbaa – Clerkship (Teaching
Award)

Dr. Ben Wilson – Clerkship
(Teaching Award)
Dr. Maria Bacchus – AARP Merit Award
Dr. Gabe Fabreau – Team Builder of the Year
Dr. Alejandra Boscan – Quality
Improvement & Patient Safety Award
Dr. Jeffrey Schaefer – Work Life Balance
Award

Dr. Julia Tien –Rookie of the Year
(Teaching Award Post-Graduate)
Dr. Kara Nerenberg – Research
Preceptor (Teaching Award
Post-Graduate)
Dr. Rahim Kachra – Silver Finger
(Teaching Award Post-Graduate)
Dr. Paul Leblanc –Golden Bull (Teaching
Award Post-Graduate)

DEPARTMENT OF FAMILY MEDICINE AWARDS
Dr. Gabe Fabreau – Specialist Family
Physician of the Year

SCHOLARSHIP

183 Peer Reviewed Publications
32 Abstracts
6 Conference Proceedings
4 Reviewed Journal Article
4 Posters
3 Letters
2 Book Chapters
1 Editorial

CHALLENGES, OPPORTUNITIES, AND FUTURE DIRECTION

Calgary GIM undertook a strategic planning exercise led by Dr. Aleem Bharwani during this period. GIM 2025 builds upon our self-identified strengths as articulated by a division wide survey, followed by 60 one on one interviews of divisions members and selected external stakeholders at AHS, the University of Calgary, the Alberta Government (Ministry of Health), RCPSC, and CPSA. This work moves us from the abstract to the pragmatic, identifying our recruitment and training priorities, the areas to which resources will be allocated, and timelines of growth and leadership. As part of an 8-year pipeline strategy, 7 established areas, 6 growth areas, and 5 thematic priorities have been identified.

General Internal Medicine continues to take pride in its collegial and collaborative spirit.

OVERVIEW

The section of Geriatric Medicine has 14 geriatrician members as of March 31, 2017. Dr. Holroyd-Leduc is the section Head; three of our members have GFT appointments, while the others have major clinical appointments within the University of Calgary. Although our section is one of the smallest within the Department of Medicine, we contribute substantially to the mandate of the Department of Medicine and the Cumming School of Medicine through our contributions to education, administration, research, and clinical service.

CLINICAL

The clinical activities of the Section of Geriatric Medicine are operationalized with AHS Calgary zone Specialized Geriatric Services (SGS), who report to the AHS Calgary zone Seniors, Palliative, and Continuing Care program. Statistics for this program are kept in a calendar year, not a fiscal year, so the data presented is for 2016.

AMBULATORY SERVICES SENIORS HEALTH CLINICS

There are three clinical sites for Seniors Health Clinics. All clinics have access to a multidisciplinary team and provide comprehensive assessment and consultation. Rockyview Seniors Health Clinic (SHC), the Bridgeland SHC, and the South Health SHC ran 1,146 half-day clinics with a total of 2,593 visits (1,266 new patient visits; 1,327 follow up visits) in 2016. This includes the Geriatric Residents Longitudinal clinic.

FALLS PREVENTION CLINIC

This is located at the Bridgeland site. This provides in-home assessment and gait & balance retraining of frail older adults with falls. Two physicians (Hoga; Cohen) provide support to this team, which saw 178 patients.

COMPREHENSIVE GERIATRIC ASSESSMENT SUPPORT FOR PRIMARY CARE
Geriatricians provide consultative support to the West Central PCN Geriatrics team (Fruetel) and the Alex Seniors clinic (Pearce).

RURAL OUTREACH

Geriatric medicine continues their teleconsultation program that supports rural communities. The number of teleconsultations has decreased over the past several years. Therefore, we are looking at ways to increase linkages with rural communities, including starting in-person rural clinics at four rural locations in Fall 2017. Dr. Heidi Schmaltz is the medical director of our Rural Outreach program, and has spent a significant amount of time preparing for the launch.



Dr. J Holroyd-Leduc
Chief of Geriatric Medicine

INPATIENT SERVICES

ACUTE GERIATRIC UNIT (AGU)

Over the past two years, our members have taken a more active leadership role on the AGU. This includes our members taking on roles as most responsible provider and also as consultant. The unit was rebranded in 2016/17, where the name and admission criteria were changed to better reflect the changing population being admitted to the unit. The focus of the unit is on optimizing the medical issues and the physical and cognitive function of frail older adults living within the Calgary Zone, with a particular focus on those who have experienced an acute decline. Dr. Pearce is the current Medical Director, and continues to lead changes to processes in an effort to improve the quality of care provided by the program. Over the past year, we have worked to more clearly define the physician role with the AGU, which has resulted in recent changes to staffing models. Dr. Persuad also developed an educational curriculum for the trainees and staff on the AGU, which was implemented in the summer of 2017.

HOSPITAL CONSULTATION

The Section offers in-patient consultation services at the four adult hospitals in Calgary, as well as city-wide on-call services. For this reporting period, between the four sites we provided approximately 140 consults per month. We have also actively supported the implementation of elder friendly care site working groups and zone advisory committee. Additionally, the consultation teams have worked with our surgical colleagues to optimize the care provided to frail older patients presenting with fall-related injuries, helping to ensure care is evidence-formed and patient-centered. This includes optimizing our referral criteria for hip fracture patients, and developing a formal consultation process with the FMC trauma service (launched July 2017).

OTHER CLINICAL ACTIVITIES

GLENMORE DAY HOSPITAL

In 2016/17, we provided case conferencing and assessment of complex patients upon request. We also began discussions with the CareWest administrative team that has led to updating the Day Hospital admission criteria and changing the most responsible physician to a geriatrician (starting September 2017). In 2017, we will continue to work on optimizing clinical and administrative processes within the Day Hospital. Dr. Michelle Persaud has recently taken over the role of Medical Director from Dr. Stacey Hall.

SENIORS HEALTH OUTREACH PROGRAM (SHOP)

In 2016, we launched SHOP in order to provide comprehensive geriatric consultations within Supportive Living and Long-term Care Facilities (Schmaltz).

SUPPORT OF OTHER PROGRAMS

Within and outside of the SGS program, including the Hospital Elder Life Program (Holroyd-Leduc), Wound Care consultations (Kwan), home visits, and consultations to RCTP. The Hospital Elder Life Program (HELP) was an AHS Great Teams, Great Care contest winner in 2017.



AWARDS AND HONOURS

Seven section members (Burbank, Dempsey, Fruetel, Hogan, Kwan, Pearce, Schmaltz) received Associate Dean's Letters for Teaching Excellence in the UME curriculum, several receiving multiple letters for a number of different courses.

Other awards and honours received by our members included:

DR. BURBACK

University of Calgary Gold Star Award for Course V
conferred by the class of 2018

DR. FRUETEL

Class of 2018 Honour Roll

DR. HOGAN

Co-recipient (Falls Risk Management Collaborative), AHS 2017 President's
Excellence Award for Outstanding Achievement in Quality Improvement

DR. HOLYROYD-LEDUC

Telemachus Distinguished Mentorship Award, Clinician
Investigator Program, University of Calgary
University of Calgary PEAK Scholar Nominee for Excellence in
Entrepreneurship, Innovation, and Knowledge Engagement

DR. KWAN

Class of 2018 Honour Roll

DR. PEARCE

Terry Groves Award for Clinical Excellence
University of Calgary PGME Award for Outstanding Contribution
to Residency Education
University of Calgary Gold Star Award for Clinical Skills Teaching
– conferred by the class of 2018
University of Calgary Associate Dean's Award for Excellence
for Services in an Integrative Course
Canadian Association for Medical Education Certificate of Merit

DR. SILVIUS

CMA Dr. William Marsden Award in Medical Ethics
(below)





ADMINISTRATION

Members of the Section are active in administration and provide clinical and academic leadership roles locally, provincially and nationally.

Highlighted leadership roles include the following:

DR. FRUETEL

Vice-Chair of Education – Department of Medicine
President – Canadian Geriatrics Society

DR. HOGAN

Chair in Geriatric Medicine – Brenda Strafford Foundation
Academic Leader – Brenda Stafford Foundation on Aging
Board Member – Gordie Howe C.A.R.E.S
Chair – Research & Innovation Working Group,
Provincial Dementia Strategy, Alberta Health

DR. HOLROYD-LEDUC

Medical Director – Specialized Geriatrics, AHS Calgary
Board Member – Calgary West Central PCN

DR. SCHMALTZ

Acting Vice Chair/Past Chair – Canadian Geriatric
Society CPD Committee
Chair – University of Calgary Annual Geriatric Update,
Clinical Pearls Conference

DR. SILVIUS

Medical Director – AHS Seniors Health
Medical Director – AHD Seniors Health Strategic Clinical Network
Medical Director – AHS Pharmacy Services
Lead – AHS MAID Committee
Chair – Canadian Drug Expert Committee, Canadian Agency for Drugs
and Therapeutics in Health (CADTH)
Co-Director – Canadian Deprescribing Network (CaDeN)

RESEARCH

Our section focuses primarily in the areas of health services research, knowledge translation and applied clinical research. Three of our members are clinician investigators (Goodarzi, Hogan, Holroyd-Leduc). Several others support research activities, including as knowledge users on grants/projects, graduate thesis committee members, resident research project supervisors and as clinical assessors/monitors for clinical trials. Journal publications (n=46) in 2016/17 authored by our members are listed at the end of this report.

Our members contribute to a number of local, national, and international research collaborations as principal applicants, principal investigators, co-investigators, site leads, and knowledge users, totaling well over \$100 million in peer-reviewed grant funding. The active grants (n=13) in 2016/17 where section members led the project as principal applicant, principal investigator or principal knowledge user are at the end of this report. Highlights include:

The section of Geriatrics and Calgary-zone Seniors Health continues to lead KT/QI initiatives aimed at improving the care provided to older adults within acute care. This includes:

- Partnering on Elder-Friendly Care (EFC) initiative within the four Calgary adult hospitals. This year we focused on promoting early and regular mobilization of vulnerable elders in hospital, using funds from a peer-reviewed Calgary-zone QI grant. Dr. Holroyd-Leduc led this initiative and other related initiatives, and the AHS Seniors Health SCN is now formally spreading EFC practices across the province, informed by our zone experiences.
- Several members (Bruback, Dempsey, Feuetel, Holroyd-Leduc, Kwok) participate on or chair the Elder Friendly Care Calgary-zone Advisory Committee or site working groups, which support these initiatives and other evidence-informed practice changes aimed at improving care for older frail adults.

Dr. Goodarzi is a new investigator within the Section who is undertaking a program of research in the area of mood disorders in older persons with neurodegenerative disorders, and has had early success in obtaining grant funding and publishing in key journals.

Drs. Goodarzi and Holroyd-Leduc are Investigators on the Translating Research in Elder Care (TREC) Team.

Dr. Holroyd-Leduc is the chair of the Knowledge Translation committee and part of the leadership team that was successful in obtaining a second term of NCE funding for the Canadian Frailty Network.

Dr. Holroyd-Leduc is leading a collaboration with the Alzheimer's Society focused on developing and evaluating a smartphone/tablet application to support caregivers of persons with dementia, which combines cognitive behavioural therapy principals with practical advice and is funded by a CIHR KTA grant.

Dr. Hogan is the Calgary site Principal Investigator for the Canadian Longitudinal Study on Aging (CLSA), which is CIHR funded.

Dr. Hogan has a leadership position in the Canadian Consortium on Neurodegeneration in Aging (CCNA) which is funded by CIHR.

Dr. Kwan is engaged in medical education research.

Dr. Cohen continues to support research in the area of Industry-funded dementia trials.

Dr. Silvius is a Knowledge User on funded research initiatives, including being involved with TREC.

EDUCATION

The Section is active across all levels of medical education, and has recorded over 2,500 hours of classroom teaching alone this reporting period. Many of our members have been recognized for their teaching excellence through the receipt of teaching awards and acknowledgements. We also hold important educational leadership roles – Dr. Fruetel is Vice-Chair of Education within the Department of Medicine, Dr. Hall is Associate Program Director for the Internal Medicine Residency program and Dr. Schmaltz is Acting Vice Chair of CME for the Canadian Geriatrics Society.

UNDERGRADUATE (UME)

All Section members are expected to teach in Course V (Aging and Neurosciences) but many members teach in other courses such as Medical Skills, Courses III, IV, VI, VIII, the Integrative course and Course 440.

- 4 members are Master Teachers (Fruetel, Hall, Kwan, Pearce) with major commitments to UME teaching
- 2 members chaired UME education committees: i) Dr. Burback co-chaired of Course V (Neurology, Aging, and Special Senses); ii) Dr. Pearce chaired of the Integrative Course

GRADUATE

We have two members (Hogan, Holroyd-Leduc) with adjunct appointments with Community Health Science (CHS), who supervise graduate students and teach in graduate courses. We also had a new clinician investigator join our section (Goodarzi), who is co-supervising graduate students. Our members supervised/co-supervised 5 graduate students in 2016/17, and were on the thesis committees of several other students.

CME

Dr. Schmaltz is the Sectional CME lead and has been integral in the planning of Visiting Professors and the annual U of C Geriatric Update for rural/urban primary care. Dr. Schmaltz is the Acting Vice Chair/Past Chair of the Canadian Geriatric Society CPD committee. Drs. Schmaltz (delirium) and Holroyd-Leduc (dementia) were Clinical Knowledge Topic Leads for Clinical Knowledge and Content Management. Members gave presentations or workshops locally, provincially, and nationally, as well.

POSTGRADUATE

All members participate in teaching and supervision of residents on rotation in Geriatric Medicine from Internal Medicine, Family Medicine, PMR, Psychiatry, Pathology, and Neurology.

- Dr. Hall is Associate Program Director of the Internal Medicine Residency program
- Our members (Pearce, Burback) sit on various PGME Residency Program Committees
- Section members participate in Noon Teaching Rounds and Academic half days of various PGME programs
- Dr. Fruetel is a member of the RCPSC Internal Medicine Examination Board and Dr. Holroyd-Leduc is a member of the RCPSC Geriatric Medicine Examination Board
- Members participated as mentors for the Internal Medicine Resident Mentorship program

SUBSPECIALTY PROGRAM

Our subspecialty training program is among the strongest in Canada and RCPSC accredited. Dr. Pearce is the Program Director. During this reporting period, we had 2 PGY4 and 3 PGY5 trainees in our subspecialty program. We also provided teaching and supervision to Care of Elderly PGY3 trainees.

- Dr. Goodarzi successfully defended her Masters' thesis and completed the Clinician Investigator Program (CIP) in June 2016. Dr. McMillian started the CIP program in July 2016.
- The subspecialty program hosted a very successful Resident Research day in January 2017 and was able to sponsor Dr. Camilla Wong from the University of Toronto as visiting professor and judge. All our residents had a project to present on this day.

CHALLENGES AND FUTURE DIRECTIONS

MAIN CHALLENGE: OPERATIONAL BUDGET

We have been very appreciative of the Department of Medicine and AHS support in recruiting geriatricians. Over the past few years, we have also been successful in training a number of geriatricians through our residency training program. However, SGS has not seen any increase in operational dollars to support additional recruitment. While there is clinical need for more geriatricians, SGS will struggle to support more physicians without additional operation support of a Clinical ARP.

FUTURE DIRECTIONS

Additional recruitment needs to be accompanied by increased operational dollars or a Clinical ARP; further AARP recruitment will focus on increasing academic (research) productivity. Our section aims to become leaders in applied geriatric medicine research. As such, our key future recruits to the DOM AARP will have a focus on research. Given the rapidly aging rural Alberta population, we will be increasing our rural outreach to include in-person clinics and visits to long-term care/supportive living facilities across the zone. We are continuing to implement evidence-informed re-design of the AGU unit, the Carewest Day Hospital, and the Seniors Health Outpatient programs, so that we can optimally serve the evolving needs of the aging population within the Calgary zone.

We are exploring the initiation of a palliative and therapeutic harmonization clinic, modelled after a successful program at Dalhousie University (<http://pathclinic.ca>). This program would focus on helping frail patients and their families make informed care decisions around a blend of therapeutic and palliative measures to optimize quality of life. The initiation of this program will depend on the availability of adequate resources.



Dr. B Walker
Dr. D Burback (below)
Geriatrics



INTRODUCTION AND BACKGROUND

In 1975, Dr. Douglas Kinsella established an academic rheumatic diseases unit at the Calgary General Hospital. The Section of Rheumatology flourished under his leadership and today we are the oldest section within the Department of Medicine.

Arthritis and rheumatic diseases affect over 5 million Canadians and their families. These diseases have an impact on both an individual's quality of life and on our health care system. The next thirty years will see the number of patients with arthritis double as a result of an aging population, population growth, longevity, and obesity.

To achieve our vision and mission, the section's focus areas of education, research, and knowledge translation support the overall goal of providing timely access and exemplary care to our patients through collaborations with key stakeholders and the development of innovative models of care. We are also in year 3 of the development of the Rheum4U program. At its core is the development of a longitudinal database which will integrate research quality and improvement in order to facilitate continuous improvement in patient care.

VISION

Providing patients with the opportunity for optimal outcomes by getting them to the RIGHT provider at the RIGHT time for the RIGHT management.

MISSION

Improving the lives of people with arthritis and rheumatic diseases through education, research innovation, and timely care.



Dr. D Mosher
Chief of Rheumatology

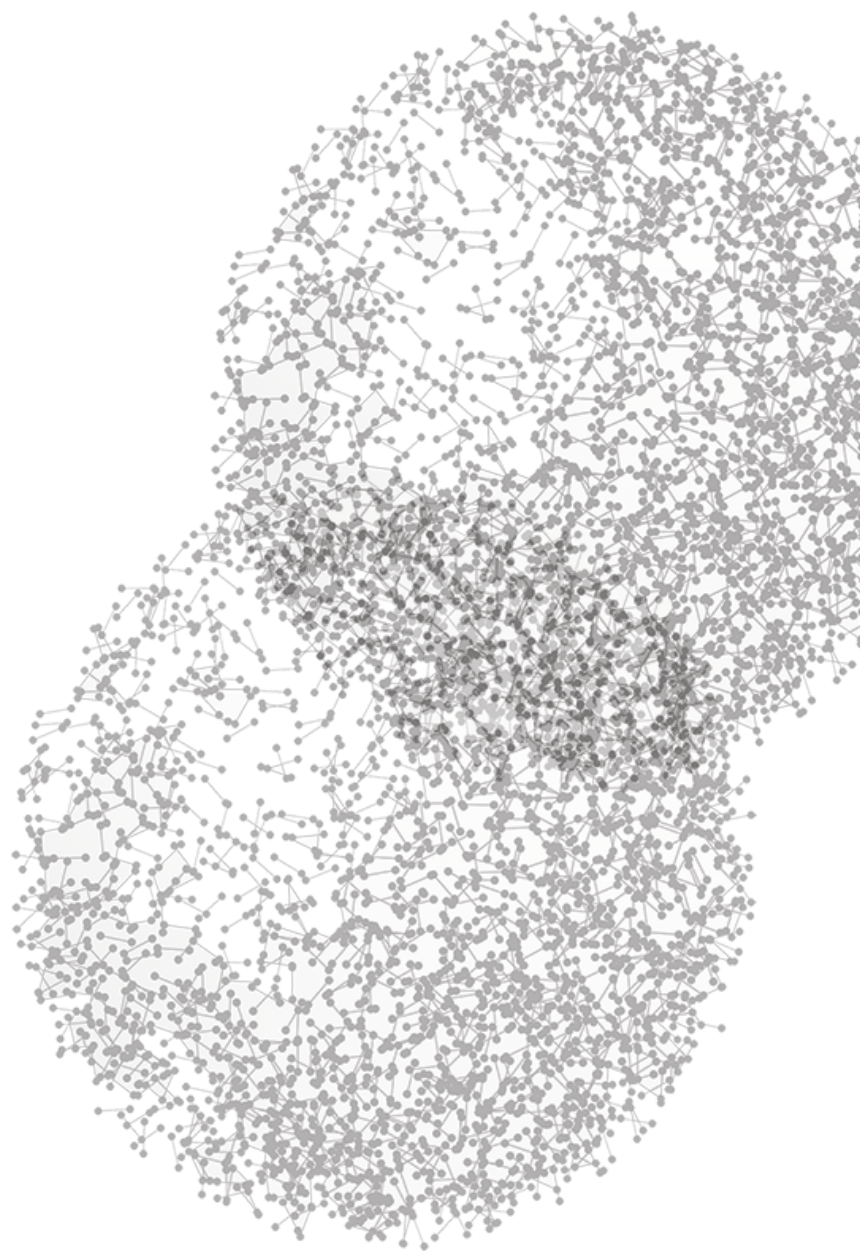
MEMBERSHIP AND FTE BREAKDOWN

The section of Rheumatology's membership consists of 17 full-time ARP members and one part-time ARP member. Of our ARP members, 8 hold GFT appointments and 10 hold major clinical appointments. In addition, we have 4 full-time FFS members and 3 part-time FFS members. We are also fortunate to have in our section Dr. Deborah Marshall in a dual appointment with Community Health Sciences; Dr. Marshall holds the JE Arthur Child Chair in Rheumatologic Diseases and is well known for her work with system models and health population research.

