



Alberta Academic Medicine and Health Services Program (South Sector)

Annual Report 2023-24

Responsibility for Reporting

For each fiscal year during the term of the AMHSP Master Agreement, Alberta Health Services (AHS) and the University of Calgary (UCalgary) shall provide the Province with an Annual Report for each of the Arrangements, prepared in accordance with Canadian public sector accounting standards.

The Annual Report is to include data and reporting that the Province requires from AHS and UCalgary to enable annual evaluation of the Program in accordance with the AMSHP Master Agreement, and specifically includes information regarding:

1. the delivery of Clinical Services;
2. the delivery of Non-Clinical Services (individually addressing the delivery of Education Services, Research Services and Leadership/Administrative Services);

3. the delivery of Program Support (individually addressing the delivery of Program Support to all Arrangements in aggregate); and
4. any achievements or outcomes enabled by the Program (for example, innovations and social accountability).

AHS and UCalgary shall also provide the Province with a fourth quarterly financial report, to be included in the Annual Report.

AHS and UCalgary shall provide the Province with the Annual Report by the stipulated date as agreed on by the Province and the AMHSP Operations Committee.

SOUTH SECTOR AMHSP

Clinical Neurosciences

The **Neurology, Neurosurgery, and Physical Medicine & Rehabilitation (PM&R)** AMHSP arrangements exist within the Department of Clinical Neurosciences. Combined, there are 85 Faculty members in the three AMHSP arrangements.

Medical Genetics

The **Medical Genetics & Genomics** AMHSP arrangement exists within the Department of Medical Genetics. There are 11 Faculty members in the Medical Genetics & Genomics AMHSP arrangement.

Pediatrics

The **Pediatrics** AMHSP arrangement exists within the Department of Pediatrics. There are 119 Faculty members in the Paediatrics AMHSP arrangement.

Family Medicine

The **Family Medicine** AMHSP arrangement exists within the Academic Department of Family Medicine. There are 53 Faculty members in the Family Medicine AMHSP arrangement.

Medicine

The **Internal Medicine** AMHSP arrangement exists within the Department of Medicine, and also includes Faculty members from the Division of Cardiology in the Department of Cardiac Sciences. There are 227 Faculty members in the Internal Medicine AMHSP arrangement.

Psychiatry

The **Psychiatry** AMHSP arrangement exists within the Department of Psychiatry. There are 23 Faculty members in the Psychiatry AMHSP arrangement.

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Neurology AMHSP
Neurosurgery AMHSP
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Psychiatry AMHSP
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Dr. Mark Anselmo
Zone Medical Director
Alberta Health Services
Calgary Zone



Dr. Richard Leigh
Senior Associate Dean, Faculty Affairs
Cumming School of Medicine
University of Calgary

Its that time of the year again when we, as the Co-Chairs of the Alberta Academic Medicine and Health Services Program (AMHSP) South Sector, are delighted to present the 2023-2024 South Sector AMHSP Annual Report. Of course, the hard work in compiling this report, which covers the period April 2023 – March 2024, was done by the leadership and finance teams of the 8 AMHSP South Sector Arrangements working in conjunction with Meghan Prevost, who was ultimately responsible for pulling it all together into the single, cohesive and easy to read report that you see here. Kudos to Meghan for a job well done, and thanks also to Ji Guo who was responsible for the data analysis of the academic data contained herein.

As Co-Chairs we continue to hold the view that the South Sector AMHSP represents incredibly good value from a provincial government perspective, especially when compared to other physician compensation models. At a time when healthcare expenditures are being scrutinized, we note that South Sector AMHSP physician members shadow billed \$89.5M for the 12 months under review, which is in excess of the \$85.5M designated grant provided by Alberta Health to administer the South Sector AMHSP for this same time period. Moreover, the average South Sector AMHSP physician shadow billing per clinical FTE was \$485,332, which is again greater than the physician remuneration provided by many of the existing South Sector AMHSP arrangements. There can be no doubt that AMHSP-funded physicians contribute fully to clinical healthcare delivery in the south sector.

The AMHSP model also offers greater accountability and governance oversight than do other physician remuneration models, with every AMHSP physician required to complete an annual report detailing their deliverables for the previous contract year. These reports are then reviewed by Arrangement Heads to determine if that physician has fulfilled the criteria to be offered another AMHSP contract for the ensuing year. There is also rigorous financial accountability, with fiscal budgets prepared by, and reviewed by financial experts. As Co-Chairs who have ultimate responsibility for signing off on the South Sector AMHSP budgets and spending, we are proud to report that our accounting processes not only meet the Canadian public sector accounting standards, but that they exhibit accounting rigor, accuracy and transparency, with minimal variances across the Sector budgets.