	ARP MEMBERS	FFS MEMBERS (FULL-TIME ONLY)
Clinical	8.74 FTE	3.30 FTE
Administrative	1.79 FTE	0.20 FTE
Research	5.10 FTE	0.10 FTE
Education	1.77 FTE	0.40 FTE
TOTAL	17.40 FTE	4.00 FTE



Dr. S LeClerc and Dr. A Fifimah
Rheumatology



CLINICAL REPORT HIGHLIGHTS

The Section of Rheumatology provides 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. Our catchment area includes the southern half of Alberta to Red Deer, a population of over 1.6 million, and extends into southeastern British Columbia and southwestern Saskatchewan. The section currently delivers services through a multisite model. Our main sites include the Rheumatology Outpatient Clinics at the Richmond Road Diagnostic and Treatment Centre (RRDTC) and the South Health Campus (SHC). The section also provides consultation services to all four hospitals in Calgary on a 24 hour basis along with urgent telephone consultations from family physicians.

The Rheumatology Clinics at the RRDTC acts as the hub of our section's clinical activities where 13 of our members provide over 50 half day clinics per week with the support of our interdisciplinary Allied Health team. In 2016, the total number of patient visits conducted by our team of physicians, nurses, and Allied Health staff was 18,279, with 16,709 being physician appointments.

The Rheumatology Clinics at South Health Campus are run by two full time rheumatologists and complemented by two full-time rheumatology nurses. Together, they provide over ten half day clinics per week. In 2016, the team at South Health Campus conducted 4,423 patient visits.

The Section of Rheumatology has 5 full-time community based rheumatology practices where large volumes of rheumatology patients are seen, offering over 30 half day clinics per week.

We were fortunate this year to recruit three new members to the Section of Rheumatology. Drs. Erin Carter, Uzma Erum and Cristina Moran-Toro all successfully passed their Royal College Rheumatology exams in the fall of 2016. Being locally trained rheumatologists, the Section was pleased that they decided to open their practices in Calgary.

Dr. Erin Carter is currently providing clinical services at RRDTC.

Drs. Uzma Erum and Cristina Moran-Toro have opened private office-based practices and are providing full-time rheumatology services out in the community.

Their practices are growing at an exponential rate, alleviating the strain of the high number of referrals received by Rheumatology every month.

Our innovative Central Triage Program continues to act as the point of entry for all referrals to the Rheumatology Service. There was a total of 6,835 referrals received in 2016 which equates to over 500 referrals per month. In early 2017, our experienced Nurse Clinician, Ms. Terri Lupton, who has been with the Central Triage Program since its inception, officially retired. Ms. Melissa Wiebe has taken over as the full-time Nurse Clinician for Central Triage. Dr. Susan Barr continues to provide support as the physician lead on this program.

Dr. Cheryl Barnabe provides outreach services for the First Nations communities in and around the city of Calgary. She holds monthly full-day clinics at the Siksika Health Clinic (Siksika Nation), Elbow River Healing Lodge (Sheldon Chumir), Levern Clinic (Kainai Nation) and TsuuT'ina.

Dr. Dianne Mosher also sees patients monthly at the Stoney Health Centre in Morley. The Section is dedicated to this under-served population and Dr. Barnabe's research within this population is nationally recognized.

Drs. Sharon Le Clercq and Liam Martin provide monthly telehealth services to Pincher Creek. Similar models for telehealth services are under consideration for other rural communities. Interest from Lethbridge will be explored this year. Dr. Martin also provides clinical care for the underprivileged in the downtown core through outreach clinics at CUPS (Calgary Urban Project Society).

The Section is dedicated to exploring and developing innovative models of care for the management of patients with MSK conditions. At the forefront of this is our collaboration with the Calgary Primary Care Networks. This year, the Section began providing consultation services through the PCN Specialist Link Program. Specialist LINK connects physicians in the Calgary area through a telephone advice line that provides timely clinical collaboration between over 1,300 family physicians and specialists while the patient is still in the family physician office. Together with the panPCN group, Rheumatology is involved in the Health Systems Support Working Group. The purpose of this working group is to provide resources and models of care for the family physician and their patients with MSK conditions. Of note this year was work on pathway development for inflammatory arthritis and gout. The pathway for gout has been completed and will be implemented this September. The inflammatory pathway helps the primary care physician determine if the patient has inflammatory versus non-inflammatory disease. We are incorporating the Osteoarthritis Toolpath developed by the College of Family Physician of Canada and the Arthritis Alliance of Canada as well as the provincial guidelines for imaging osteoarthritis of the knee.

To further research and best practice clinical care, the Section of Rheumatology supports specialty clinics at RRDTTC, South Health Campus and the South Calgary Eye Centre.

Clinics supported by our members include:

Ankylosing Spondyloarthritis (Drs. D Mosher, O Ziouzina)

Crystal Arthropathy/Gout (Dr. P MacMullan)

Early Inflammatory Arthritis (Drs. C Barber, G Hazlewood, E Kaminska, L Martin, P MacMullan, C Penney)

Lupus (Drs. C Baldwin, S Barr, A Clarke, M Jung)

Nurse Practitioner (Dr. J Rankin, NP)

Uveitis (Dr. O Ziouzina)

Stable RA (Dr. S Le Clercq)

Vasculitis (Dr. A Fifi-Mah)

Young Adults with Rheumatic Diseases (Drs. C Baldwin, E Kaminska, P MacMullan)



Dr. E Kaminska
Rheumatology

EDUCATION

Dr. Christopher Penney once again led a successful CME Day in Rheumatology this past May. “Inflammatory Arthritis: What I Want to Know and What I Should Do” was held in a reverse classroom approach where attendees were required to view podcasts prior to attending the workshops.

Course objectives included:

1. apply assessment strategies to distinguish conditions and facilitate early diagnosis of inflammatory arthritis
2. describe the benefits and risks of biologics and non-biologics
3. recognize rheumatological emergencies in primary care
4. demonstrate family physician’s roles in diagnosis and management of gout

In addition, attendees were provided with an update on rheumatology referrals and pathways. The event was very well received and rated by all who attended.



Dr. C Baldwin
Rheumatology

Dr. Paul MacMullan was in his this first year as the Undergraduate Medical Education Coordinator for the Section of Rheumatology. Under Dr. MacMullan’s leadership, the Section of Rheumatology completed another successful MSK and Skin Course in the fall of 2016.

Dr. Gary Morris continues to do an exemplary job as the Section’s Post-graduate Residency Program Director. His work ethic and tireless dedication to education is unmatched as evidenced by our trainees who all continue to be successful in their Royal College exams.

Our Rheumatology Residency Training Program was once again successful in matching our full quota of trainees for the 2017-2018 academic year and we had three new PGY4 residents as of July. Drs. Erin Butler, May Choi and Sarah Cribby all completed their Internal Medicine residency at the University of Calgary. We are very pleased to have these three bright residents join our Program. Drs. Caylib Durand, Jeff Gong and Jesse Heyland successfully completed their PGY4 year and were promoted to PGY5 as of July 1st, 2017. Drs. Matthew Cooper, Maysoon Eldoma and Steven Thomson completed their Rheumatology training as of the end of June 2017, and they have expressed interest in remaining in Calgary to practice. We are confident that our goal of being a top three residency training program in Canada is coming to fruition as evidenced by the number of successfully completing trainees and the growing interest for our program.

The Rheumatology Residency Training Program held our fourth annual Rheumatology Residents’ Bootcamp Weekend in May of 2016. Sixteen PGY1 Internal Medicine residents had the opportunity to network with rheumatologists and participate in MSK examination small groups. This program continues to be popular amongst residents who are considering Rheumatology for subspecialty training.

Section wide educational activities include weekly Academic Rounds for all staff and trainees. Dr. Gary Morris continues to do an exemplary job of organizing rounds and has done so since 2007. Attesting the high quality of rounds, most of our divisional members, as well as nurses and Allied Health Professionals, attend rounds on a weekly basis.

RESEARCH

The Section of Rheumatology continues to develop a rich research program. Over this past year, our members have been listed on over 108 peer reviewed journal publications, with 10 first author acknowledgements.

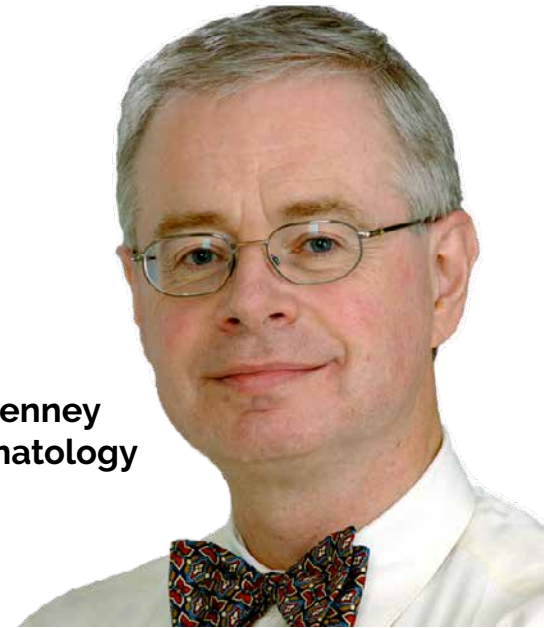
We are fortunate to have two research chairs within the Section. As previously mentioned, Dr. Marshall holds the JE Arthur Child Chair in Rheumatology Research. We also have Dr. Ann Clarke who holds the Arthritis Society Chair in Rheumatology.

Dr. Marshall has been on sabbatical for the past year; however, notably, she has won an Alberta Innovates Health Solutions grant, “Alberta Precision Health Initiative for Arthritis and Complex Immune Diseases.” This grant will specifically focus on linking Rheum4U with administrative and research data. This past year she has been co-investigator with the pediatrics team which won the \$8,000,000 CIHR-Dutch grant on precision health.

Dr. Clarke is in her fourth year as the Arthritis Society Chair in Rheumatic Diseases. Dr. Clarke’s research activities are focused on systemic lupus erythematosus and allergic diseases. Dr. Clarke is also Vice-Chair of Research in the Department of Medicine and is responsible for overseeing the Subrata Ghosh Fellowship to support advanced clinical/research training among the top trainees within the Department of Medicine at the Cumming School of Medicine.

Dr. Clarke’s research highlights include the establishment of the University of Calgary Lupus Centre of Excellence, which offers state-of-the art care to patients with SLE living in southern Alberta. Further, the Centre serves as a resource for the development of the Southern Alberta Registry for Lupus Erythematosus (STARLET), a research database and biorepository of carefully pheno-typed patients with SLE. STARLET focuses on monitoring and enhancing the health outcomes of lupus patients and identifying and modifying potential risk factors associated with a poor prognosis. The Centre also provides specialized clinical and research training to the next generation of physicians who will be caring for patients with SLE and related conditions. Dr. Clarke is the PI on national study (funded by the Canadian Initiative for Outcomes in Rheumatology Care) on measuring and mitigating the economic impact of SLE (\$110,800 – 2015 – 2017); this study also contextualizes these costs by exploring the experiences/perceptions of patients using an integrated knowledge translation approach, empowering them to advocate for innovative systems-level interventions that will benefit the working lives of individuals with SLE. She is also the PI on an international study (funded by the Systemic Lupus International Collaborating Clinics – SLICC) on the economic impact of lupus nephritis and accrual of organ damage (\$235,013 – 2014 - 2018) and site PI on two industry sponsored studies – “Systemic Lupus Erythematosus Prospective Observational Cohort Study” and a Phase 2, randomized control trial to evaluate the safety and efficacy of CC-220 in SL.

Dr. C Penney
Rheumatology



Dr. Cheryl Barnabe's work with First Nations populations continues to bring her increasing recognition, locally and nationally. She won the Jeffrey Shiroky award in recognition of contributions in the field of inflammatory arthritis at the Laurentian Rheumatology conference this spring.

She was recognized as the Top 40 Under 40 by Avenue Magazine in 2015. She won the Emerging Research Leader Award from the O'Brien Institute as well as awarded the Outstanding (top 5%) Reviewer for Arthritis Care & Research. She won a prestigious CIHR Foundational Scheme Grant and a CIHR operating grant for \$1,000,000 over 5 years for her project entitled, "Alberta Indigenous Mentorship for Health Innovation (AIM-HI) Network." Funding will begin this May. Over the fiscal time period, she was PI or co-PI on the following grants:

- Arthritis Care for Indigenous Populations, Salary Support Grant, CIHR
- Arthritis Care for Indigenous Populations, Foundation Scheme Grant, CIHR
- Case Managers to Improve the Management of Arthritis and Associated Comorbidities with Aboriginal Communities: A Proof of Concept Study, The Arthritis Society
- Case Managers to Improve the Management of Arthritis and Associated Comorbidities with Aboriginal Communities: A Proof of Concept Study, Canadian Initiative for Outcomes in Rheumatology Care
- Erosion Healing and Restoration of Function in Rheumatoid Arthritis, The Arthritis Society

Dr. Claire Barber's research focus is the development of quality indicators. As co-lead on the Rheum4U Steering Committee, she successfully led a pilot study of the Rheum4U database in the clinics at RRDTTC and her Rheum4U project entitled "Development of a patient-centered balanced scorecard approach to improve quality of care in rheumatoid arthritis patients in Canada" recently won a CIHR grant for \$183,600. Dr. Barber won the Best Abstract on (Adult) Research by Young Faculty Award in 2017, presented to her at the 2017 Canadian Rheumatology Association Annual Meeting in Ottawa for the Abstract "Development of a National Rheumatoid Arthritis Core Clinical Dataset (RACCD) in Canada to Support High Quality Care for RA Patients." She was PI or co-PI on the following grants over the reporting period:

- Measuring Geographic Variation in Access to Care for Rheumatoid Arthritis Patients and Related Outcomes: A Patient-Centered Approach, Canadian Initiative for Outcomes in Rheumatology Care (CIORA)
- Rheum4U: Pilot testing online data entry in the Division of Rheumatology, Alberta SPOR
- Testing of System-Level Performance for Inflammatory Arthritis, Canadian Initiative for Outcomes in Rheumatology Care (CIORA)

Dr. C Barnabe
Rheumatology



Dr. Glen Hazlewood's area of research is in patient preferences. He was successful in being funded by CIHR for this grant entitled, "Establishing the Foundation for a Patient-Centered Pragmatic-Registry Randomized Trial of Treatment Tapering in Rheumatoid Arthritis", \$99,724. Over the reporting period, Dr. Hazlewood is listed as the PI or co-PI on the following grants:

- Incorporating Patients' Preferences into Canadian Rheumatology Association Treatment Recommendations for Rheumatoid Arthritis, CIHR
- Bridging the Evidence Gap: Understanding Patient and Physician Choices for Treatment in Early Rheumatoid Arthritis, CIHR
- Bayesian Models for Synthesizing Randomized Controlled Trials and Patients' Preferences for Treatment Options in Early Rheumatoid Arthritis and Crohn's Disease, CIHR
- Indigenous Patient Preferences for Rheumatoid Arthritis Pharmacotherapy, Arthritis Research Canada (ARC)

As director of the Mitogen Advanced Diagnostics Laboratory, Dr. Fritzler continues to win international accolades for his lifetime of research. In 2016, he was awarded the Carl R Joliff Award for Lifetime Achievement in Clinical and Diagnostic Immunology by the American Association of Clinical Chemistry becoming the first Canadian to win this prestigious award.

Dr. A. Fifi-Mah continues her work on the Southern Alberta Vasculitis Patient Registry.

Dr. C. Baldwin joined the registry this year as well.

Dr. S Barr continues to be active in Lupus research, as co-PI on the STARLET project, Southern Alberta Registry for Lupus Erythematosus.

Dr. S Le Clercq is involved in a joint research project with Hematology to develop Calgary as a site for excellence for hematopoietic stem cell transplantation (HSCT) in Systemic Sclerosis (SSc) by participating in SCOT study, a North American study of high dose immune-suppressive chem/radiotherapy with autologous hematopoietic stem cell rescue. Calgary was only Canadian site to participate as a primary center.

Dr. P MacMullan was recently awarded a CIHR grant in the amount of \$550,000 entitled, "Precision Molecular Diagnostics for Crystal Arthropathies," as co-PI. He also won a grant from the McCaig Institute for \$25,000 for his project, "DECT in Gout: Development and Evaluation of Crystal Threshold."

Dr. L Martin continues to lead a robust Biologics Research Program, with over \$400,000 in grants obtained from pharmaceutical companies.

ADMINISTRATION

The Section of Rheumatology is led by Dr. Dianne Mosher as the Zone Clinical Section Head. A number of our members participate on a large number of committees and working groups at the regional, provincial, national and international levels. A few noteworthy positions held by our members are:

DR. C BARNABE

Chair, Optimal Care Committee, Canadian Rheumatology Association
Chair, Group for Research with Indigenous Peoples, Institute for
Public Health Chair

DR. A CLARKE

Systemic Lupus International Collaborating Clinics
Vice-Chair of Research, Department of Medicine, Alberta Health Services

DR. G HAZLEWOOD

Chair, Guidelines Committee, Canadian Rheumatology Association

DR. P MACMULLAN

Site Chief, Richmond Road Diagnostic and Treatment Centre,
Department of Medicine

DR. L MARTIN

Co-Chair, Provincial Committee for Pharmacovigilance Program for
Biologic Therapy

DR. D MOSHER

Co-Lead, Arthritis Working Group, AB Bone and Joint
Strategic Clinical Network
Chair, Governance and Nominating Committee, Arthritis
Alliance of Canada
Co-Chair, AAC Models of Care Committee, Arthritis Alliance of Canada

Dr. C Penney

Chair, Canadian Rheumatology Association Education Committee

AWARDS

DR. C BARBER

Best Abstract on (Adult) Research by Young Faculty Award from the
Canadian Rheumatology Association

DR. C BARNABE

Emerging Research Leader Award from the O'Brien Institute
Outstanding (top 5%) Reviewer for Arthritis Care & Research
Jeffrey Shiroky award for contributions in the field of inflammatory
arthritis

DR. M FRITZLER

Carl R Joliff Award for Lifetime Achievement in Clinical and Diagnostic
Immunology, American Association of Clinical Chemistry

DR. G HAZLEWOOD

Young Investigator Salary Award (\$90,000 over 3 years), the
Arthritis Society
New Investigator Salary Award
Drug Safety and Effectiveness, CIHR

DR. P MACMULLAN

UME Bronze Teaching Award

DR. G MORRIS

UME Honor Roll Teaching Award

DR. D MARSHALL

O'Brien Institute Research Excellence Award

CHALLENGES, OPPORTUNITIES, AND FUTURE DIRECTION

The Alberta Bone and Joint Strategic Clinic Network Arthritis Working Group identified timely access to a rheumatologist as a challenge due to

1. lack of appointments for new patients because we look after our inflammatory arthritis patients for life.
2. regional disparities in rheumatology access.