As we noted in last year’s report, the AMHSP is a great enabler of value-based healthcare and serves as a catalyst for innovation and continuous improvement. South Sector AMHSP physician members

conducted 333,674 outpatient visits, 128,955 inpatient consultations and pediatric emergency department visits, and admitted more than 25,000 patients to our Calgary area hospitals during the 12 months under review. Similarly, AMHSP members in the Department of Family Medicine had ~24,000 'paneled patients' (i.e., where the Family Medicine Teaching Clinics were responsible for their primary care) during this same period. In addition to outstanding clinical care delivery, the AMHSP also facilitates excellence in medical education, healthcare research, and medical leadership.

"333,674 outpatient visits, 128,955 inpatient consultations and pediatric emergency department visits, ...more than 25,000 patients admitted to our Calgary area hospitals"

Alberta, like much of Canada, faces a healthcare workforce crisis both in primary care and in generalist specialist care. This challenge is most pronounced in rural Alberta and, to that end, the two medical schools in the province have worked with the provincial government on an innovative educational partnership to expand physician training in both Lethbridge and Grand Prairie. The Cumming School of Medicine has partnered with the University of Lethbridge to train undergraduate medical students in Lethbridge and rural communities across southern Alberta, and much of the medical education for this Southern Alberta Medical Program (SAMP) will be provided by South Sector AMHSP physician members. Another innovative program that is being rolled out to address the healthcare workforce crisis is the Master of Physician Assistant Studies (MPAS) program at the University of Calgary. Leadership and teaching within this program will be provided by AMHSP physician members, with the first cohort of students scheduled to begin in September 2024. Both the UME (MD) and PGME (residency) programs in the Cumming School of Medicine are largely supported by AMHSP physician members, with the South Sector AMHSP currently

supporting 205 key educational leadership roles, thereby ensuring that the core MD training program and the 65 specialist residency training programs remain among the best in Canada and meet and exceed all the requisite national accreditation standards. Ongoing expansion of the MD and PGME programs, as part of the Southern Alberta Medical Program, will ensure that Alberta is well positioned to meet the healthcare workforce challenge in years to come. As part of this goal, we are proud to highlight that there were 203 residents in the Calgary Family Medicine training program during the period under review, at a time when many Family Medicine residency programs across Canada had unfilled positions. Much of the success of our Family Medicine residency program, as reflected by the number of residents enrolled in the program, is due to the diligent leadership and educational efforts of South Sector AMHSP members.

"...much of the medical education for this Southern Alberta Medical Program (SAMP) will be provided by South Sector AMHSP physician members."

Another very tangible benefit of the AMHSP is that it facilitates an environment that enables world-class health outcomes and quality improvement research. South Sector AMHSP members secured \$73.8M in total research revenue, including \$17.2M in federal CIHR grant funding, and published 1,855 refereed papers during this reporting period. Bringing in this amount of federal research funding not only facilitates the conduct of high-quality biomedical research but also creates job opportunities through the hiring of research staff and the training of highly qualified personnel, many of whom go on to join local biotech companies. Thus, the robust research environment facilitated by the AMHSP not only leads to practice-changing medical advances and policy advocacy, but also

drives economic diversification within southern Alberta through biomedical innovation and the incubation of start-up companies in the region.

"South Sector AMHSP members secured \$73.8M in total research revenue, including \$17.2M in federal CIHR grant funding."

The South Sector AMHSP, as an enabler of value-based healthcare, also facilitates healthcare innovation and continuous improvement. This year's South Sector AMHSP Annual Report once again contains numerous examples of innovative programs that are undoubtedly improving the lives of everyday Albertans.

Dr. Lara Nixon, an AMHSP-funded physician in the Department of Family Medicine, is studying how harm reduction policies are impacting older people with experiences of homelessness. A multidisciplinary, multisite Geriatric Emergency Medicine task force, co-led by AMHSP-funded physician Dr. Zahra Goodarzi, is addressing the concerns of older adults across Emergency Departments with the goal of improving the quality of care and the access to care that older Albertans receive in Emergency Departments. In the Department of Pediatrics, Dr. Sarah MacEachern's clinical work in caring for children with neurodevelopmental disorders informs and directs her multidisciplinary research program in this same area, that addresses the common and real-world challenges that these young people and their families face in navigating our health and social care systems. None of these innovative health outcomes and quality improvement programs necessarily align well with fee-for-service remuneration models, and yet each of these programs, along with the others described in this report, are contributing substantially to a value-based health care system in southern Alberta.

From a patient's perspective, the ultimate measure of performance in healthcare should be the delivery of outcomes that matter to them along the full cycle of care, and these programs do just that.

As the South Sector Co-Chairs, we continue to be immensely proud of the work done by our AMHSP colleagues and believe that the South Sector AMHSP continues to be the driver of a value-based health care system. Moreover, the AMHSP is enabling innovative changes in medical education to better meet the healthcare needs of all Albertans, but especially those living in rural or regional communities. As responsible stewards of public healthcare dollars, we believe that the AMHSP continues to represent excellent value for both the government and the people of Alberta. We trust that as you read this 2023-2024 South Sector AMHSP Annual Report, you will agree with our sentiments in this regard!