Our Central Triage receives approximately 500 referrals per month. This past year we have been working with our primary care colleagues to modify the referral criteria. As well, we have engaged AHS on process improvement and now have two physicians reviewing referrals. Moving forward we have the opportunity to scan our referrals into SCM (Sunrise Clinical Manager) and create a triage tab to manage our referrals and align with the Alberta Referral Directory.

The recruitment of three new rheumatologists has helped with our wait times and we have been able to provide better access. However, without looking at alternative care models for our follow up patients, this is a short-term solution.

Dr. Sharon LeClerc and the nurses at South Health Campus are running a successful nurse run stable RA clinic which allows Dr. Le Clercq to see more new rheumatoid arthritis patients. The ABJSCN has evaluated successful stable care models and has developed a measurement framework. Further implementation of such models can assist with access and regional disparities. Interest from the pan-PCN group and Lethbridge in exploring further the implementation of stable care clinics.

A significant challenge for the Section is providing consultation coverage for all four adult hospitals and telephone advice for both on call and specialist link. Being able to provide advice to our colleagues is a fundamental part of a specialist's roll. We are working to meet the needs of our fee for service colleagues and AARP physicians to create a coverage model to deliver the best care for our patients. It is of concern that our members are driving long distances and expected to answer pages and calls while driving on Deerfoot Trail. A split call model is now being piloted.

Unique to Calgary is the close collaboration with our colleagues in Pediatric Rheumatology. With their collaboration, we have developed a tool (Rheum4U) to collect data across ages. We are in the process of developing the data architecture to allow linkages with administrative data and research data as well as the privacy impact assessment to allow linkage by the unique identifier. This will allow for continual quality improvement reporting and pave the way for precision medicine. With support from the University of Calgary and AHS, we hope to "Optimize patient outcomes through early rapid disease recognition, foster discovery, initiate precision therapies and accelerate knowledge into practice."³

Dr. L Martin
Rheumatology



³ From "Centre for Excellence in Inflammation and Arthritis in Children and Adults," July 26, 2016.

Gastroenterology

The Division continues to provide gastrointestinal disease and hepatology care of the highest standard to the citizens of the Calgary Zone and Southern Alberta. Roughly 75% of gastroenterologists and all hepatologists within the Zone receive patient referrals through a central access and triage (CAT) system (~1800 referral to GI and 375 referrals to hepatology per month). CAT allows for the assessment of wait time and access issues that can be handled through shifting resources and personnel in an active and dynamic process to address areas of most urgent need. In addition to providing the highest level of tertiary level patient care in gastroenterology and hepatology, the Division continues to strategically develop six main areas of quaternary patient care (Colon Cancer Screening Center [Lead, Dr. Steven Heitman], Calgary Gut Motility Center [Leads, Dr's Chris Andrews and Michael Curley] CREATE Therapeutic Endoscopy Center of Excellence [Leads, Dr. Steven Heitman and Rachid Mohammed], Nutrition Center of Excellence (Lead, Dr. Maitreyi Raman], Calgary Inflammatory Bowel Disease Research and Wellness Center [Lead, Dr. Remo Panaccione] and the Calgary Liver Unit [Lead, Dr. Carla Coffin] under the umbrella of the Calgary Center for Digestive Health as shown in Figure below. These areas of excellence are supported by dedicated established clinical fellowship programs in IBD, liver disease, motility and therapeutic endoscopy. The CCDH is supported by leading-edge translational research infrastructure providing outstanding patient care and an unsurpassed training environment for future physicians and researchers. Moreover, the organizational structure of the CCDH has allowed for the successful implementation of numerous highly innovative clinical care programs and pathways.



Dr. M Swain
Chief of Gastroenterology

INNOVATION IN PATIENT CARE, COLLABORATION AND INTEGRATION WITH PRIMARY CARE

OUTREACH

Aimed to improve provision of specialty GI and hepatology care to underserved areas of Calgary Zone and the South Zone (Medicine Hat primarily). Given recognized challenges with access to care, outreach clinics and telehealth provide improved access. Clinics include:

- Outreach IBD to Medicine Hat, on site and telehealth support
- Hepatology + Imaging clinics, North East Calgary Zone
- CUPs clinic with support for endoscopic evaluation

MULTIDISCIPLINARY COLLABORATIVE CARE MODELS

Better integration of care is a priority. GI specialty care works closely with primary care to provide specialty services within the medical home. This model includes a nurse-led, multi-disciplinary clinic for the care of non-urgent functional gastrointestinal syndromes (IBS, dyspepsia, GERD) at the SHC and within the Foothills Primary Care PCN. Plans are currently underway to expand the capacity within the Primary Care chronic disease care team nursing staff from West Central and Mosaic PCNs, who may best identify and then support patients within primary care. In addition, through collaboration with Diagnostic Imaging (EFW) integrated, collaborative clinics have been developed to better care for liver patients in the Calgary Zone with timely, appropriate imaging combined with specialty consultation embedded in the North East to ensure improved access for high needs populations.

COLLABORATION AND SUPPORT OF PRIMARY CARE, THROUGH PRIMARY CARE-BASED CLINICAL CARE

PATHWAYS AND PATIENT EDUCATION

Many benign GI conditions are chronic, with intermittent and recurrent symptoms, prompting repeat visits and necessitating follow up care; however, they do not necessarily require endoscopy for diagnosis nor specialty care. In support of management of these patients within the medical, best-evidence clinical care pathways have been developed to address 5 common referral indications. In addition, multidisciplinary patient education sessions focused on a broad array of topics have been developed (1st to take place Oct 12th, 2017) to support patient's self management and understanding of their condition. Resources like these have been developed in response to feedback gleaned from patient focus groups. Finally, the Section of GI was the first, in collaboration with primary care pioneered the use of rapid phone consultation to facilitate support primary care by specialty care, Specialist Link – a rapidly expanding service, now including multiple additional specialty services.

QUALITY AND OUTCOMES MEASUREMENT

The following themes guide our focus on quality in the Division of Gastroenterology and Hepatology:

1. **Optimize Access and Referral Appropriateness:** Through Central Access and Triage (CAT), wait times measurement, with iterative capacity to inform decision regarding refinement and improvement, is a priority. We actively measure wait times for multiple clinical streams, with informed improvement initiatives to optimize wait times to ensure the sickest are seen first. In addition, in collaboration with primary care, we mandate certain investigations to optimize referral quality and some low risk cases are declined, with support for referring physicians through best- evidence clinical care pathways. We prospectively monitor outcomes (re-referral rate, Emergency Department visits, endoscopy and outcome for patient re-referred) for this population, with recent data reviewing 1,266 cases clearly supporting safety, with low rates of clinically significant findings on re-referral and no malignancies detected to date. Expansion of the clinical care pathway is underway, to include both diarrhea predominant IBS and abdominal pain in 2018, as well as non-alcoholic liver disease (completed), Hepatitis B and C to go live next year. Leadership within the Division is also championing Advice Request, and ultimately e-referral, to be implemented Spring, 2018. The aim is to include as much of the Division as possible – currently, approximately 70% of luminal gastroenterologists and 100% of hepatologists participate in CAT.
2. **Optimized Resource Use and Appropriateness:** The Division recognizes the need to work towards optimized resource use, including costs associated with therapy as well as investigations. Working closely with the Digestive Health SCN, we have facilitated the de-listing of Colace from hospital formulary as well as de-prescribing guidelines for proton-pump inhibitors geared towards both gastroenterologists and primary care physicians in the province and in the CZ. Moreover, we have measured and optimized the use of on-call endoscopy at the FMC and through collaboration with the Emergency Department and increasingly use of risk stratification tools, we have reduced the use of endoscopy for low risk patients. These initiatives will be spread to other sites in the CZ. In collaboration with the Physician Learning Program, we are evaluating the use of routine gastroscopy for healthy young patients with dyspepsia, as a Choosing Wisely guided intervention to optimize invasive investigations in this population.
3. **Physician Feedback, Physician Reports:** Annual acute care activity reports are distributed to physicians performing endoscopy in the Division. These reports have evolved over time, with an aim to provide feedback regarding endoscopic examinations in addition established to quality metrics, report clarity and quality of information to the referring physician.

EDUCATION HIGHLIGHTS

Education remains a significant broad priority within the Division. In addition, Division members occupy many of the key educational portfolios within the CSM including:

- Dr. Jon Meddings: Dean, CSM
- Dr. Ron Bridges, Senior Associate Dean, CSM
- Dr. Syl Coderre: Associate Dean of Undergraduate Medical Education (UME), CSM. In early 2016, he led the UME accreditation process to the best result possible, a fully accredited medical school for eight years. He has continued to innovate in UME for the time period of 2016 - 2017 in many areas, including: re-organization of the UME student affairs/admissions offices, creation of a community engagement office in the school's BACS centre, creation of an introduction to basic science course for the class of 2020, introduction of a Choosing Wisely initiative in all UME small groups, distribution on a yearly basis of a Faculty Performance Report to over 1500 UME teaching faculty, and introduction of a clerkship lottery for student choices. In addition, Dr. Coderre was asked to be a secretary for the University of Montreal's accreditation review in April 2016.
- Dr. Kelly Burak, Associate Dean, CSM, Continuing Medical Education & Professional Development Co-Lead, Physician Learning Program (PLP)
- Dr. Melanie Stapleton, Head GI Fellowship Program (top ranked GI program in Canada)
- Dr. Maitreyi Raman, Associate Director of Admissions, CSM

Divisional members were recognized for their outstanding contributions to the education of the UME class. Gold Star Awards - Kelly Burak and Sylvain Coderre, Jersey Awards - Kelly Burak, Honour Role - Chris Andrews, Michelle Buresi, Gil Kaplan, Mani Kareemi, Puja Kumar, Yvette Leung, Kaylee Milne, Maitreyi Raman and Eldon Shaffer.

ADMINISTRATION HIGHLIGHTS

GI Site leads: FMC – Foothills Medical Centre, site chief Dr. Christopher Andrews; RGH – Rockyview General Hospital, site chief Dr. Jen Williams; PLC – Peter Lougheed Centre, site chief Dr. Rachid Mohamed; SHC - South Health Campus, site chief Dr. Michael Curley, the Colon Cancer Screening Center (CCSC); Medical Lead, Dr. Steven Heitman

AHS Leadership Roles:

- Dr. Kerri Novak, Head ZMAC
- Dr. Remo Panaccione, Lead Clinical Care Integration initiative
- Dr. Paul Belletrutti, Chair Calgary Zone Endoscopy Management Committee
- Dr. Kerri Novak, Medical Lead QA/QI
- Dr. Paul Belletrutti Medical Lead, GI Central Access and Triage (CAT)
- Dr. Maitreyi Raman Medical Director for Nutrition Services for the Calgary Zone
- Dr. Rachid Mohamed Medical Lead, Therapeutic Endoscopy Calgary Zone
- Dr. Puja Kumar FMC GI Clerkship Director



Dr. K Novak
Gastroenterology

AWARDS AND DISTINCTIONS

- Dr. Kelly Burak: The 'U Make a Difference' award program recognizes individuals and teams who exemplify excellence and the ability to reach above and beyond the expected to "Make a Difference" in our university community. The awards acknowledge that outstanding contributions to the university's vision can take many different forms and they provide all members of the university community the opportunity to formally recognize each other's efforts and contributions throughout the year. These awards are an important aspect of university's culture of recognition. A 'U Make a Difference' award is an honour for members of our university community who, through their performance, commitment and service make the university a great place to learn and work.
- Dr. Paul Beck: Killiam Annual Professorship
- Dr. Remo Panaccione: CAG visiting Professor award, CCC Finkelstein award, AHS Medical Lead, Systems Integration for the Calgary Zone. This is a senior leadership role working with the Zone Medical Director in identifying ways to best deliver care to the patients in the Calgary Health Zone. This includes identifying potential problems within the current system and then implementing solutions that benefit all stakeholders including primary, care, speciality care, and most importantly patients.
- Dr. Gil Kaplan: Honour Roll, Faculty Appreciation, Cumming School of Medicine's Class of 2018, Peak Scholar Nominee, Celebrating excellence in entrepreneurship, innovation, and knowledge engagement, University of Calgary, Healio Gastroenterology 200: selected in the top 200 leading innovators in the field of gastroenterology, CIHR Embedded Clinician Researcher Salary Award (Chair), ASG Distinguished Researcher Award, Alberta Society of Gastroenterology
- Dr. Kerri Novak: Department of Medicine Dr. John M. Conly Innovation Award, for her innovative work with the PCNs. The Innovation Award recognises a significant contribution within the Department of Medicine that has led to an innovation in medical treatment, practice or service, teaching, prevention, amelioration of symptoms or barriers, or a public policy change that has led to some practical application that improves the lives of patients. This award recognises that Kerri's innovative contributions have brought significant positive change to the Alberta Health Services in the quality of patient care delivery.
- Dr. Carla Coffin: Head, Calgary Liver Unit
- Dr. Yasmin Nasser and Dr. Humberto Jijon: Each received the Crohn's and Colitis Canada, Innovations in IBD grant.

DIVISIONAL OUTPUTS

Publications: 521 total

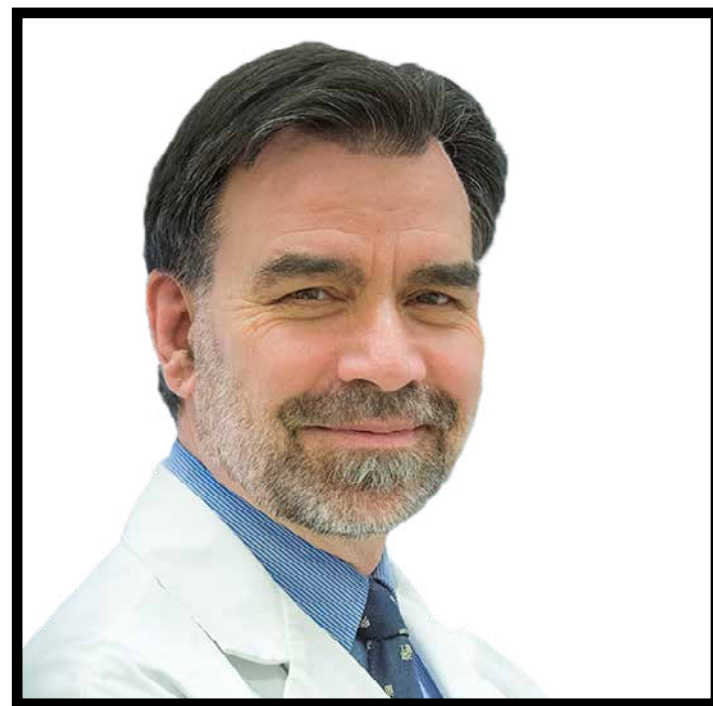
Grants: 133 total with a total value of \$166,886,577

Presentations: 115 total

INTRODUCTION AND BACKGROUND OF SECTION

The Section of Respiratory Medicine continued to make important contributions to the academic pursuits of the Cumming School of Medicine (CSM) and clinical accomplishments of the Calgary Zone – Alberta Health Services (CZ-AHS) for the period April 1, 2016 to March 31, 2017. Almost all Section members are based at one of the four acute care sites. As of March 31, 2017, the Section had 24 Academic Alternative Relationship Plan (AARP) members, 8 Fee-for Service (FFS) acute care site-based members, 2 FFS acute care site-based part-time sleep physicians, 1 community-based FFS member and 4 Associate members (all FFS) who hold cross appointments in the Section. The Section also has 2 community-based, FFS allergists. Of the AARP Members, 6 hold Geographic Full Time (GFT) appointments, while the remaining 18 AARP members, and all the FFS members, hold major clinical appointments. One member, Dr. Weatherald, was on a leave of absence while undertaking additional academic and clinical training in pulmonary hypertension.

The Section provides continuous consultative service and inpatient ward service at 4 acute care hospitals while maintaining a busy outpatient clinical service across the zone. In addition to general respiratory clinics the Section provides services in the following subspecialty clinics: Calgary COPD and Asthma Program (CCAP- all sites); Complex Inflammatory Airway Disease (FMC / RGH), Alberta Thoracic Oncology Program (FMC and SHC); Dyspnea Clinic (in conjunction with the TBCC – FMC and SHC); Cough (FMC); Bronchiectasis (FMC); Sleep (FMC); Interstitial Lung Disease (SHC); Advanced Pulmonary Symptom Management (SHC), Chronic Ventilator and Neuromuscular (PLC); Pulmonary Hypertension (PLC), Lung Transplant (PLC / FMC) and BMT-Lung (TBCC). Members of the Section also report all pulmonary function and sleep diagnostic tests at the four hospital sites, and provide TB services for the zone through the Sunridge TB Clinic. ATOP, Lung Transplant, Neuromuscular and Interstitial Lung Disease all provide tele-health services to the outlying regions in the province, in addition to their inpatient and outpatient responsibilities. The Section participates in Specialist Link and co-manages Pulmonary Central Access and Triage with Alberta Health Services.



Dr. W Flemons
Chief of Respiratory Medicine

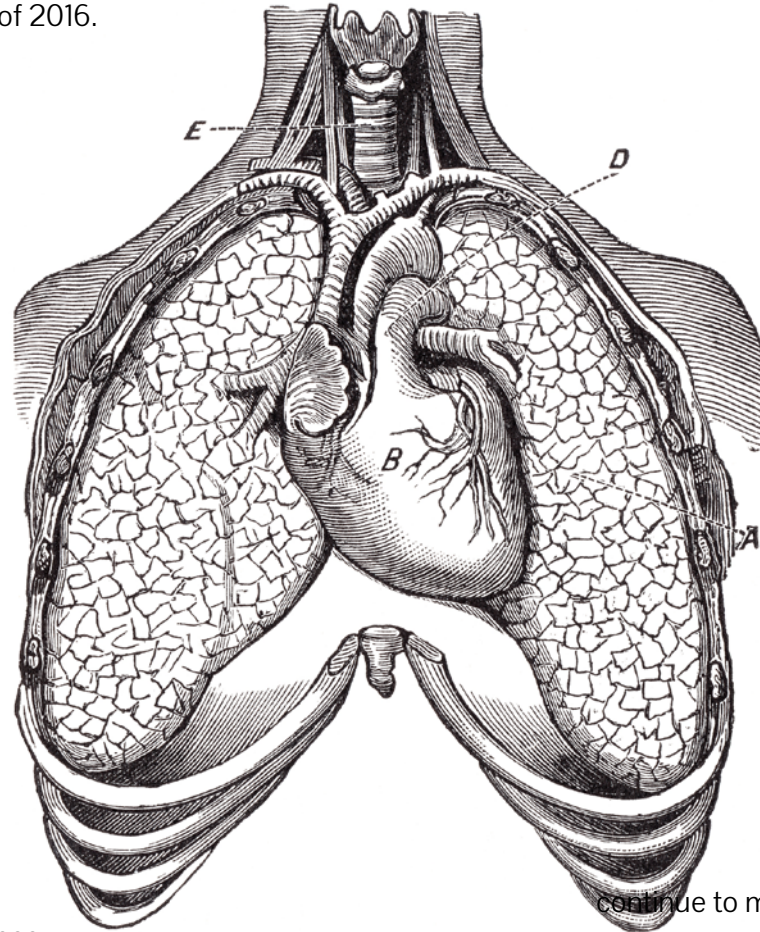
REPORTING HIGHLIGHTS

CLINICAL

For the period April 1, 2016, to March 31, 2017, the Section was successful in recruiting a new Section member to the RGH - Dr. Patrick Mitchell, who received his medical training in Ireland and his pulmonary (and research) training in Hamilton. Dr. Mitchell joined the Section in the summer of 2016.


In January 2017, Dr. Agnes Hurter, who received her training in South Africa, joined the Section and Drs Fisher, Jarand, and Field in the TB clinic. Dr. Hurter's inpatient and other outpatient responsibilities are carried out at the PLC. Dr Rhea Varughese returned to the PLC from leave of absence where she received additional training in lung transplantation at the University of Toronto and the University of Alberta. Dr. Weatherald took a leave of absence to go to Paris in 2016 for training in Pulmonary Hypertension and returned in June 2017. Dr. Alex Chee, one of five interventional pulmonary medicine (IPM) specialists whose inpatient and outpatient general respiratory medicine practice was based at the South Health Campus accepted an excellent offer from the Beth Israel Deaconess Medical Center and Harvard Medical School in Boston. The Calgary IPM group is actively seeking to recruit another IPM physician to replace Dr. Chee.

The Section of Respiratory Medicine also continues to actively seek recruitment among appropriately trained individuals to fill faculty positions in the areas of Chronic Ventilation and Neuromuscular Disease, Sleep Medicine, Airways Disease Clinician Scientist, Mycobacterial Disease, and Health Services



Research. The Section recognizes a need to recruit both academic and clinical respirologists to meet growing population demands for service and to remain competitive in its academic pursuits. Pulmonary Central Access and Triage (PCAT) continues to function well; it directs consults to almost all outpatient clinics at all four sites (the exceptions are: TB Clinic, Sleep Clinic, ATOP and Lung Transplant). Wait times at the PLC are starting to improve with the addition of Dr. Hurter and are expected to continue to improve with the return of

Drs. Weatherald and Varughese. Several Section members continue to be involved with and provide leadership for the Respiratory Health Strategic Clinical Network (RHSCN). Dr. Sachin Pendharkar serves as co-chair of the sleep disorders working group; this working group has made important contributions in the development of level 3 (ambulatory monitoring in the home) sleep diagnostic testing provincial standards. This has demanded that Dr. Pendharkar's working group collaborate with several professional Colleges. Other Section members who have made, and continue to make substantial contributions to the RHSCN at both the core committee and working group level include Drs. Walker, Lohmann, Field, Roman, Hirani, Flemons, Fraser, Hanly and Loewen.



Drs. Tremblay and MacEachern are involved in the Cancer SCN, as it pertains to lung cancer screening and management in Alberta. Members of the Section continue to be national leaders in Sleep Medicine. Under the direction of Dr. Pat Hanly, and with the assistance of Drs. Kris Fraser, Sachin Pendharkar, Willis Tsai and Andrea Loewen, the group continues to develop novel and important alternative models of care delivery. The goal of which is to improve patient access to diagnosis and treatment of severe sleep disordered breathing. The Sleep Centre continues to enjoy excellent collaboration with private homecare companies for sleep diagnostics and treatment. Members of the Sleep Centre have been active and influential in working with Respiratory Homecare Benefits within AADL to provide more timely and appropriate approvals for funding clients who require bi-level pressure and oxygen therapy for the treatment of sleep hypoventilation. Several members of the Section (Drs. Rimmer, Hanly, Loewen, Flemons) are members of the AADL Clinical Advisory Committee.

The Interventional Pulmonary Medicine program is one of only two such services in the country. Dr. Alain Tremblay is the leader of this program and, along with Drs. MacEachern, Hergott and Dumoulin, continue to lead a highly respected IPM service using a variety of innovative tools and techniques including endobronchial ultrasound, permanent and removable stents, and indwelling pleural catheters. Helped by private donations, this program has been able to purchase the equipment necessary to perform this highly technical and ground-breaking service. The Program is also recognized for its outstanding Advanced Fellowship training. Dr. Frederic McGovern completed his training in IPM in June 2016, while Dr. Ben Shieh started his 1-year Fellowship in July 2016.

The Calgary Asthma and COPD Program is nationally recognized for providing a cohesive service that links together family physicians' offices, hospitals, and emergency departments. Dr. Brandie Walker is the Medical Director of this team of dedicated health care providers that includes physicians, respiratory therapists and nurse clinicians. The program relies heavily on the use of innovative tools such as induced sputum cell counts to manage patients with complex airways disease, and, through the links with the Airways Inflammation Research Group, can offer patients access to novel mAb therapies that are not available in routine clinical practice.

The Interstitial Lung Disease program runs out of the SHC, and is the only such program in the Prairie Provinces. It is overseen by Drs. Charlene Fell and Kerri Johannson, and operates in close collaboration with Dr. Sharon LeClercq (Rheumatology) to provide cutting-edge therapies to patients with complex ILD, with or without associated connective tissue diseases. The ILD program accepted its first Advanced Fellowship trainee – Dr. Veronica Marcoux. This is a unique training opportunity offered to respirologists in Canada and is a tribute to the program established by Dr. Fell.

Drs. Mody and Jarand continue to provide a unique Bronchiectasis program to serve patients with non-cystic fibrosis bronchiectasis. These patients invariably have complex medical disorders, and their optimal management is facilitated through this clinic.

Dr. Dina Fisher is the Medical Director for Tuberculosis Services in the Calgary Zone, and together with Drs. Jarand, Hurter and Field, they provide medical consultation at the Sunridge TB clinic. The Section participated with Alberta Health Services to transition patients with non-tuberculous mycobacterial (NTM) disease from the TB clinic to the PLC chronic disease management clinic. Dr. Jarand has agreed to take on the medical directorship of this new clinic. There is an ongoing need to recruit additional physicians to TB services in the near term to meet the growing demand in the TB and NTM clinic.

The Pulmonary Hypertension program (inpatients and outpatients) operates out of PLC site. The Lung Transplant program inpatient service operates out of the PLC site; the program's outpatient clinics are located at the FMC North Tower. Drs. Helmersen, Hirani and Thakrar have been joined by Dr. Varughese and together provide an outstanding comprehensive service (including 24/7 call-coverage) for these complex medical patients. An increasing number of clinical trials are being performed in both programs, and they have established reputations as clinical centres of excellence across the country. The increasing complexity and number of patients in the lung transplant and pulmonary hypertension programs has created the need to develop a distinct inpatient service. This required change in service delivery model highlights the need for additional recruitment of respirologists with advanced training in this area of medicine.

Finally, Dr. Karen Rimmer – ably assisted by Dr. Andrea Loewen – runs the Neuromuscular and Chronic Ventilation program, which includes an outreach component providing medical services to patients in their homes by allied healthcare professionals with specialist care backup. This type of program, providing complex care via a variety of specialties (neuromuscular, sleep, ventilation) exemplifies the benefits of the AARP funding model, and are likely not sustainable in a more traditional FFS funding model. The program has created an Advanced Fellowship training program and is expected to accept the first trainee in July 2017.

RESEARCH

The period April 1, 2016, to March 31, 2017, saw continued strength in the areas of academic activity and research within the Section of Respiratory Medicine. Members of the Section contributed to 70 peer-reviewed papers and 59 abstracts. Section members were invited to give 35 national or international presentations. It is worth highlighting some of the more notable academic contributions by Respiratory Medicine Section members: Dr. Leigh continues as the GSK Professor of Inflammatory Lung Disease in the Cumming School of Medicine. Dr. Mody has a large CIHR operating grant (5 years - \$753,000) studying direct lymphocyte mediated antimicrobial mechanisms. Dr. Hanly continues to be a major investigator with Canadian colleagues that make up the Canadian Sleep and Circadian Network – the network obtained a prestigious CIHR network grant of \$4,000,000. Dr. Hanly is Co-PI with Dr. Marc Poulin on other CIHR funded grants. Dr. Fisher continues as a member and site lead of a Canadian research coalition that obtained a CIHR Population and Public Health Foundation grant of \$1,128,500 looking at the treatment of latent TB infection and drug resistant disease. Dr. Tremblay and colleagues obtained a grant of \$2,300,000 to evaluate Lung Cancer Screening in Alberta. Dr. Tremblay also has a \$100,000 grant from the Western Canada Mesothelioma Foundation to investigate Cancer screening in asbestos exposed workers in Alberta.



Dr. D Fisher
Respiratory



EDUCATION

The Calgary Adult Respiriology Training Program, under the leadership of Program Director, Dr. John Chan, continues to operate with full accreditation status from the Royal College of Physicians and Surgeons of Canada. The Training Program remains very popular among trainees across the country; July 2016 saw a new Fellow join the training program for the period 2016-2018 bringing the total number of fellows to five. The ongoing popularity of this fellowship Program reflects the breadth of the training experience in Calgary, including the opportunity to have limited but dedicated training in Interventional Pulmonary Medicine, which is relatively unique in Canada.

In addition to the post-graduate training program, most Section members are heavily involved in teaching in the undergraduate medical school Course 3 (Respirology & Cardiology) at the University of Calgary. This teaching consists of formal class lectures, small group sessions, and bedside clinical teaching. Course 3 continues to be expertly coordinated and led by Dr. Dan Miller. Dr. Tara Lohmann is one of the course evaluation coordinators. Dr. Flemons, and colleagues within W21C continue to offer an elective in quality and safety for undergraduate students in Med 440 (Applied Evidence-Based Medicine). Dr. Flemons continues to chair the very successful CME certificate course in Quality and Safety Management. It is the only online course of its kind in Canada and attracts participants from several health disciplines from across the province and several participants from out-of-province. Several GFT members are also involved in graduate student training, and in advanced, area-specific workshop development and teaching. Dr. Flemons is working with colleagues across the country to develop an Area of Focused Competence in Patient Safety / Quality Improvement for the Royal College of Physicians and Surgeons of Canada.

AWARDS

Dr. Fraser was given the Section's Bob Cowie award for outstanding academic and clinical contributions. Dr. Flemons was presented with the Department of Medicine's Professionalism award. Dr. Pendharkar was a Finalist, President's Award of Excellence for Innovation, Alberta Health Services (team lead). Dr. Leigh was awarded Tenure with the Cumming School of Medicine. Several members of the Section were recognized for outstanding teaching - Drs. K Fraser, Dr. M Thakrar were given the Bronze Star award by the UME Office and Drs. C Hergott and K Johannson were both recognized for their teaching contributions by making the Honour roll for undergraduate teaching.

ADMINISTRATION

Dr. C. Mody – Department Head,
Microbiology, Immunology and Infectious Disease
Dr. R. Leigh – Head of Medicine
Dr. Flemons – Section Head, Respirology
Vice Chair Health Analytics and Safety for the
Department of Medicine
Medical Director, Health System Improvement for
Health Quality Control of Alberta

CHALLENGES, OPPORTUNITIES, AND FUTURE DIRECTION

Several of the excellent clinical programs that are staffed and led by members of the Section need additional clinical support. The greatest need is for two additional chronic ventilation/neuromuscular disease respirologists. The interventional pulmonary medicine group is in the process of recruiting an academic respirologist to fill the vacancy created when Dr. Chee left for a position in Boston. The TB clinic still requires at least one more respirologist and is interested in partnering with Infectious Disease to add a physician from their Section to meet the growing demand assessing and treating patients with mycobacterial disease. The sleep group continues to look for opportunities to recruit excellent academic respirologists to improve access for patients with suspected sleep disordered breathing and other sleep disorders and to enhance the academic productivity. The complex airways inflammation group needs an academic researcher to continue to expand the excellent work that Dr. Leigh has established with colleagues in the Cumming School of Medicine.

There continues to be a strong interest in recruiting one or more respirologists with academic training in health services research who can also work clinically to meet the demand for general respiratory consultative services. Finally, the lung transplantation / pulmonary hypertension group is moving towards creating a separate inpatient service which will require at least one additional clinician to be recruited.

The work that the Section has done on creating comprehensive reasons for referral and business rules for Pulmonary Central Access and Triage has positioned it to move ahead with eReferral. The Section will also proceed with implementing eReferral-advice in 2017-2018. These referral pathways together with Specialist Link will have created a range of options for primary care physicians to obtain advice from the members of the Section. Two of the sites where the Section is based (RGH and SHC) are proceeding with plans to implement SCM ambulatory in their outpatient clinics over the coming year.

INTRODUCTION TO SECTION

The Infectious Diseases (ID) Section is one of ten sections in the Department of Medicine (DOM). The ID section has 29 members who work full time and part time for the Section. This includes 5 GFT members (4.75 FTE), 10 major clinical members (9.6 FTE), 5 fee for service physicians (2.26 FTE), 4 physicians who are pursuing further academic training and who work as locum physicians (0.7 FTE), and 4 physicians with primary appointments in Pathology and Laboratory Medicine (Microbiology) and cross appointments to the Department of Medicine, ID Section (0.45 FTE) During this fiscal year one Section member was on sabbatical for part of the year and another was on a Medical Leave of Absence.



Dr. D Holton
Chief of Infectious Diseases

AWARDS AND ACHIEVEMENTS

SCHOLARSHIPS

Dr. Ranjani Somayaji
CF Research Fellowship, CIHR Funding

Dr. Elissa Rennert-May
Alberta Innovates

Dr. Will Connors
Master of Public Health, Emory University

CLINICAL AWARDS

Dr. John Gill
*Dr. John Dawson Award for Clinical Excellence, FMC,
Chair of International Workshop on Observation Databases*

RESEARCH AWARDS

Dr. Tom Louie

TEACHING AWARDS

Dr. Jack Janvier, Cumming School of Medicine
*Distinguished Service Awards Year 1, Year 2, Course 8
Associate Dean's Letter of Excellence
Physical Examination Year 1, Year 2, Course 8*

Dr. Bonnie Meatherall, Cumming School of Medicine
UME Honor Role

Dr. Ron Read, Cumming School of Medicine
UME Honor Role

IMPORTANT ACKNOWLEDGEMENTS

Dr. John Conly
*Medal for Distinguished Service AMA
New Member of CIHR Institute Advisory Board
for Health Innovation*

CLINICAL

The Infectious Diseases Section provides inpatient care at all adult acute care sites in Calgary and ambulatory patient care in a variety of specialized settings as described below. The Section spends approximately 55% of our clinical service time working with inpatients and 45% caring for ambulatory patients. Almost all inpatient consults and outpatient intravenous antimicrobial (HPTP) consults are completed within 24 hours of when the consult is requested.

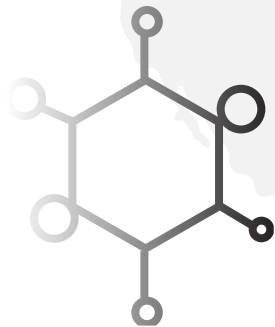
The focus of the outpatient clinics is to prevent hospital admissions by providing timely ambulatory care. All Section members work in our core ID service areas (inpatient consultation and HPTP). Two HPTP Clinics operate daily except December 25, 26, and January 1, while 2 other HPTP Clinics operate on weekdays (no weekends or Statutory Holidays). Each year the Section operates 1,224 HPTP clinics and records over 20,000 patient visits. The HPTP clinics see a wide range of infections from patients who are discharged from hospital with serious infections (brain, liver abscess) and who require outpatient intravenous therapy to acute referral patients from the Emergency Department and Urgent Care Facilities. HPTP referrals from the ED and UC prevents thousands of patient admissions to acute care.

The Section operates a number of other outpatient clinics which address specific outpatient infectious disease issues. The Sexually Transmitted Infection clinic (STI) and HIV clinic (SAC) operate weekday mornings and afternoons. SAC also operates one evening clinic. The remaining clinics operate on specific days of the week.

Clinic Name	Physicians	Statistics
Cystic Fibrosis (CF)	Dr Michael Parkins, director Dr. Harvey Rabin Dr. Ranjani Somayaji, clinical fellowship	100 (94) clinics 880 (813) clinic visits 186 (189) total patients 72 (64) admitted, 957 (942) days
General ID Clinic	Dr Andrew Pattulo Dr. Joseph Kim PGY4 and PGY5 and second year ID trainees	87 (92) clinics 496 (545) patients seen 265 (301) new patients
Hematology Oncology	Dr. Andrew Johnson (specialized consultations upon request)	46 (45)
Sexually Transmitted Infections (STI)	Dr. Ron Read, director Dr. Angel Chu, anal pap clinic	134 (129) MD general clinics 320 (302) nursing clinics 26 (27) anal pap clinics 18,178 (18,178) patient visits 6,618 (6,691) new patients
Southern Alberta Clinic (SAC) (HIV Clinic)	Dr. John Gill, diector Dr. Donna Holton Dr. Jack Janvier Dr. Oscar Larios, co-infection HCV-HIV Dr. Bonnie Meatherall Dr. Michael Parkins Dr. Stephen Vaughan	302 (327) clinics by ID 5344 (5184) patient visits 149 (131) new patients 1737 (1,689) active SAC patients
Tropical Disease Clinic	Dr. Bonnie Meatherall, co-director Dr. Stephen Vaughan, co-director Dr. Bayan Missaghi	52 (56) clinics 187 (199) patients (34 no shows) 187 (155) new
Hepatitis C Treatment (CUPS and SAC)	Dr. Gisela Macphail	59 completed treatment 578 RN visits for treatment 121 MD screening visits 386 RN screening visits

ADMINISTRATION

Members of the ID Section are involved in the medical administration of a large number of programs. Among people with primary DOM appointments, administration work accounts for 3.04 FTEs. Section members are the medical directors for 3 programs with a large Public Health impact a) the Southern Alberta Clinic (HIV clinic), b) the Sexually Transmitted Infections Clinic, and c) Infection, Prevention and Control (IPC) program. In addition, Section members are the medical directors for a) the Home Parenteral Treatment Program, b) the Adult Cystic Fibrosis Clinic, c) Tropical Diseases Clinic, and d) Antimicrobial Stewardship. Dr. Ron Read is the Vice President of Strategic Planning. Several members are involved in Academic Administration (See Education). Section members participate on > 100 committees (local, regional, national and international).



Dr. B Meatherall and Dr. S Vaughan
Infectious Diseases

Infection Prevention and Control (IPC)

Dr. John Conly

Co-Director, Calvin, Phoebe and Joan Snyder Institute for Chronic Diseases (Snyder Institute), and Chair of Snyder Institute Finance Committee

Chair, Infectious Diseases Research Group, University of Calgary and Health Region

Director, Centre for Antimicrobial Resistance, University of Calgary and Health Region

Member, Board of Directors, Canadian Foundation for Infectious Diseases

Medical Site Officer Infection Preventions and Control FMC

Co Chair of the Antimicrobial Stewardship Committee

Member, Technical Consultative Group, GIPC Network, WHO – Geneva, Switzerland

Member of Cochrane Collaboration

FMC IPC Medical Site Officer

Dr. Joseph Kim

RGH Medical Site officer, Infection Prevention and Control Program

Dr. Bayan Missaghi

PLC Medical Site officer, Infection Prevention and Control Program

Dr. Oscar Larios

SHC Medical Site officer, Infection Prevention and Control Program

Dr. Tom Louie

Infection Prevention and Control Program (IPC), Antimicrobial Stewardship

Cystic Fibrosis

Dr. Michael Parkins
Medical Director

HPTP

Dr. Donna Holton
Medical Director

Antimicrobial Stewardship

All of the IPC physicians are involved in Antimicrobial Stewardship and in addition Dr. Andrew Pattullo is also involved

SAC/HIV

Dr. John Gill
Medical Director, Southern Alberta HIV Clinic (SAC)
Director, University of Calgary Retrovirology Laboratory

STI Clinic

Dr. Ron Read
Medical Director, Calgary Sexually Transmitted Infection Clinic

Tropical Infection Program

Dr. Bonnie Meatherall
co-Medical Director
Dr. Stephen Vaughan
co-Medical Director

Section members with secondary DOM appointments also involved in administration

Dr. Deirdre Church
Section Chief, Medical Microbiology,
Calgary Laboratory Services



RESEARCH

The Section is active in research from bench to bedside. The ID Section and the Section of Clinical Microbiology often participate in collaborative projects.