AMHSP Arrangements

The Alberta South Sector Academic Medicine and Health Services Program (AMHSP) is comprised of 8 arrangements within seven clinical-academic departments at the University of Calgary's Cumming School of Medicine and Alberta Health Services – Calgary Zone.

The eight arrangements include Family Medicine (Department of Family Medicine), Internal Medicine (Department of Medicine and Division of Cardiology in the Department of Cardiac Sciences); Medical Genetics & Genomics (Department of Medical Genetics); Neurology, Neurosurgery, and Physical Medicine & Rehabilitation (PM&R) (Department of Clinical Neurosciences); Pediatrics (Department of Pediatrics); and Psychiatry (Department of Psychiatry).





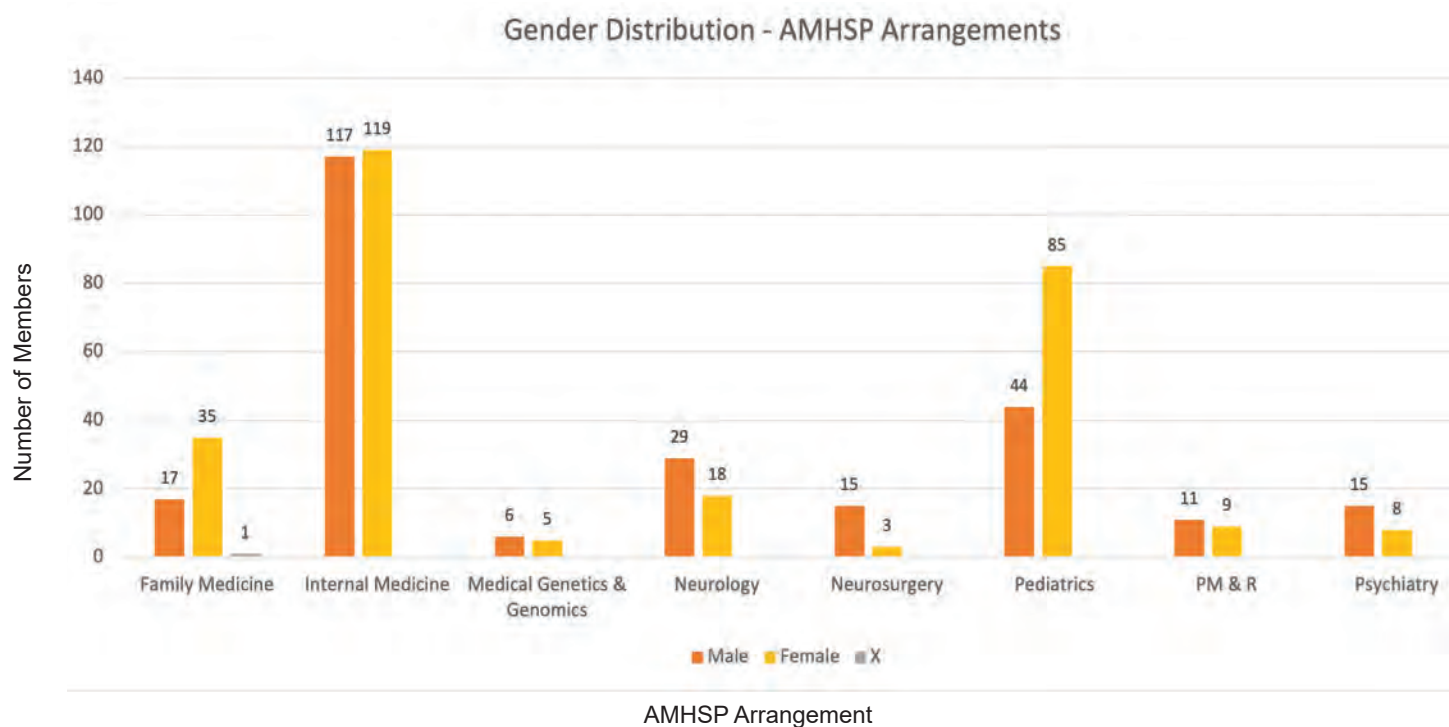
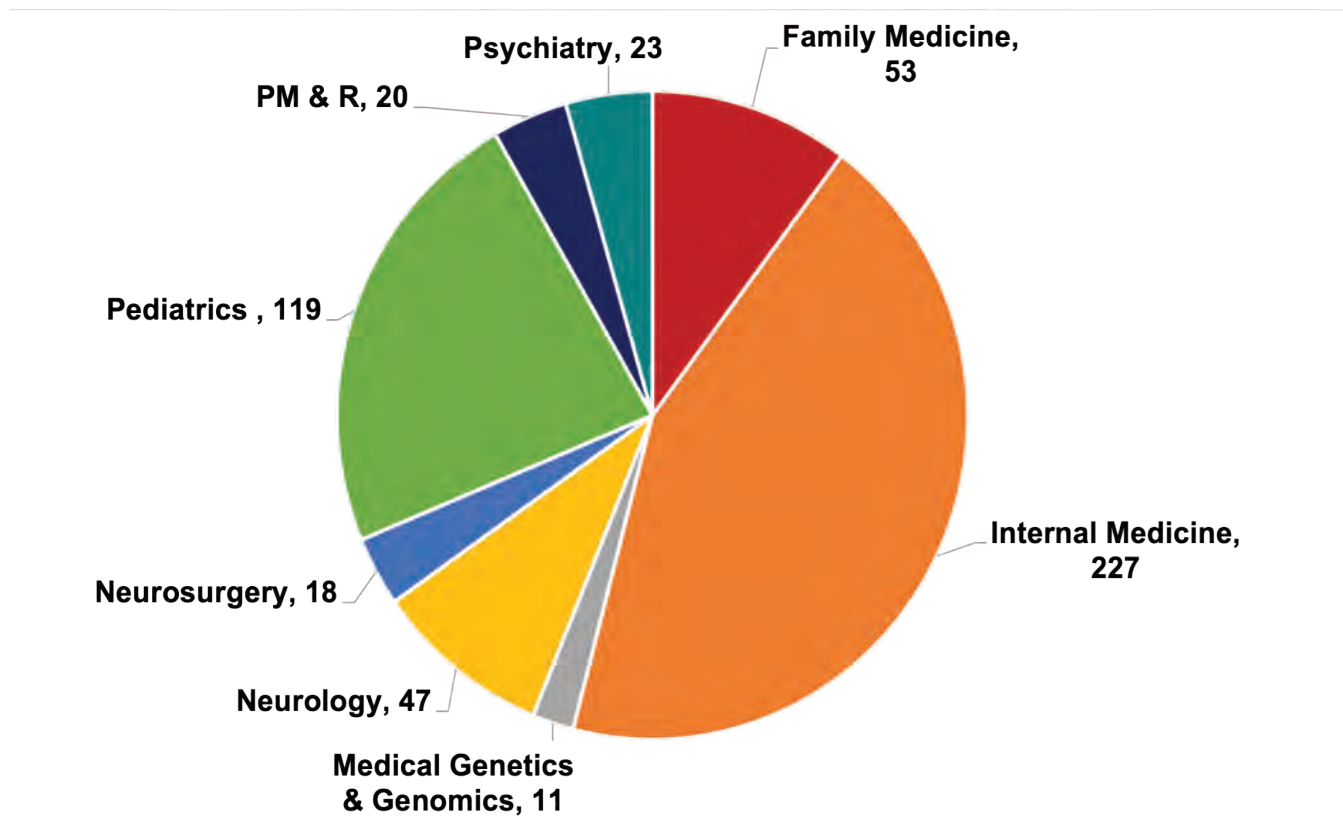
South Sector AMHSP Membership