The Infectious Diseases Section is linked to both the Department of Microbiology, Immunology, and Infectious Diseases and the Snyder Institute of Chronic Diseases. Section members have international recognition as leaders in HIV domestic violence research (Dr. Gill), CF microbiome research (Drs. Rabin, Parkins, Somayaji), *C. difficile* treatment research (Dr. T Louie) and Antimicrobial Stewardship/Infection Prevention and Control (Dr. Conly). In the 2016-17 academic year, Section members were the Grant Holders for over \$3.8 million and received funding from agencies ranging from NIH, CIHR, AIHS, a variety of Cystic Fibrosis organizations, local funding and drug trials. Dr. Michael Parkins, the Training Program research mentor, has been very successful in working with trainees to identify projects that have been successfully completed.

ANTIMICROBIAL STEWARDSHIP

Dr. J Conly*
Dr. J Kim
Dr. B Missaghi
Dr. O Larios
Dr. T Louie*
Dr. A Pattulo
Dr. E Rennert-May,
clinical fellow

CYSTIC FIBROSIS

Dr. H Rabin*
Dr. M Parkins*
Dr. R Somayaji,
clinical fellow

BIOFILMS AND MICROBIOME

Dr. K Brown, Prosthetic Joint Infections
Dr. T Louie*, *C. difficile*
Dr. B Missaghi, Gastrointestinal Biome
Dr. R Read, Antimicrobial Resistance in Cattle

MAJOR RESEARCH NODES WITH SIGNIFICANT RESEARCH FUNDING > \$3.8 MILLION

ANTIMICROBIAL STEWARDSHIP

Dr. J Conly*
IPC, MRSA biology/epidemiology
Dr. J Kim
IPC, MRSA

Dr. B Missaghi
IPC
Dr. O Larios
IPC

HIV/HCV (NAACORD AND DAD MEMBER)

Dr. D Church
Dr. J Gill*
*HIV/AIDS, economic analysis, domestic violence
in families with HIV*
Dr. J Janvier
HIV in Aboriginal communities
Dr. O Larios
co-infection HIV/HCV
Dr. G Macphail
HCV in marginalized patient populations

Opportunistic Funding
>\$250,000

STI's

Dr. R Read

Dr. A Chu

(including anal pap testing)

New Technology and Innovation

Dr. D Church

Dr. J Conly

Dr. D Gregson

Dr. O Larios

Dr. M Louie

Dr. D Pillai

Tropical Medicine

(member of the Geo-Sentinel Surveillance Site)

Dr. B Meatherall

Dr. B Missaghi

Dr. D Pillai

Dr. S Vaughan



Dr. J Conly
Infectious Diseases



Dr. R Read
Infectious Diseases



Dr. O Larios
Infectious Diseases

Several Section members guide research projects done by medical students and post-graduate physicians in the Cumming School of Medicine as well as working on projects with BSc students, Masters and doctoral candidates in the Department of Microbiology, Immunity and Infectious Disease. The most successful projects have focused on understanding the respiratory biome in Cystic Fibrosis patients (*Achromobacter* species, *Serratia marcescens*, *Pseudomonas aeruginosa*, and *Streptococcus* species including *Streptococcus milleri*), expanding our knowledge of the pathogenicity of *Staphylococcus aureus*, *Clostridium difficile* and HIV and understanding how patient care outcomes are altered by Infection Prevention and Control interventions or Antimicrobial Stewardship actions. Some Section members work on projects with students who have an interest in biofilm infections of prosthetic joints or assessing cure of vertebral osteomyelitis and outcomes of common infections treated in HPTP such as dental infections. The Section currently has 2 clinical fellowship members: Dr. Elissa Rennert-May (Antimicrobial Stewardship) and Dr. Ranjani Somayaji (Cystic Fibrosis). Dr. Will Connors is doing a Master of Public Health at Emory University.

EDUCATION

The Section is committed to providing education to all levels of learners in the Cumming School of Medicine and other health allied faculties at the University of Calgary. The Section is involved in formal teaching sessions, small group teaching sessions, and clinical bedside teaching for all the programs listed below. The Section is also involved in the evaluation processes, mentoring and doing remedial work with trainees in the programs listed below.

- undergraduate medical studies and Clerkship training (UME) Course 1-8
- residency training programs at the PGY1-3 (PME)
- residency training programs at the PGY4-5 (PME)
- ID Section is formally involved in the academic and clinical training of residents in Infectious Diseases, Medical Microbiology, Dermatology, Family Medicine, General Internal Medicine, Community Health, Obstetrics and Gynecology, and Pediatric Infectious Diseases
- Nurse Practitioners training program by teaching

The Section gives lecture/information sessions as part of Continuing Medical Education (CME) for Family Physicians and other clinical departments who ask for special lectures on infectious diseases topics.

EDUCATIONAL ADMINISTRATION AND LEADERSHIP

Program Director, Infectious Diseases

Dr. Andrew Johnson

The ID Resident Training Program is fully accredited by the Royal College of Physicians and Surgeons of Canada (reviewed February 2015). All members of the Section are actively involved in the ID training program. The Infectious Diseases Training Program and the Microbiology Program Training program work very closely together.

The Program is constantly renewing itself by responding to new requirements of the Royal College of Physicians and Surgeons of Canada or suggestions made by members of the ID section or the trainees. New modules have been created to address Royal College requirements for more exposure to Antimicrobial Stewardship and a 2nd block of Infection Prevention and Control experience. Revisions of the academic half day teaching sessions ensures an outstanding program. Academic half days are held co-jointly with the Pediatric ID trainees and the Medical Microbiology trainees. All topics are discussed from an Adult and Pediatric Infectious Disease perspective as well as from a Medical Microbiology perspective.

UNDERGRADUATE TEACHING

Course 1 Coordinator – Dr. B Meatherall

Medical Education Committee – Dr. R Read

Course 8 Coordinator – Dr. J Carson, Microbiology

CUMMING SCHOOL OF MEDICINE POST GRADUATE TEACHING (MEDICINE ASSOCIATED)

Global Health – Dr. S Vaughan, Dr. B Meatherall

Family Practice – Dr. R Read, STI module, Family Medicine, O & G

UNIVERSITY OF CALGARY NOT CUMMING SCHOOL OF MEDICINE

Faculty of Arts – Dr. R Read

Hematology

The section of Hematology and Hematological Malignancies has 32 members. This includes 21 Department of Medicine ARP members, 8 fee for service members and 3 clinical associates. Six division members have GFT appointments, while the remainder have major clinical appointments with the University of Calgary. The division saw one new recruit in 2016/17, with Dr. Sonia Cerquozzi starting practice in January 2017, after completing an advanced fellowship in Myeloproliferative Neoplasms at the Mayo Clinic in Rochester, Minnesota.

The division has recognized a need for recruitment to our thrombosis program, especially with the retirement of Dr. Karen Valentine in June of 2017. Through the Department of Medicine and Libin Cardiovascular Institute, the division is in the process of recruiting a second thrombosis specialist for 2018, with plans for a third member of this team to be recruited the following year.

The next area of clinical need identified has been for general hematology coverage at the South Health Campus. The division plans to recruit 2 hematologists to the site in the next two years. The requirement for these positions becomes more acute with the anticipated retirement of 2 division members in late 2018 or 2019.

CLINICAL

The section provides malignant and benign hematology consult services at all Calgary hospitals. Regularly scheduled clinics occur at the Peter Lougheed Center (Site Chief - Dr. Johan Lategan), South Health Campus (Site Chief - Dr. Ted Thael), Foothills Hospital, and Tom Baker Cancer Center (Site - Chief Dr. Peter Duggan). Inpatient hematology services are located at the Foothills and Peter Lougheed sites. In addition, section members provide outpatient malignant hematology clinics in Medicine Hat, and outpatient bone marrow transplant clinics in Edmonton.

Major Clinical programs of the section of Hematology and Hematologic Malignancies include the rare Blood and Bleeding Disorders Clinic, Immunohematology and Bone Marrow Failure Clinic, Thrombosis program, Malignant Hematology, and Bone Marrow Transplantation.

RARE BLOOD AND BLEEDING DISORDERS COMPREHENSIVE CARE PROGRAM (RBBD. DIRECTOR, DR. MAN-CHIU POON). The RBBD provides comprehensive and coordinated interdisciplinary care to adults diagnosed with rare hematological disorders. Currently, the RBBD provides care to 679 patients with rare bleeding disorders, 135 with hemoglobinopathies, 29 with paroxysmal nocturnal hemoglobinuria (PNH), 26 with congenital marrow failure syndromes, and 29 with hereditary angioedema (HAE), for a total of 859 patients. The program has seen more than a threefold increase in patient numbers in the past 10 years. An increase of 3.564-fold since 2007) RBBD initiatives and innovations for 2016/2017 include:

- Engagement of psychiatry in pain management to help with opioid craving/addiction problems in patients with Sickle Cell disease, with development of individualized pain protocol for home and ER management of pain crisis.
- QI/QA projects studying: ER management of RBBB-registered HAE patients presented with HAE exacerbation, and peri-partum bleeding in VWD patients.
- Development of a RedCap database with help from the University of Calgary Clinical Research Unit, to capture longitudinal data about the aging hemophiliac population and for women with bleeding disorders.
- Completion of a 4-day Strategic Planning Program to develop short term and long-term RBBB action plans for clinical care, research, education, and stakeholder relations up to 2022.

Initiatives in development for 2017-2018 include a pilot outreach project to provide care and education to patients and healthcare workers in areas such as Lethbridge and Medicine Hat, and the development of a haemophilia 'Center of Excellence' with a focus on aging hemophilia.

CHALLENGES facing the RBBB include increasing patient loads without changes in staffing complement, prospective collection of patient outcome data, the transition of patients from the pediatric to adult clinic care, and the need to provide outreach to patients living outside the Calgary area.

RESEARCH. The RBBB continues to grow its vibrant research program, with all clinic hematology staff and many of the allied health team members participating in research initiatives. Investigator initiated collaborative research initiatives include study of bone health among haemophiliacs, genetic determinants of inhibitor treatment success, pain assessment and management in haemophilia and sickle cell disease, clotting factor pharmacokinetics, pregnancy loss in VWD, and others.

The hemophilia Bone Health research program, under the direction of Dr. Adrienne Lee, and in collaboration with the McCaig Institute for Bone and Joint Health, is considered by the Association of Hemophilia Clinic Directors of Canada as one of the cutting edge bleeding disorders research program in Canada. In 2017, Dr. Lee was awarded the BHAP Early Career Investigator Award to continue her hemophilia bone health research.



Dr. P Duggan
Chief of Hematology

CHINA HEMOPHILIA EXCHANGE/INTERNATIONAL HEALTH PROGRAM
(DR. MAN-CHIU POON)

This international development program has worked to promote the care, education and research on hemophilia in China since 1993. Since 2004, the program has worked with 6 Chinese centers, helping them to develop a network for collaboration in care, research, education and training of other centers. There are now more than 40 centers with various capacities in China with at least one in each province. Low dose prophylaxis (at least for children) is now practiced in many centers with improved QoL including marked decrease in school absence. Low dose prophylaxis for adults are just in the pilot study stage, but already show improved QoL and community participation. Collaborative projects are gaining traction as a result, with 5 joint publications in 2016-17. In 2016, the RBBD annual exchange observership allowed 2 Chinese hematologist (from Beijing and Yangzhou) to have 2-week clinical observation in Calgary on comprehensive haemophilia care. In March 2017, we had one staff hematologist and one hematology resident (Dr. Dawn Goodyear and Dr. Ninada Ganta) enjoyed a reciprocal 2-week observership at the Peking Union Medical College Hospital Hemophilia Clinic. Calgary has now hosted 26 physicians, nurses, and physiatrists from China and have sent 3 hematologists and 3 hematology residents to Beijing, in addition to Dr. Poon. We are expecting a team of 4 physicians and nurses from Wuhan, China in 2018. In 2016, the program expanded with, for the first time, a paediatrician from Aluva, India was hosted as a clinical observer in Calgary.

IMMUNOLOGY/ BONE MARROW FAILURE PROGRAM

The Immunohematology program remains very busy and continues to grow. There are over 100 active patients in the clinic and there are currently a growing number of referrals. The recent addition of a dedicated part time nurse has proven to be a tremendous asset, allowing an increase in patient assessments and new consults, and providing continuity of care outside of clinic hours. A regular urgent patient clinic is planned. The availability of specialized genetic testing is often required to establish a formal diagnosis in these patients, testing currently not available in Alberta. This testing is currently being provided through collaboration with the NIH, while work is underway with CLS to provide some of these services locally. The Bone marrow failure program provides care to patients with PNH, aplastic anemia, and other. Accessing expensive drug therapy for PNH remains a challenge for this population. In this group as well, specialized genetic testing, as yet unavailable in Alberta, is often key in establishing a diagnosis.

THROMBOSIS (DIRECTOR, DR. DEEPA SURYANARAYAN)

The Calgary thrombosis program has seen tremendous growth in referrals since the recruitment of Dr. Suryanarayan in 2015. A second thrombosis physician is expected to start in early 2018. Clinical initiatives for 2018 will include the consolidation of thrombosis referrals across the Calgary zone, clinical collaboration between thrombosis and the anticoagulation clinic, and development of a Cancer Associated Thrombosis Clinic. The first interdisciplinary thrombosis case rounds was conducted in October and will continue on a regular basis. The program is currently sponsoring one multicenter, investigator initiated trial.

MALIGNANT HEMATOLOGY

(HEMATOLOGY TUMOUR GROUP LEADER, DR. CAROLYN OWEN)

The malignant hematology tumour group provides care for patients with hematological malignancies at the Tom Baker Cancer Center, Foothills Medical Center, and Peter Lougheed Center. In addition, regular outreach clinics are held in Medicine Hat. The group is divided into four areas of interest: Lymphoma, Leukemia and Myeloproliferative Neoplasms, Myeloma, and Bone Marrow Transplantation. The Hematology tumour group focuses on patient centered, evidence based care, with an emphasis on clinical trials and cutting edge cancer research. This latter focus continues to be reflected in the success of hematology clinical trials, representing close to half of all TBCC clinical trials activity.

BONE TRANSPLANTATION (DIRECTOR DR. ANDREW DALY)

Bone Marrow Transplantation. The University of Calgary BMT program, located at Tom Baker Cancer Center, The Alberta Children's Hospital and Foothills Medical Center, provides comprehensive care to patients undergoing hematopoietic cell transplantation and their families. The program is accredited by Health Canada and by the Foundation for Accreditation of Cellular Therapy (FACT). FACT accreditation is only awarded to programs that demonstrate the highest attention to quality management and patient outcomes. The program provides autologous transplants for residents of southern Alberta and allogeneic transplants for the entire province of Alberta. In the 2016-17 year, the BMT program treated 192 patients. Of these, 113 patients received an autologous and 79 received an allogeneic transplant.

OUTPATIENT CLINICS AND CONSULTATION SERVICES.

Hematology outpatient clinics are located at the Foothills Medical Center, Peter Lougheed Hospital, and South Health Campus, with one private office in Bridgeland. The majority of section members use a central triage process, which received 4,285 referrals in 2016/17, an increase of 7% over the previous year. An additional 600 referrals were seen outside of the central triage process.

Notable successes for the BMT program this year include expanding the use of autologous transplantation into non-malignant diseases like Multiple Sclerosis and Systemic Sclerosis. The University of Calgary BMT Program also became the first program in the world to successfully use gene therapy to treat a patient with Fabry disease, an inborn deficiency of alpha-galactosidase. In order to support this increased activity, the program secured funding to expand clinic hours to evenings and weekends, allowing autologous transplants to occur in an outpatient setting. The program continues an aggressive research agenda focusing on hematological malignancies, alternative donor sources for allogeneic transplantation and on prevention and treatment of post-transplant complications. The program has recruited Dr. Kareem Jamani to develop a chronic graft-versus-host disease and survivorship clinic.

Challenges and opportunities for the BMT program include further integration of the autologous transplant program and long-term follow-up clinics at the Cross Cancer Institute in Edmonton. While functionally separate, these clinics make up a significant portion of the activity of the Provincial BMT program. Common protocols for stem cell collection, pre-transplant conditioning chemotherapy and follow-up care are anticipated to lead to improved health outcomes for Albertans no matter where they live in the province.



EDUCATION

Education continues to be a key strength of the division, and members continue to provide hundreds of hours of undergraduate, postgraduate, and continuing medical education.

Educational Leadership Roles:

- Dr. Mona Shafey, Hematology fellowship program director
- Dr. M. Dawn Goodyear, Chair Course 1, UGME
- Dr. Deirdre Jenkins, Student Advocate for Mistreatment, Cumming School of Medicine Written Exam Board & Oral Exam Board for Internal medicine, RCPSC Evaluation Coordinator, Course 1
- Dr. Lynn Savoie, Chair of RCPSC Hematology exam committee Program Director, BMT fellowship, TBCC
- Dr. Peter Duggan, Program Director, Lymphoma Fellowship, TBCC Program Director, Myeloma, TBCC

HEMATOLOGY FELLOWSHIP TRAINING PROGRAM

(PROGRAM DIRECTOR, DR. MONA SHAFEY)

The Hematology training program had a total of seven trainees during the 2016/17 training year. In addition, two others pursued advanced fellowships in “Lymphoma” at the Tom Baker Cancer Center.

RESEARCH

In 2016/17, the Division published 67 peer-reviewed articles, 3 book chapters, and 62 meeting abstracts. Three New England Journal of Medicine articles were co-authored by Dr. Nizar Bahlis (2) and Dr. Russell Hull (1). Division members delivered 18 international, 22 national, and 32 local/provincial invited presentations. Division members received a total of \$1,013,000 in new grants, as well as \$960,000 in ongoing grant support. Notable new funding includes: \$600,000 awarded to Dr. Nizar Bahlis from the Terry Fox Foundation for “Molecular Myeloma Monitoring - the M4 Cohort Study”, \$186,000 awarded to Dr. Adrienne Lee from Bayer for “The Role of Factor VIII and Joint Arthropathy in Bone Density, Microarchitecture and Bone Strength in Adolescent Severe Hemophilia A” and \$59,000 awarded to Dr. Deepa Suryanarayan from CanVECTOR for “Apixaban Versus LMWH for Catheter Related Thrombosis in Cancer Patients”

In addition to direct grant support, the Hematology tumour group through Tom Baker Cancer centre generated over \$2,900,000 in clinical trials revenue in 2016/17, enrolling 144 patients to interventional clinical trials.

QUALITY

Quality Assurance and Patient Safety Program (Lead, Dr. Lesley Street)

The Hematology Tumour Board Meeting has implemented a format whereby all new lymphoma and Myeloma cases are presented and the treatment plans are decided by consensus. This important Quality Assurance process increases transparency and ensures our Provincial Tumour guidelines are followed.

The Reporting and Learning System is reviewed regularly and key issues or recurring problems are identified. To date, this system has been embraced by frontline inpatient and ambulatory staff to document possible and actual patient safety encounters. It does not fully capture, however, medical events or process errors unique to the practice of medicine. This highlights the need for a complementary system for physician input in these areas and raises the possibility of underreporting by physicians.

The Educational Case Review format has been adopted to replace traditional Morbidity and Mortality Rounds. These rounds serve as a venue to review medical events which highlight the need for systemic change rather than individual error.

Within the Bone Marrow Transplant program, mortality statistics and outcomes of transplant recipients are reviewed formally on a quarterly basis. Two full-time quality management specialists are employed within the BMT program focusing on Health Canada and accreditation standards.



Dr. J Tay
Hematology

AWARDS

- Dr. Michelle Geddes - Hematology Residency program Teaching Award 2016
- Dr. Michelle Geddes - Honour Roll, presented by the class of 2018 in acknowledgement of excellent contribution to medical education, 2017
- Dr. Dawn Goodyear - Associate Dean's Letter of Excellence, University of Calgary Cumming School of Medicine, 2016
- Dr. Dawn Goodyear - Honour Roll, presented by the class of 2018 in acknowledgement of excellent contribution to medical education, 2017
- Dr. Dawn Goodyear - Gold Award for Teaching, University of Calgary - Cumming School of Medicine 2016
- Dr. Deirdre Jenkins - Gold Star Teaching Award, 2016
- Dr. Deirdre Jenkins - Jones Award for outstanding contribution to the UME program 2016
- Dr. Carolyn Owen -2017 Honour Roll - In Acknowledgement of Excellent Contributions to Medical Education, University of Calgary, Cumming School of Medicine, Class of 2018
- Dr. Man-Chiu Poon - 2016 Foothills Hospital Medical staff Association Service Recognition Award.
- Dr. Man-Chiu Poon - Associate Dean's letter of Excellence in Teaching (Blood Course) 2016
- Dr. Man-Chiu Poon - Assistant Dean's Letter of Commendation in Teaching (Bronze Award, Blood Course) 2016
- Dr. Man-Chiu Poon - 2017 Honour Roll - In Acknowledgement of Excellent Contributions to Medical Education, University of Calgary, Cumming School of Medicine, Class of 2018



Notable achievements of the Hematology fellows include:

Teaching Awards:

- Bronze Award for Course 1 Teaching – Mike Kennah, Sylvia McCulloch
- Associate Dean's letter of excellence for clinical core teaching – Ninada Ganta, Megan Drew-McKinstry, Salma Shivji

Research awards:

- Oral Presentation, 2016 American Society of Hematology Annual General meeting – Dr. Gwynn Davies “A Pilot Study in Cancer Patients with Central Venous Catheter Associated Deep Vein Thrombosis in Upper Extremity Treated with Rivaroxaban (Catheter 2)”.
- ASH abstract achievement award – Dr. Amy Trottier
- Travel Grant for CanVECTOR research bootcamp – Dr. Dwip Prajapati
- CanVECTOR start-up award for research – Dr. Dwip Prajapati (Impact of PESI in driving disposition of patients with PE in ER)
- CanVECTOR start-up award for research - Dr. Salma Shivji (DOAC educational project)

Other:

- Senior internal medicine resident of the year at Rockyview General Hospital – Dr. Amy Trottier

ADMINISTRATION & LEADERSHIP

- Dr. Carolyn Owen, Hematology Tumour Board lead, TBCC
- Dr. Lesley Street, medical lead, QA/QI
- Dr. Lynn Savoie, President, Canadian Hematology Society
- Dr. Man-Chiu Poon, Director, Rare Blood and Bleeding Disorders Clinic
- Dr. Andrew Daly, President, Canadian Blood and Marrow Transplant Group
Director, Alberta Blood and Marrow Transplant Program Member, OneMatch Medical and Scientific Advisory Committee
Member, Canadian Blood Services Bioethics Advisory Panel.
Chair, Alberta Provincial BMT Oversight Committee.
- Dr. Peter Duggan, Division Chief, Hematology and Hematological Malignancies
Deputy Medical Director, Tom Baker Cancer Center
Co-chair of the NIH BMT clinical trials network data safety and monitoring board



Dr. C Owen
Hematology

Nephrology

The Section of Nephrology is comprised of 28 nephrologists that includes 12 full time faculty at the University of Calgary and 14 adjunct clinical members and 3 full time clinicians. Section members have diverse research interests in public health, health services, clinical epidemiology, and knowledge translation, basic and translational science. The section also has 3 members who are medical education specialists who contribute at all levels of the medical curriculum. Collectively, the section works together to provide clinical care as well as support the research and educational mission of the group. The Section also boasts several members with high profile leadership positions within the University of Calgary, Cumming School of Medicine and Alberta health Services.

2016-2017 was another outstanding year academically for the Section with high research productivity, clinical innovation and leadership. The section is also integrally involved with Kidney Health Strategic Clinical Network, which is an Alberta Health Services Program that enables the application of research knowledge to improve clinical practice. The Nephrology Research Group in SARP and the Section of Nephrology is one of the most successful research teams worldwide. Research in chronic kidney disease, acute kidney injury, dialysis, vascular access, health economics and health services rank among the top academic enterprises in Canada.



Dr. D Muruve
Chief of Nephrology

Key performance indicators included;
130 peer-reviewed publications in 2016-2017.
\$59,822,817 total active peer reviewed funding under management by section members as principal investigator or co-principal investigator.
The Division holds eleven CIHR grants, including 4 in the Foundation Scheme awarded to Drs. Tonelli, Manns, Hemmelgarn and James.
Section members also lead a variety of CIHR national teams and clinical trials. Dr. Manns co-leads the Can-SOLVE-CKD CIHR SPOR Network and Dr. Muruve co-leads a national team in Inflammation and Chronic Disease. Drs. Quinn, Ravani and Tibbles lead multi-centre clinical trials in vascular access and BK virus nephropathy respectively.
45 National or International invited presentations in 2016-2017.
60 trainees currently under direct supervision.
45 Invited National, International Presentations total in 2016-2017.

KEY PARTNERSHIPS – PROVINCIAL, NATIONAL AND INTERNATIONAL

1. Can-SOLVE CKD Network. Drs. Manns, Hemmelgarn, Tonelli, Muruve and James are members and key leaders in the Can-SOLVE-CKD Network. Dr. Braden Manns is the Co-Lead of the project.
2. Canadian National Transplantation Research Program. Drs. Muruve and Tibbles are key members of the CNTRP, co-leading several projects and serving on the Executive Committee (Tibbles).
3. Drs. Hemmelgarn, Tonelli, Manns, James and Muruve lead or co-lead multiple provincial and national team grants in Chronic Kidney Disease, Acute Kidney Injury, Chronic Disease, Medication Safety, Indigenous Health and Inflammation.
4. Kidney Health Strategic Clinical Network (KHSCN). Multiple members participate on the Core Committee of the KHSCN. Dr. Scott-Douglas is the KHSCN Medical Director.

RESEARCH

Division Head, Dr. Dan Muruve, leads a basic science research program on the role of inflammation in kidney disease. His group also oversees the Precision Medicine and Biobanking Program for glomerulonephritis and other diseases of the kidney. The Precision Medicine in Nephrology Research Program is comprised of researchers and clinicians at the University of Calgary's Cumming School of Medicine who share common interests in understanding the molecular and genetic mechanisms of kidney disease to define disease specific biomarkers, develop advanced diagnostic testing and targeted treatments for patients with kidney disease. The program is supported by the Biobank for the Molecular Classification of Kidney Disease (BMCKD), the only full-service kidney focused biobank in Canada.

Basic and clinical research on BK virus nephropathy is being conducted by Dr. Tibbles, under the BK-KIDNI trial. This trial is a multi-centre CIHR clinical study that may inform new approaches to deal with this opportunistic infection. Dr. Ravani is exploring kidney allograft failure and the risks associated with the transition back to CKD and renal replacement therapy in his CIHR-funded clinical research program.

Dr. Ahmed leads a translational research program in renal physiology as it pertains to CKD, cardiovascular disease, sex, diet, and sleep disorders.



Dr. L Girard
Nephrology

Dr. Girard leads multiple industry-sponsored and academic clinical trials for glomerulonephritis and other rare kidney diseases. Dr Manns works with provincial and national health care policy makers developing new evidence-based health policies regarding optimal physician payment models and drug formulary cost-sharing structures. His work has also examined the cost of care for patients with kidney care across the spectrum of chronic kidney disease.

The Roy and Vi Baay Chair in Kidney Research has contributed greatly to the development of research activities within the Division of Nephrology, under the direction of Dr Brenda Hemmelgarn, the Chair holder. The Chair currently provides salary support for an Assistant Professor, Dr. Paul Ronksley, to contribute to research activities in kidney and chronic disease. The Chair also provides a graduate salary award each year to students who are conducting research in the field of kidney disease.



Dr. B Hemmelgarn and Dr. M Tonelli
Nephrology

COLLABORATIVE RESEARCH

The Interdisciplinary Chronic Disease Collaboration (ICDC) is a motivated team of researchers led by Drs. Hemmelgarn, Manns and Tonelli. The ICDC mission is to improve the health and quality of life for all Canadians living with a non-communicable chronic disease regardless of their age, ethnicity or gender.

Can-SOLVE CKD is a pan-Canadian patient-oriented kidney research network co-lead by Dr. Braden Manns and involving numerous members of the Section of Nephrology. Can-SOLVE CKD is one of five chronic disease networks funded by the CIHR through the Strategy for Patient-Oriented Research. In partnership with patients, researchers, health care providers, and policy-makers, Can-SOLVE-CKD's goal is to ensure that every Canadian with or at high risk for chronic kidney disease receives the best-recommended care, experience optimal outcomes, and have the opportunity to participate in studies with novel therapies, regardless of age, sex, gender, location, or ethnicity.

Dr. Marcello Tonelli worked with colleagues from WHO, Medecins Sans Frontieres and UNHCR to ensure that medicines and simple devices for managing NCDs were included in the Interagency Emergency Health Kit, which is used by humanitarian agencies worldwide to respond to disasters and civil conflicts.

Locally, Dr. Braden Manns in collaboration with provincial health care policy makers, is enrolling 4,800 low income seniors to the ACCESS study, to determine the impact of free preventive medications and a self-management support program (aimed at lifestyle, and appropriate medication use and adherence) on patient health and health care costs over a three year follow-up period.

Drs. Quinn, Ravani and MacRae are asking a bold question in the CIHR-sponsored ACCESS Study, the results of which may transcend conventional knowledge, clinical guidelines and healthcare policy for patients starting hemodialysis.

Dr. Matthew James leads a multidisciplinary provincial program for acute kidney injury in patients undergoing treatment for cardiovascular disease in two studies: Contrast RISK - Reducing Injury Sustained by Kidneys and Strategy for Uptake of Processes for Recognizing and Responding to AKI (SUPPORT).

With support from the Kidney Foundation and Heart and Stroke Foundation of Canada, Dr. Sofia Ahmed continues to investigate the impact of diet and vitamin D on renal physiology and chronic kidney disease.

INNOVATION AND THE INTEGRATION OF RESEARCH AND CLINICAL CARE

The Section of Nephrology, SARP and the KHSCN work together to introduce research and evidence-based innovations to the clinical care of patients with kidney disease. The group operates a multidisciplinary Quality Improvement (QI) Committee to promote and support excellence in kidney care. The committee unites clinical, operational and research representatives, along with allied health providers, to evaluate current quality improvement projects and to coordinate the implementation of new projects in the future, in order to sustain long-term system improvements. Currently the QI Committee is working several projects that include:

1. Improving the timing of Palliative Care
2. Consults for patients in conservative care
3. Delivering Care Based on Patient's needs
 4. Amputation Prevention
 5. Falls Prevention
6. Best possible medication history.

SARP and the Division of Nephrology Central Access and Triage system aim to provide rapid and efficient care of patients referred to Nephrology and to reduce wait lists. The use of a dedicated Outpatient Elective Referral Clinic at the South Health Campus, telephone consultations as well as the eReferral system through Alberta Netcare allows a rapid response to physicians in need of a non-urgent nephrology consult or opinion. Urgent and semi-urgent patients, as always, are seen within 2 weeks in the Urgent Nephrology Clinic at the Sheldon Chumir Health Centre.

EDUCATION

The Nephrology Fellowship Training Program is directed by Dr. Sophia Chou and was accredited in 2015. Formal Courses include; MDCN 310 and MDCH 741 through the University of Calgary. Dr. Jennifer MacRae oversees the Hemodialysis Subspecialty Training Fellowship.

Continuing Medical Education has two leaders; Dr. Adam Bass, Dr. Sophia Chou and hold Nephrology Grand Rounds, Kidney Biopsy Rounds, Morbidity and Mortality Rounds, Difficult Case Rounds and a Journal Club.

OVERALL TRAINEES FOR 2016-2017	
Clinical Fellows	3
Clinical (Resident) Research Trainees	13
Post-doctoral Fellows	10
PhD Graduate Students	12
MSc Graduate Students	17
Undergraduate Students	5
Total	60

Number of Teaching Hours	
Undergraduate	1600+
Postgraduate	1000+
Graduate	2500+
CME	100+
Thesis Supervision	500+
Total	5700+

KEY PARTNERSHIPS – PROVINCIAL, NATIONAL AND INTERNATIONAL

1. Can-SOLVE CKD Network. Drs. Manns, Hemmelgarn, Tonelli, Muruve and James are members and key leaders in the Can-SOLVE-CKD Network. Dr. Braden Manns is the Co-Lead of the project.
2. Canadian National Transplantation Research Program. Drs. Muruve and Tibbles are key members of the CNTRP, co-leading several projects and serving on the Executive Committee (Tibbles).
3. Drs. Hemmelgarn, Tonelli, Manns, James and Muruve lead or co-lead multiple provincial and national team grants in Chronic Kidney Disease, Acute Kidney Injury, Chronic Disease, Medication Safety, Indigenous Health and Inflammation.
4. Kidney Health Strategic Clinical Network (KHSCN). Multiple members participate on the Core Committee of the KHSCN. Dr. Scott-Douglas is the KHSCN Medical Director.

DIVISION LEADERSHIP

Dr. Brenda Hemmelgarn
Head, Department of Community Health Sciences,
Cumming School of Medicine, University of Calgary
Board of Directors, Vice-Chair, Alberta Health Services
Board of Directors, Member, Canadian Academy of Health Sciences
Board of Directors, Member, Kidney Foundation of Canada, Southern
Alberta Branch

Dr. Braden Manns
Svare Professorship in Health Economics, Faculty of Medicine, University
of Calgary (2014-2019)

Dr. Marcello Tonelli
Associate Vice-President, Health Research, University of Calgary
Associate Dean, Health Research, Cumming School of Medicine,
University of Calgary
Chair, Canadian Task Force for Preventive Health Care
Chair, International Society of Nephrology, Research Portfolio

Dr. Kevin McLaughlin
Assistant Dean, Undergraduate Medical Education Research and
Innovation

Dr. Dan Muruve
Section Chief, Nephrology
Medical Director, Southern Alberta Renal Program

Dr. Jennifer MacRae
Chair, CSN Vascular Access Work Group, Canadian Society of
Nephrology

Dr. Pietro Ravani
Chair, ERA-EDTA, Scientific Committees, Section Chair, ERA-EDTA,
European Renal Association

Dr. Nairne Scott-Douglas
Medical Director, Kidney Health Strategic Clinical Network, Alberta
Health Services



Dr. S Ahmed
Nephrology



Dr. A Bass
Nephrology

MAJOR AWARDS

Dr. Brenda Hemmelgarn

2016 GREAT Supervisor Award, Faculty
of Graduate Studies, University of Calgary

2016 Kidney Foundation of Canada Dr. JB Dossetor Mission Award – Research

2016 Killam Annual Professor Award, University of Calgary

2017 Kidney Foundation of Canada, Medal for Research Excellence

Dr. Braden Manns

2016 Alberta Venture Magazine's 50 Most Influential People

2017 Kidney Foundation of Canada, Medal for Research Excellence

Dr. Kevin McLaughlin

2016 Michael Tarrant award for contribution to undergraduate medical education

2016 Best class composite memory award (class of 2018)

2016 Canadian Society of Nephrology Clinical Nephrology Teaching Award

Dr. Robert Quinn

2016 Silver Tongue Award in recognition of outstanding contribution Internal Medicine Residency Program, University of Calgary

Dr. Adam Bass

2017 Award for Undergraduate Medical Education, Clinical/Adjunct/Research Faculty

Dr. Nairne Scott-Douglas

2017 FMC Physician of the Year

Dr. Louise-Philippe Girard

2017 ARP Division of Medicine Merit Award for Outstanding Clinical, Educational and Research Contributions

Dr. Marcello Tonelli

2016 “Highly Cited” researcher, Thomson-Reuters



SOUTHERN ALBERTA RENAL PROGRAM (SARP)

Southern Alberta Renal Program (SARP) is dedicated to providing a full spectrum of care for all of its patients throughout their renal journey. The Southern Alberta Renal Program is integrated with the Section of Nephrology at the University of Calgary that plays a leading role in kidney disease research, advancing knowledge and discovery for kidney diseases. Together the Section of Nephrology and the Southern Alberta Renal Program work to integrate research, innovation and clinical care to provide the best possible outcomes for patients with kidney disease.