518
Members

8
AMHSP
Arrangements
■■■

7 Departments
*Benefitting from participating
in AMHSP Arrangements*

Department of Clinical Neurosciences ■■■
Department of Family Medicine
Department of Medical Genetics
Department of Medicine
Department of Cardiac Sciences*
Department of Pediatrics
Department of Psychiatry



1
X*

254
male

282
female

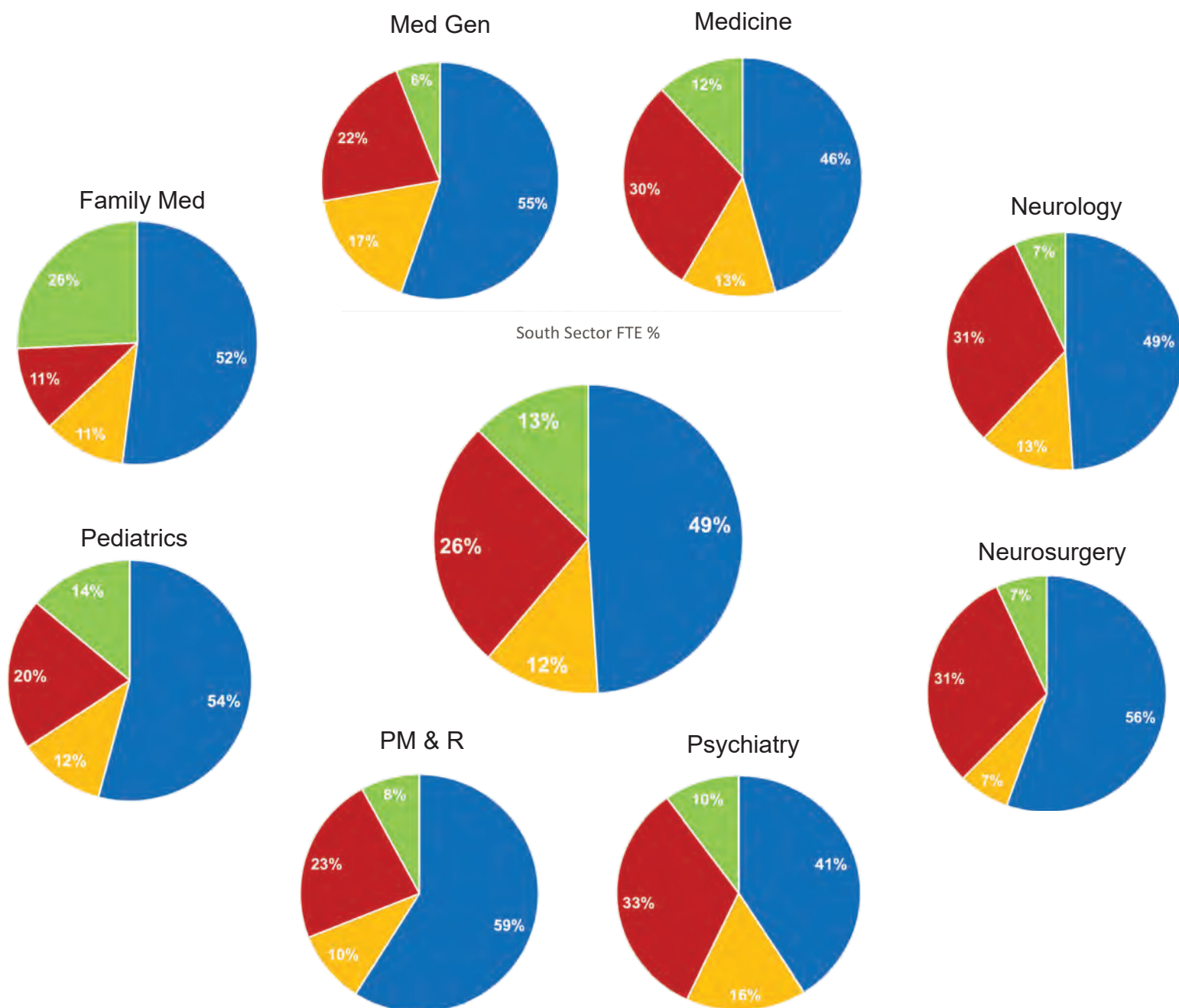
members from the Division of Cardiology in the Department of Cardiac Sciences are members of the Internal Medicine AMHSP arrangement

**X= not identifying as male or female*

Physician Profiles

CARE Pillar FTEs*

Clinical Administration / Leadership Research Education



	Clinical	Admin	Research	Education	Total
Family Medicine	19.36	4.1	4.18	9.59	37.23
Internal Medicine	108.65	29.5	69.75	28.15	236.05
Neurology	21.11	5.67	13.06	2.81	42.65
Neurosurgery	9.33	1.1	5.11	1.08	16.62
Pediatrics	54.15	11.87	20.91	14.19	101.12
PM & R	9.21	1.58	3.59	1.28	15.66
Psychiatry	8.57	3.41	6.87	2.04	20.89
South Sector	230.38	57.23	123.47	59.14	470.22

*FTE as per the 2023-24 Year To Date Actuals submitted to Alberta Health Financial Reports
Med Gen Actual FTE unavailable



Clinical Reporting

As the clinical activities and types of care provided by the AMHSP departments differ, not all departments use the same metrics to measure clinical care. As such, the metrics reported in this section are not available for all AMHSP arrangements.

Outpatient referral data for the Department of Medicine is from Central Access & Triage and Seniors Health One-line, and is only available for participating physicians (FFS and AMHSP) from the Divisions / Sections of Endocrinology & Metabolism, Gastroenterology, General Internal Medicine, Geriatric Medicine, Hematology, Respiratory Medicine, and Rheumatology. Outpatient data for the Department of Pediatrics is from the Alberta Children's Hospital Child Health Annual Report. You can refer to each arrangement appendices for details explanations of data.



\$89,463,280.91

in Gross Shadow Billing



\$485,332.22

Average
Shadow Billing
per Clinical FTE

Shadow billing in millions

333,674

Total Outpatient Visits



Family Medicine: 84,621
Medical Genetics: 11,357
Neurology: 34,652
Neurosurgery: 11,066
Pediatrics: 166,472
PM&R: 10,647

65,717

Outpatient Referrals /
Total Patients



Internal Medicine: 58,172
Medical Genetics: 7,545

128,955

Inpatient Consults and
Pediatric ED Visits



Internal Medicine: 7,721
Medical Genetics: 968
Neurology: 4,890
Neurosurgery: 5,433
Pediatrics: 76,049
PM&R: 778
Psychiatry: 3116

25,681

Patients Admitted /
Discharged



Internal Medicine: 14,212
Neurology: 1,768
Pediatrics: 9,182
Psychiatry: 519

23,825

Paneled Patients
Family Medicine Only



* please see applicable appendices for detailed data explanations. Not all departments track the same data.