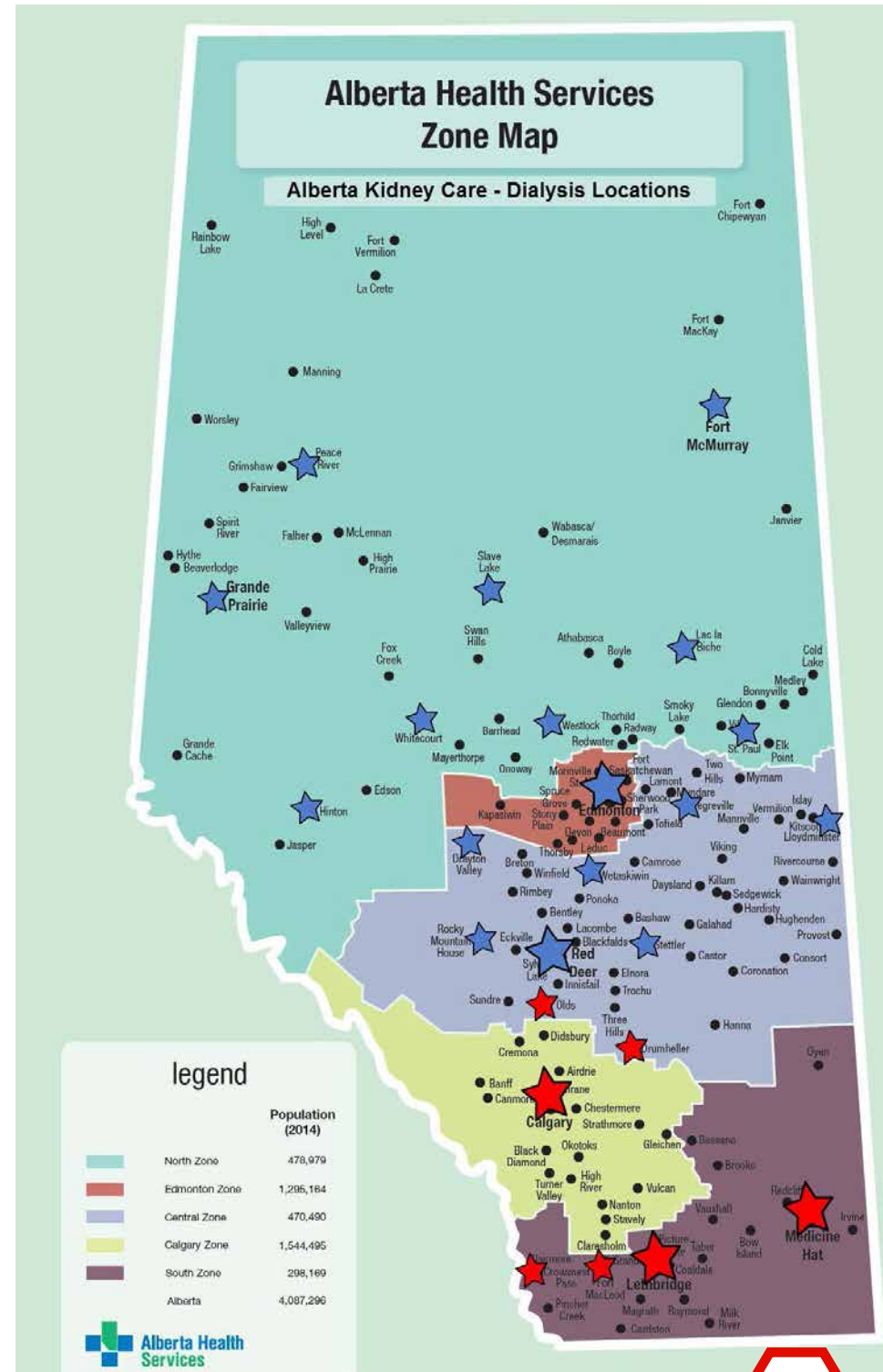
The Southern Alberta Renal Program (SARP) provides chronic kidney disease and dialysis services for an estimated 2.1 million people south of Red Deer, and also for a small number of people in neighboring sections of Saskatchewan and British Columbia. These services take place primarily on an outpatient basis. The multidisciplinary team includes the Section of Nephrology, registered nurses, licensed practical nurses, social workers, dietitians, pharmacists, spiritual care and other allied health providers. SARP and the Section of Nephrology consist of 30 practicing nephrologists and over 500 allied health care professionals who provide clinical renal services to 14 unit locations in 3 cities and communities from the town of Olds south to the American border.

The goals of SARP and the Section of Nephrology are:

- Improve the health and quality of life for patients and families living with kidney disease.
- To prevent kidney failure through education, early detection and management of high risk individuals.
- To delay the onset of dialysis in chronic kidney disease patients.
- To increase the use of home-based dialysis therapies.
- To ensure access to appropriate treatments, including transplantation and supportive care as patients move through the continuum of kidney care.
- To plan for future operation, financial, business, and clinical needs in an environment that is sustainable and accessible.
- To be international leaders in health services, population health, clinical research and precision medicine for kidney diseases.

Approaching patient care at every level of the chronic kidney disease spectrum including:

- Clinic services for chronic kidney disease care, including outreach to at risk demographic groups, support for community-based health care providers serving renal patients, and specialty clinics to support a diverse patient population.
- Renal replacement therapy for end stage kidney disease, which comprises hemodialysis and peritoneal dialysis, including a home PD assist program and a home nocturnal hemodialysis program.
- Acute/inpatient care, including services in acute care facilities and outreach dialysis to both South Health Campus and Rockyview General Hospital in Calgary.
- Palliative and conservative care services for patients with end stage renal disease.
- Collaboration with the Southern Alberta Transplant Program (ALTRA) to support patients awaiting kidney transplantation.



SARP PROGRAMS, SERVICES AND THEIR GROWTH

Clinic Services provided; Chronic Kidney Disease Clinic, General Nephrology Clinic, Dietician Clinic, Renal Diabetes Clinic, Kidney Disease Prevention Clinic, Glomerulonephritis Program, Genetic Disease Clinic, Advanced Care Planning and Kidney Stones Clinic. The average number of central referrals has increased from 118 per month in the 2012-13 fiscal year to 264 per month in the 2016-17 fiscal year. This is a 124% increase over four years. This is a clear indicator of continued future growth in demand for all SARP services.

CLINIC SERVICES

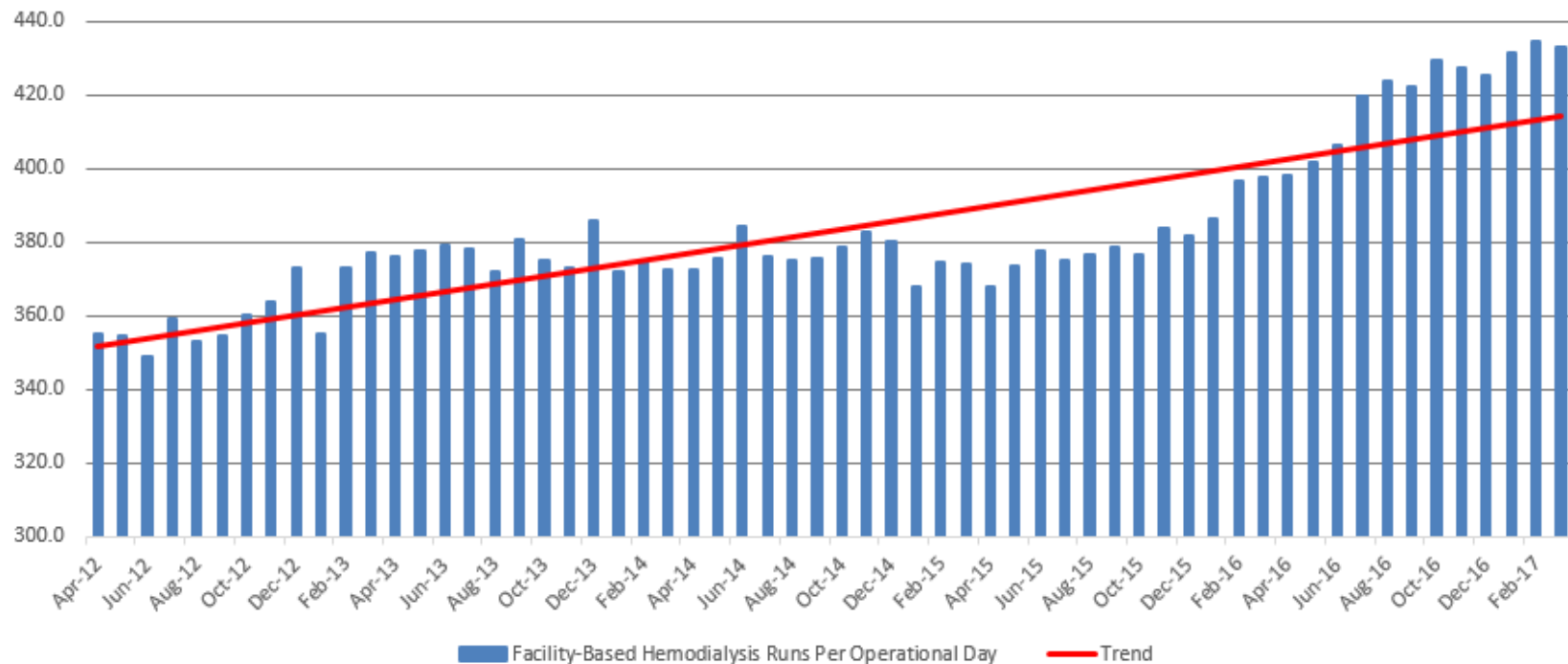
- The number of distinct patients who received non-dialysis / clinic services from SARP reached a new record high in the 2016-17 fiscal year, at 5,053. This is a 34% increase in only four years.

CLINIC VISITS

- The overall number of clinic visits increased by 1.2% in 2016-17, compared to the year before, to a total of 42,887. The most growth occurred in the Calgary Zone, where the number of clinic visits increased by 3.7%.

SARP and the Section of Nephrology operates four Kidney Disease Prevention Clinics to provide early detection and preventative care services for populations at high risk of kidney disease. This includes Indigenous peoples in Canada, a population with a 40% incidence rate of diabetes. All four clinics are led by nurse practitioners who deliver services on-site to reach high risk individuals within their communities. In 2016-17, a total of 147 patients were seen by the four Kidney Disease Prevention Clinics, a 1% increase over the previous year.

SARP Facility-Based Hemodialysis Runs Per Operational Day - Five Year Trend





RENAL REPLACEMENT SERVICES AND THERAPIES

Facility –Based Hemodialysis, Peritoneal Dialysis, Home Hemodialysis, Acute Hemodialysis, Outreach Hemodialysis, Transient Hemodialysis and Inpatient Nephrology Service.

Hemodialysis Growth

- SARP is currently experiencing its highest ever demand for facility-based hemodialysis, a demand that continues to rise. A total of 131,744 HD treatments were provided in SARP facilities in 2016-17, a 10.4% increase over the previous year and by far a new record high.

Peritoneal Dialysis Growth

- SARP assesses all patients for eligibility to home therapies, and has a year-end rate of 20.6% of patients on peritoneal dialysis. However, total peritoneal dialysis treatment days declined by 10% from the year before due to a lower entry rate and transfers to hemodialysis. In total, 24% of new dialysis patients in SARP started on peritoneal dialysis. The decline in peritoneal dialysis rates has contributed to the substantial increase in hemodialysis treatments.

Home Hemodialysis

- The number of patients receiving nocturnal hemodialysis at home as of March 31, 2017 was 77. This number has remained relatively stable for the past four years, but SARP is exploring options to increase the availability of this treatment.

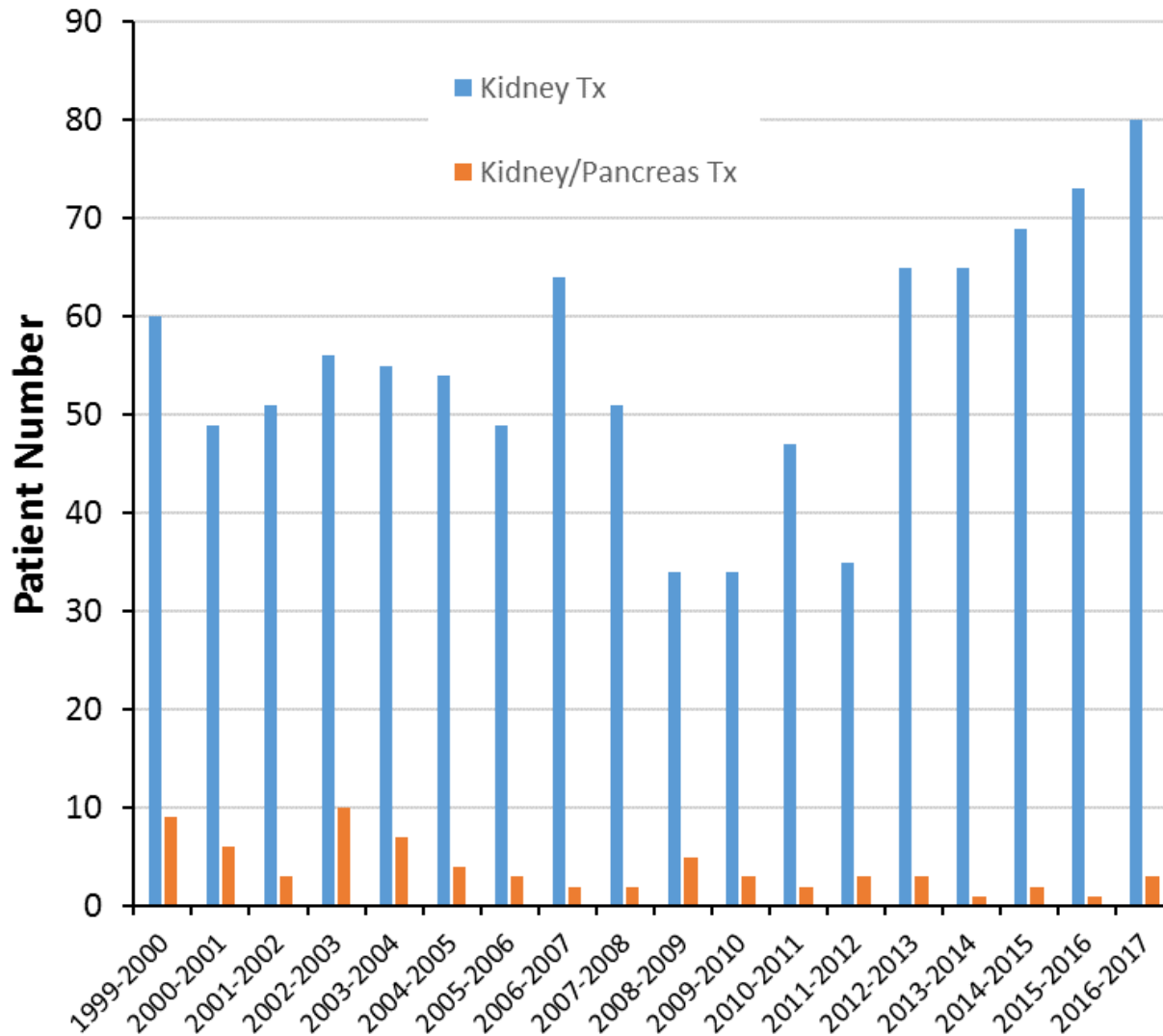
Off-Unit Hemodialysis

- SARP provides HD treatments in other departments when required, such as when an inpatient can't be moved or when no space exists in the renal unit. In 2016-17, off-unit runs increased by 4% to a total of 1309. These runs are more costly, but are increasing due to capacity pressure on units.

SARP expanded its outreach dialysis program to the Rockyview General Hospital in 2016. Dialysis machines are now installed at both the South Health Campus and Rockyview General Hospital in Calgary, and trained SARP staff from the Foothills Medical Centre travel to the outreach sites when required to provide dialysis to inpatients there. This decreases the need to transfer acutely ill inpatients across the city for dialysis, and provides system-wide cost savings. A total of 110 outreach hemodialysis runs were provided at the two sites in the last fiscal year.

Exercise Program

- The SARP exercise program operates in 11 dialysis units, and a total of 228 patients are currently enrolled and supported by SARP kinesiologists. Patients spend part of their regular hemodialysis treatment time using a bicycle pedal device, which improves dialysis outcomes and overall patient health and has been demonstrated by SARP, through peer-reviewed research, to lower hospitalization rates and lessen length of stay for hemodialysis patients. The success of SARP's exercise program has led to the establishment of similar programs in Edmonton, Manitoba, and Toronto.



Conservative Care

- A total of 132 patients were seen by the Conservative Care service in the 2016-17 fiscal year. This number has been trending slowly downward over the past two years, possibly because of a small decrease in the overall number of patients who have been on dialysis for multiple years.

Modality Education

- Modality Education activity increased by 74% compared to the previous year, reaching a total of 571 visits.

Transplant Services provided; Operational support is provided by Southern Alberta Transplant Program (ALTRA). Currently, the Section of Nephrology has 5 physicians dedicated to kidney transplant clinical care. Dr. Simardeep Gill will join the group in 2017 as its 6th transplant nephrologist. In 2016-2017, 80 kidney transplant and 3 kidney-pancreas transplants were performed. The number of transplants have increased substantially over the past few years in part due to the adoption of "donation after cardiac death" (DCD) practices.

Physician Wellness

OVERVIEW

Physician Wellness has been formally recognized within the DOM since 2004. Over the past 12 years, the portfolio has focused on 1) enhancing literacy around physician wellness, promoting physician wellness with an evidence-based approach, researching the topic in a scholarly fashion, translating the knowledge gained into programs and practical tools, hearing the voices of our colleagues at the grass roots level, reaching colleagues across every career stage, and engaging leadership to engender change. All this has been accomplished by a very small and dedicated team, with remarkable support from many, most notably the DOM and W21C. We have earned an international reputation as researchers and thought leaders in the field. Our next big goal is to develop a faculty level and eventually provincial level wellness hub to join together all those currently doing work in the field so we can both plan collectively, and share resources.

BACKGROUND

The portfolio of Vice Chair, Physician Wellness and Vitality was created by Dr. John Conly within the Department of Medicine (DOM) in 2004 in order to identify and improve work-life balance issues for members of the Department and to promote physician wellness, in a scholarly fashion. The following document summarizes the activities during the 2016-2017 academic year. Our research home is nestled within the W21C Research and Innovation Centre.



Dr. J Lemaire
Vice Chair, Physician Wellness

RESEARCH

MTU preceptor study: In this CIHR funded study we explored the role of the attending physician preceptor and its relationships to the work context and wellness. We have analyzed almost 100 hours of observational data, and 73 stakeholder interviews. Results have been presented at multiple conferences locally, nationally, and internationally.

- We have two publications in high impact journals and are working on several additional manuscripts
- The results of this study can inform at many levels
- Royal College Physicians and Surgeons of Canada (CanMEDS 2015, Competency by Design, Entrustable Professional Activities, Training in GIM)
- Divisions of GIM (How to make the MTU preceptor role sustainable, physician wellness aspects)
- Departments of Medicine (How to optimize patient care and medical education)
- AHS (How to optimize multidisciplinary care, team work, health system inefficiencies, patient flow)

Stakeholders' perceptions of the MTU preceptor role: In a secondary analysis of the MTU preceptor data set, Dr. Erin Miller (Internal Medicine resident, mentorship research project) joined our research team to compare 7 stakeholder groups' perceptions of this important role (patients/families, senior nurses, bedside nurses, residents, medical students, allied health care professionals, and preceptors themselves), to identify the overlaps and the differences. This is important in order to develop a comprehensive view of the role that includes all stakeholders' views, especially given at times competing or even conflicting role elements (e.g. teaching time vs discharging patients vs assessing ICU or ER patients for transfer). We have just finished drafting the manuscript for this study. Another manuscript is emerging documenting this role from the perspective of the stakeholders (Alicia Polachek, Kenneth Blades W21C).

Public perceptions around physician wellness: In this AHS funded study, we explore public awareness around the topic of physician wellness and whether or not patients perceive a link between physician wellness and patient care. This study emerged from a Med 440 project with a U of C medical student, Darby Ewashina, now a resident in psychiatry. The results have been presented at national and international conferences, and the manuscript is currently under review at CMAJ.

Anticipatory stress around job availability for new graduates: We are collaborating with Dr. Sean Grondin, and Dr. Janet Edwards in a funded study to assess how much anticipatory stress is created around job availability, what resources are available to program directors and trainees, and what we can do better.

The impact of teaching about contextual tensions on the MTU: This project is as yet unfunded. We have secured ethics approval and have piloted the study at the University of Calgary, and the University of Saskatchewan. We will go to University of Alberta in Jan 2018.

We strive to share our work at appropriate academic conferences. Some examples include:

- May 2016, we presented at the WellMed2 Conference, 2nd International Meeting on Well-Being and Performance in Clinical Practice in Chalkidiki, Greece: "The 'Safety Architect' Role of the Attending Physician on the Wards".
- September of 2016, we presented our work at the BMA/AMA/CMA International Conference on Physician Health in Boston, USA, Increasing Joy in Medicine - that included an oral presentation: "Aha! Hahaha: Attending Physicians Use Humor on Medical Teaching Units", and a poster: (by student Dr. Darby Ewashina) "How Does My Doctor Seem Today? A Qualitative Study of Patients' Perceptions Regarding Physician Wellness and Its Link to Patient Care"
- April 2016 (Oral Presentation by internal medicine resident Erin Miller), Canadian Conference on Medical Education, Montreal, Quebec. Miller E, Polachek A, Wong H, Lemaire JB. "Unique Perspectives on the Medical Teaching Unit Physician Preceptor Role: A Qualitative Study of Stakeholder Groups' Views"
- April 2016 Canadian Conference on Medical Education, Rethinking Teaching and Learning, Winnipeg, Manitoba. Lemaire J, Blades K, Polachek A, Pendharkar S. "A Comprehensive View of the Medical Teaching Unit Preceptor Role Based on Stakeholders' Perspectives" May 1st, 2017

In addition, our team's work was recognized through invitations for Dr. Lemaire to speak internationally, nationally, and locally, both about the research and as a thought leader around physician wellness initiatives.