Leadership Roles

The percentage of time allocated to administration and leadership in the South Sector AMHSP arrangements may initially seem high, but in general is skewed by a large number of senior leadership roles and Connect Care affiliated roles that are required for the implementation of the provincial EMR. Within the CSM, the majority of the senior leadership roles (amongst clinicians) are held by AMHSP members. Similarly, the overwhelming majority of educational leadership, institute leadership and quality improvement leadership roles are done by AMHSP members.

In 2023-24, South Sector AMHSP members held 280 administrative / clinical leadership roles and 205 educational leadership roles, for a combined total of 485 leadership roles.

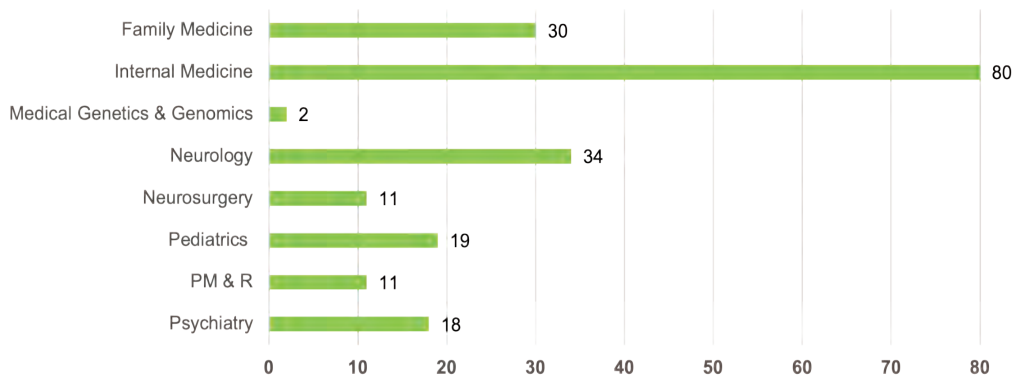
As the majority of leadership roles are associated with a fractional FTE, it is possible for one AMHSP member to hold multiple roles.



485

Leadership Roles

Educational Leadership Roles



205

Educational Leadership Roles



Family Medicine: 30
Internal Medicine: 80
Medical Genetics: 2
Neurology: 34
Neurosurgery: 11
Pediatrics: 19
PM&R: 11
Psychiatry: 18

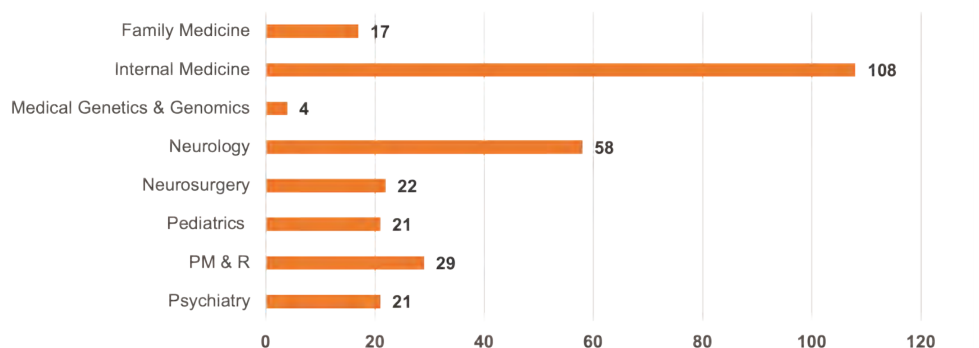
280

Administrative / Clinical Leadership Roles



Family Medicine: 17
Internal Medicine: 108
Medical Genetics: 4
Neurology: 58
Neurosurgery: 22
Pediatrics: 21
PM&R: 29
Psychiatry: 21

Administrative/Clinical Leadership Roles





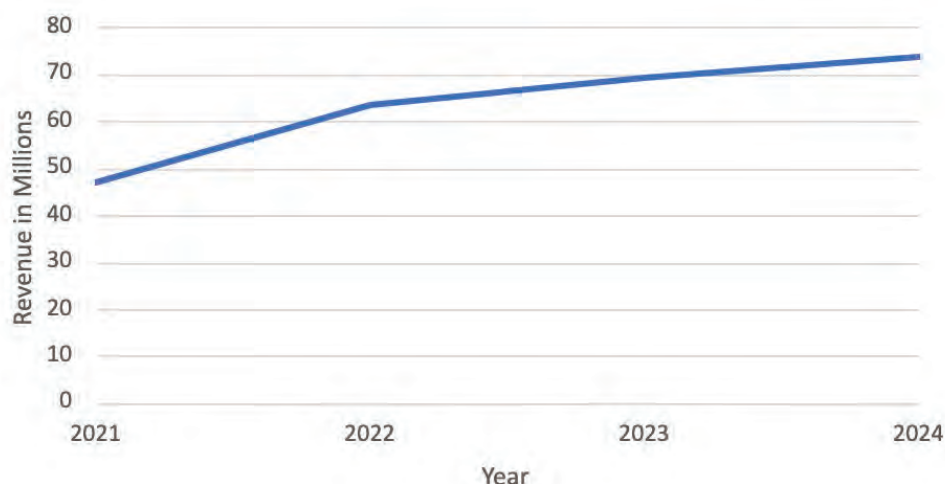
Research and Academic Productivity

Research funding metrics from the Cumming School of Medicine (CSM) confirm that AMHSP departments are more productive in terms of grant monies obtained and scholarly papers published. Within the South Sector AMHSP departments, research funding is driven and led by AMHSP members.

In total, in 2023-24 South Sector AMHSP members were responsible for obtaining \$73.8 Million in total research revenue, including \$17.2 Million in CIHR revenue, \$5 Million in Clinical Research Revenue, as well as authoring *1,855 publications.

\$73.83 Million* in Total Research Revenue (CSM)