Some examples include:

- Invited Speaker, International Conference on Residency Education, Niagara Falls, Ontario, Canada "Physician Health Symposium Healthy Healers, Healthy Workplace - From Awareness to Action: The Clinical Learning Environment" September 2016
- Keynote Address, WellMed2 Conference, 2nd International Meeting on Well-Being and Performance in Clinical Practice, Chalkidiki, Greece "Beyond Traditional Competencies: How Hospital Ward Attending Physicians Use Adaptability, Humanism, Relationality and Wellness to Negotiate the Complex Environment" May 2016
- Keynote Speaker, University of Toronto, Physician Health Symposium, Toronto, Ontario. "Work and Learning/Context and Culture" May 30, 2017
- Invited Speaker, The Ottawa Hospitals Department of Medicine Grand Rounds Physician Wellness Lecture, Ottawa, Ontario. "From Burnout to Wellness" March 21, 2017
- Invited Workshop Facilitator, Division of General Internal Medicine, University of Ottawa. Lemaire JB, Kachra R, Zarnke K, Polachek A. "The Important Role of the Clinical Teaching Unit Preceptor: A Focus on the Complex Work Environment" March 20, 2017
- Invited Speaker, Department of Medicine, College of Medicine, Grand Rounds, Saskatoon, Saskatchewan. "From Burnout to Wellness" February 1, 2017
- Invited Workshop Facilitator, workshop for Academic Half Day, General Internal Medicine Senior Residents, Division of General Internal Medicine, University of Saskatchewan. Lemaire JB, Card S, Spilg E, Kassam N, Kachra R, Zarnke K, Polachek A. "Transitioning to the Clinical Teaching Unit Preceptor Role: A Focus on the Complex Work Environment" February 1st, 2017.
- Invited Workshop Facilitator, workshop for GIM attending physicians, Division of General Internal Medicine, University of Saskatchewan. Lemaire JB, Kachra R, Zarnke K, Polachek A. "The Important Role of the Clinical Teaching Unit Preceptor: A Focus on the Complex Work Environment" January 31, 2017

In addition, we strive to publish the important work of our research team:

- Lemaire JB, Wallace JE. Burnout among doctors. British Medical Journal 2017;358:j3360 (Invited editorial)
- Dyrbye LN, Trockel M, Frank E, Olson K, Linzer M, Lemaire J, Swensen S, Shanafelt T, Sinsky CA. Development of a Research Agenda to Identify Evidence-Based Strategies to Improve Physician Wellness and Reduce Burnout. Annals of Internal Medicine. 2017 May 16;166(10):743-4.
- Lemaire JB, Wallace JE, Sargious P, Bacchus M, Zarnke K, Ward DR, Ghali W. How Attending Physician Preceptors Negotiate Their Complex Work Environment: A Collective Ethnography. Academic Medicine. 2017 Aug 22.
- Bacchus M, Ward DR, Grood J, Lemaire JB. How evidence from observing attending physicians links to a competency based framework. Medical Education. 2017 Jun 1;51(6):633-44.
- Brown GE, Bharwani A, Patel KD, Lemaire JB. An orientation to medicine for new faculty of medicine members: meeting a need in faculty development. IJME. 2016. 7:255-260.
- Polachek AJ, Wallace JE, Gautam M, de Grood JA, Lemaire JB. The look and feel of resilience: a qualitative study of physicians' perspectives. J Hosp Adm. 2016. 5:47-54.

KNOWLEDGE TRANSLATION, EDUCATION AND INFORMATION EXCHANGE

The Well Doc? Initiative is used as a vehicle to educate and translate knowledge around physician wellness. We target the entire range of the medical career, including medical students, residents, new faculty, staff physicians across many specialties, and allied health care professionals.

- Presentations: From January 2016 to June 2017, we logged over 25 presentations. Some were presentations of the research at academic conferences but many were in response to perceived needs or requests. For example, we attended the division of respiratory medicine annual retreat, offering an overview of physician wellness and a hands on experience learning a breathing technique using real-time biofeedback devices. We also spoke to anesthesiologists, OB/GYN, pediatricians, and new faculty hires at the University of Calgary, Cumming School of Medicine.
- New programs:
 - We piloted a series of supper meetings to help new attending physicians in GIM transition to this challenging role. The content was based on knowledge gained from our MTU preceptor study. We also piloted this initiative in Saskatoon and Ottawa, with great success.
 - On the other side of the transition, we are developing a curriculum to address transition to practice for GIM residents who will become MTU attending physicians. We piloted some learning materials in Calgary and Saskatoon (Edmonton in January 2017). We evaluated this pilot and have submitted an abstract to the 2018 Canadian Conference on Medical Education. This work is in conjunction with Dr. Sharon Card at the RCPSC. This content will eventually be embedded into the GIM sub-specialty training curriculum.
 - We are developing a DOM Advice and Support team.
 - We are revisiting Career Adaptation Guidelines for physicians who need to alter their work patterns based on life events or career stage.
- Partnerships: We continue to work with the UC Office of Faculty Development offering once or twice a year orientations to wellness to our new faculty members. We are working with the UME office and the PGME office (Drs. Maureen Topps (now Lisa Welechovitch, Pamela Chu).

OUR GOAL IS TO DEVELOP A WELLNESS HUB TO COORDINATE THE EFFORTS OF ALL THOSE WORKING IN THIS FIELD.

ADMINISTRATION/W21C WELLNESS TEAM/PARTNERSHIPS

We continue to advocate for and to represent physician wellness and vitality through many different avenues. As vice chair within the Department of Medicine, Dr. Jane Lemaire endeavors to advocate for physician wellness at the Medical Services Executive Meetings. Wellness continues to be a productive and well recognized portfolio within the W21C Research and Innovation Centre, supported by the incredible W21C team that includes Dr. William Ghali, Jill de Grood, a long standing academic team member who is now the W21C Director, and Alicia Polachek who is the senior research associate for wellness. The Wellness team continues to seek collaborations and partnerships. Dr. Lemaire is the Chair of the AMA Physician and Family Support Group Advisory Committee and a member of the AHS Physician Wellness Committee. She is also a member of the International Alliance for Physician Health and served as a CanMEDS 2015 ePanelist for the Professional-Physician Health Expert Working Group. She has recently been invited to serve as a member of the newly formed Royal College of Physicians and Surgeons of Canada Health Advisory Group, RCPSC. She serves as an advisor to the CMA Physician Health team, reviewing their foundation documents.



RECOGNITION

- The work of the Wellness Team was recognized through the 2016 Canadian Medical Association Physician Misericordia Award for outstanding leadership and support for physician colleagues awarded to Dr. Jane Lemaire in August 2016, at the CMA Annual General Meeting, Vancouver, BC.
- Dr. Lemaire was invited to comment to a small gathering of Physician Wellness researchers at the American Medical Association headquarters in Chicago in September 2016. The goal was to develop a national research agenda. The proceedings were published as an “Ideas and Opinions” piece in the Annals of Internal Medicine in April 2017.
- Dr. Lemaire was invited to review the Canadian Medical Association’s revised foundation documents for Physician Health in August 2017.
- Dr. Lemaire was an invited member of the abstract review committee for the American Conference on Physician Wellness (October 2017 San Francisco).

FINAL COMMENTS

Physician Wellness is part of our daily dialogue for many. We share an enhanced awareness that it is important for us on a personal level, and that it is part of our professionalism to ensure that we are well. This enhanced literacy is now being followed by asks for concrete tools and strategies to be pro-active in our approach. We must practice risk reduction in the realm of mental health as we do for physical health. In doing so, we reduce the stigma of mental illness and exert a powerful public health influence by supporting wellness of all sorts as an important health goal. We can discuss and learn how to thrive within the wonderfully rewarding yet challenging career path we have all chosen.

As an added layer, we need to recognize that although physicians have a responsibility as professionals to care for themselves, the medical profession and the healthcare systems in which we work must also support physician wellness. Accordingly, interventions for burnout and promotions of physician wellness should occur at a systems level as well as at the individual physician level.

We could not do any of this work without the support of many. The DOM has continued to support Dr Lemaire in this role, recognizing its importance. As far as we know, there is no other DOM in the nation that has a Vice-Chair role dedicated to this topic. The W21C continues to offer us a research home, including support from research assistants with expert skill (even in between the grants when funds dry up). The division of GIM supports this work, recognizing it as important scholarly contributions. AHS has provided support through providing the skills of the AHS Heart Math trainers, who have helped us to develop physician tailored versions of Heart Math as teaching tools. I must mention Krista Warners and Debbie Gray from AHS who have been invaluable advocates and colleagues. Most importantly, to all the physicians and health care providers who participate in our research studies who make this all possible.

Dr Jane Lemaire,
on behalf of the Wellness Team

Office of Education

The Office of Education was created in October 2016, with Karen Fruetel as the Vice Chair of Education.

The purpose of this office is to:

1. Foster educational excellence
2. Promote educational scholarship
3. Provide co-ordination of all educational programs in the DOM and liaise with the Cumming School of Medicine

The O of E is in its infancy and there are challenges. These include accessing robust evaluation data in a format that is informative and the challenge of the transition to CBD over the next 5 years. The Department of Medicine has developed an evaluation model to assess its effectiveness over the next 5 years.



Dr. K Fruetel
Vice Chair of Education

Some of the activities of the Office in the short time it has been open include:

- The creation of Department of Medicine Educational Executive Committee (DOMEEC), which brings together leaders in Undergraduate, Postgraduate and Continuing Medical education to advise the DOM on educational matters
- Providing support to young emerging leaders in Medical Education through sponsoring one member a year to attend the Canadian Leadership Institute for Medical Education.
- Restarting Medical Grand Rounds. A survey of members showed a majority of members wanted these rounds to start again. This will start in January 2018.
- Developing a Departmental response to Competency Based Education. four programs will commence with CBD in July 2018, followed by seven more phased in over the next four years. The DOM will play a role in helping programs in the DOM meet the challenges, but also provide a platform for these programs to work and learn together in areas of commonality in making this transition.
- Development of an Educational Matrix for evaluating members in the AMSHP who have FTE devoted to Education.
- Reaching out to educational leaders in the Cumming School of Medicine and also with other Vice Chairs of Education in the Departments of Pediatrics, Surgery, Oncology and Family Medicine. It is hoped that through these partnerships that the DOM will learn from others and lead in some areas of common interest.

Internal Medicine Residency Program

The 2017-8 year was a very successful one for the Internal Medicine Residency Program at the University of Calgary. There have been great innovations and initiatives in the areas of health advocacy, resident wellness, and Competence by Design. The highlights of our Program are noted below.

OUR TRAINEES

We have 32 PGY1's; 38 PGY2's; 32 PGY3's and 3 PGY4's.

We typically accept 25 Canadian Medical Graduates, 6-7 Alberta International Medical Graduates, 1 re-entry trainee (practicing family physician interested in starting an Internal medicine training program) and one transfer trainee per year. The goal is to keep the total number of trainees in the program at ~100 as this seems to be best for the balance of the educational mandate of the program and the service needs of the Department.

We have Canadian trainees from BC to Newfoundland and are known as a highly sought after program for the many reasons illustrated below, as well as the collegiality of the trainees and the Departmental Members. We have international trainees who have attended medical school from far away countries. Last year we had over 450 CaRMS applicants for the 32 available positions. We conducted over 200 interviews and appreciate the support from the members of the Department in making this a success.

FELLOWSHIPS

Most of our trainees pursue Fellowship programs and are highly successful in the Medical Subspecialty Match. Last year (for the July 2017 start) we had local trainees matched to the following.

General Internal Medicine: 6; Endocrine: 3 (2 staying in Calgary, 1 away);
Rheumatology: 4 (3 staying in Calgary, 1 away);
Hematology: 2; Respiratory Medicine: 4 (2 staying in Calgary, 2 away);
Infectious Diseases: 2; Cardiology: 2 Gastroenterology: 1 (away);
Geriatrics: 1; Nephrology: 2; Oncology: 1;
IM 4th year with core program: 3

Of the 31 trainees who recently entered their 4th year of training, 84% (26/31) matched to Calgary. Members of the Department should be proud to have so many trainees wanting to remain in the city after their core IM training.



Dr. M Mintz
Program Director, IMRP

LEADERSHIP TEAM

The Residency program is fortunate to have the strong support and leadership of Dr. Richard Leigh. We have been able to pursue many important initiatives as a result of his support and mentorship. We also appreciate the support of Dr. Karen Fruetel who has assisted with the Program and Departmental CBD initiatives.

The Program leadership team includes the following individuals: Program Director: Dr. Marcy Mintz. Associate Programs Directors: Drs. Stacey Hall (FMC-also curriculum committee chair, OSCE lead), Ghazwan Altabbaa (RGH- simulation lead), Paul Leblanc (PLC- assistance with trainees in academic difficulty), Paul Davies (SHC- MTU director). The Assistant Program Directors are Drs. Irene Ma (US and procedural skills lead with Dr. Janeve Desy) and Jason Tay (Research director). We also have four Chief residents who are integral in the day-to-day activities of the Program and help with the communication and organization of Program related activities. Our 2017-8 Chief Residents are Yael Shrom, Sudhir Nishtala, Brett Edwards and Amanda Cunningham.

In additions to RPC there are numerous committees that help with the day-to-day support of the Program and include the Curriculum Committee, MTU Committee, Assessment Committee, Research Committee and the Wellness Committee. There is strong administrative support in the Program with Ms. Stacey Dickinson as the newly appointed Team lead.

PROGRAM HIGHLIGHTS

1. **Simulation Program:** There is a strong simulation program for our trainees developed and led by Dr. Ghazwan Altabbaa. This included a Transition to Senior curriculum, weekly simulation scenarios for trainees at the RGH, a Simulation OSCE as well as a developing Safety curriculum. We are the only IM residency program in Canada with a RCPSC accredited Simulation program and are proud of this accomplishment. There are 3-5 trainees per year that are supported to take the RCPSC Simulation training course and are heavily involved in the Simulation curriculum. There is also an evolving simulation program at the SHC led by Dr. Alejandra Boscan.
2. **Point of Care Ultrasound: (POCUS):** Dr. Irene Ma is a leader in POCUS and we are lucky to have her in Calgary. After recently completing her PhD, she has returned back to Calgary to strengthen in the Ultrasound initiatives in the Department. Irene has developed a comprehensive bedside ultrasound and procedural skills curriculum for our trainees and has recently started a Bedside Ultrasound and Procedural Skills Elective for 8 interested trainees per year. Our program has been able to take Ultrasound training and procedural skills training to a nationally recognized level.
3. **Global Health:** Over the past 4 years we have had 2-4 trainees per year travel to Guyana to complete a 4-week international elective at the University of Georgetown. This has been a great experience for trainees on both sides of the world. Under the leadership of some of our very keen trainees there has also been regular tele-health educational sessions broadcasted to Guyana by our trainees. We are very proud of this partnership.

4. Health Advocacy: Two years ago the Curriculum committee established a Health Advocacy half day and we have raised over \$10,000 to support the Drop in Centre in monetary donations. We have also had over 100 hours of “trainee time” spent at the Centre to assist in meal preparation and clothing/furniture sorting.
5. Wellness Initiatives: The Program has a newly formed Wellness committee to help reinforce the importance of Mental Health awareness and personal health. Initiatives that have included lectures from Drs. Lemaire and Hanlon (PFSP), team building through quarterly Program lunches, monthly ice-cream Fridays on the MTU, after hours sports events (spin classes, boxing class, hikes) as well as a social committee that arranges evening events. Dr. Tania Pannu (PGY2) brought this initiative forward last year and has been working on scholarly initiatives to measure the impact of the initiatives on the perceived “wellness” of the trainees. She will be presenting the details in a podium presentation at the upcoming Canadian Conference on Physician Health in Ottawa. Dr. Julia Tien has been the faculty co-director of the Wellness committee and we are proud of this new initiative.



COMPETENCE BY DESIGN (CBD)

We are scheduled to formally start the RCPSC CBD initiative in July 2018. This is an enormous undertaking that is both exciting and daunting. A summary of what this is going to involve and where we stand is noted below:

Entrustable Professional Activities (EPA): The Canadian Internal Medicine Speciality Committee in conjunction with the RCPSC developed the EPAs for the core IM program. All of the Internal Medicine Program directors from across Canada have been involved with this initiative over the past 5 years. In total, there are 29 EPAs for the 4 years and 21 for the core 3 years. There are 3 EPAs for the transition to discipline (~3 month), 7 for the Foundations stage (~9 months), 11 for the Core stage (2 years) and 8 for the Transition to Practice stage (1 year which may be covered in fellowship). Each EPA involves a certain skill and must be deemed “achieved” to be passed. The number of successful assessments per EPA is still being finalized but will likely vary from 1-21 per EPA. A full list of the EPAs has been circulated to each Section head and educational lead. The EPAs have recently been mapped to specific rotations.

The local progress has been moving along with the following accomplished to date:

1. A pilot was done with the PGY1s for the 7 Foundation EPAs in the Spring of 2017. In total about 200 assessments were done and all of the trainees had the opportunity to receive face-to face-feedback. This was on a homemade Office 365 platform that I created and the data distribution (after the forms were submitted) was complex and not sustainable. An external IT consultant has been contacted to assist with the development of a new platform but approval from the RCPSC is required to move forward. Hopefully, we will be able to continue our pilot in the next few months.
2. All of the present PGY1's have been assigned an "academic advisor" with each advisor having between 1-5 trainees. The goal is for advisors to meet 3-4 times per year to review the trainees' academic progress.
3. A Transition to Discipline OSCE and ECG exam was piloted in 2016 to evaluate the success in achieving the objectives for the Transition to Discipline stage. This OSCE will be repeated on a yearly basis.
4. A boot-camp model was piloted for the present PGY1s that required a conversion of their half-day to a full day curriculum this past July and August. This occurred on four occasions to ensure a richer curriculum at the start of their training. The success of this initiative will be explored prior to next summer.
5. A Competence Committee has been mapped out with planned meetings 2-4 times per year. The goal will be to have the Academic Advisors present the progress of trainees through CBD. This is under development and Dr. Fruetel has taken a leadership role with this initiative.
6. Faculty development initiatives require ongoing work. The PGME office has workshops and is willing to reach out to individual sections to provide support in understanding the e-portfolio and the completion of the EPA assessments (technical support, what an assessment entails, etc.). Unfortunately the e-portfolio is not yet available and we do not have a workable platform to pilot at the present time. Now that data has been collected and EPAs have been assigned to rotations, targeted Divisional support in the future could occur. This is a monumental initiative and one that I hope to develop over the next 3-9 months.
7. Curriculum changes may be required to satisfy the EPAs that cannot be covered during the existing rotations. This is a Canada-wide concern and one that all programs will be exploring over the next 12 months. Examples include the procedural skills EPAs that require NG placement, venipuncture and radial blood gas sampling. Other EPAs require strong ambulatory experience early in the training and this will require a potential curriculum modification.
8. With the support of the PGME office we have developed a partnership with W21 to assist with some of the technical and administrative aspects of the CBD process.

Thank you all for your ongoing support,
Marcy Mintz

**Looking to
the Future...**



Dr. Glen Hazelwood
Rheumatology



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