South Sector AMHSP

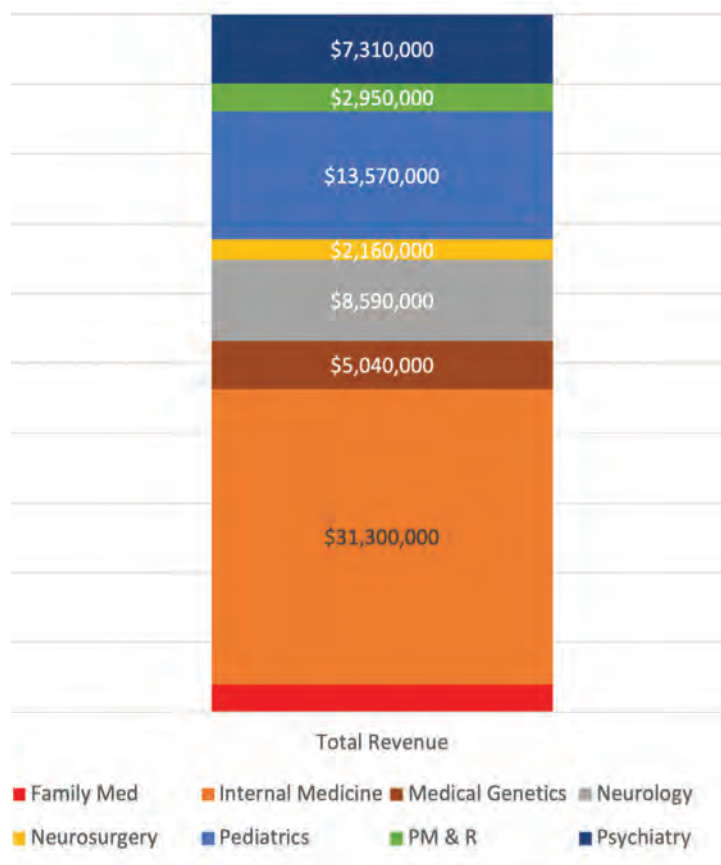


1,855*
Publications

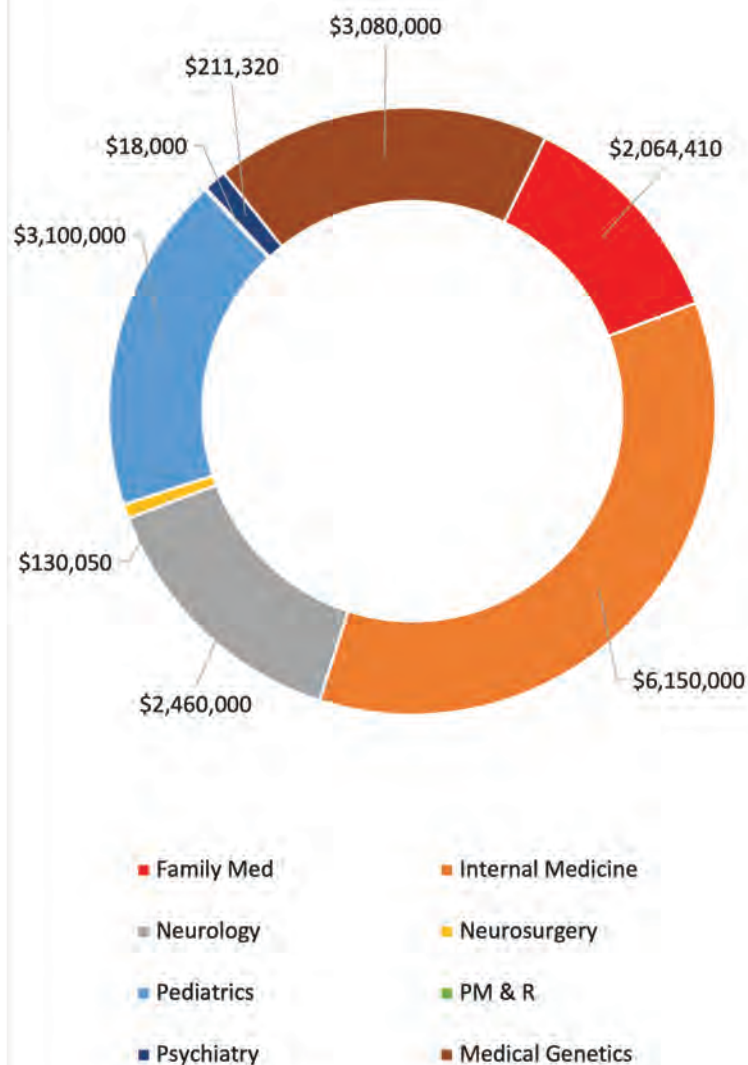
2021-22 1,881
2020-21 1,569
2019-20 1,345

*Methodology of data collection represents the number of publications reported by each arrangement.

South Sector AMHSP Research Revenue, 2023-24



\$17,213,780 CIHR Funding 2024



*Methodology of data collection reflects data extracted from SCOPUS database, locums are excluded.



Educational Activities

The vast majority of plan members have a standard 5% FTE in their ISA. This goes to teaching Undergraduate Medical Education (UME) students, graduate student supervision, Post-Graduate Medical Education (PGME) didactic sessions and Continuing Medical Education (CME).

The AMHSP allows exceptional medical educators to devote up to 50% of their time for educational leadership and scholarship in education. As stated earlier, the vast majority of educational leadership positions within the CSM are taken on by AMHSP members. In 2023-24, AMHSP members held 205 educational leadership positions.



65

PGME Residency
Training Programs

205

Educational
Leadership
Roles



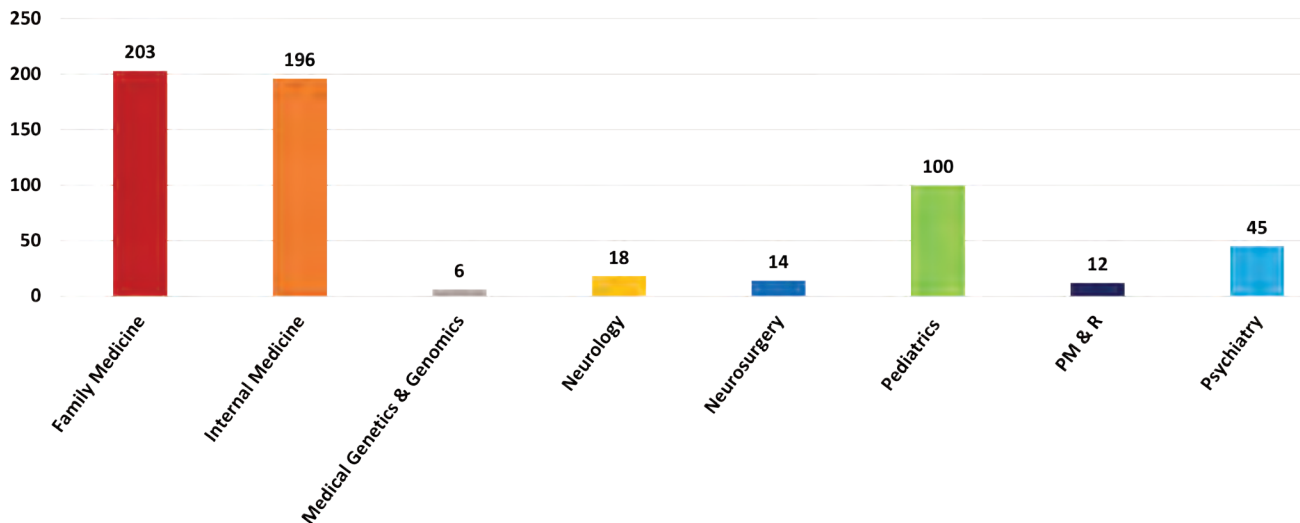
It is very difficult to protect enough time for a major educational role in a non-AMHSP Department. Even if stipends are available from the university and AHS, they do not incentivize individuals to take on these major educational roles.



594

PGME Residents

PGME Residents



482



In-Training Evaluation
Reports (ITERs)
completed by AMHSP
preceptors

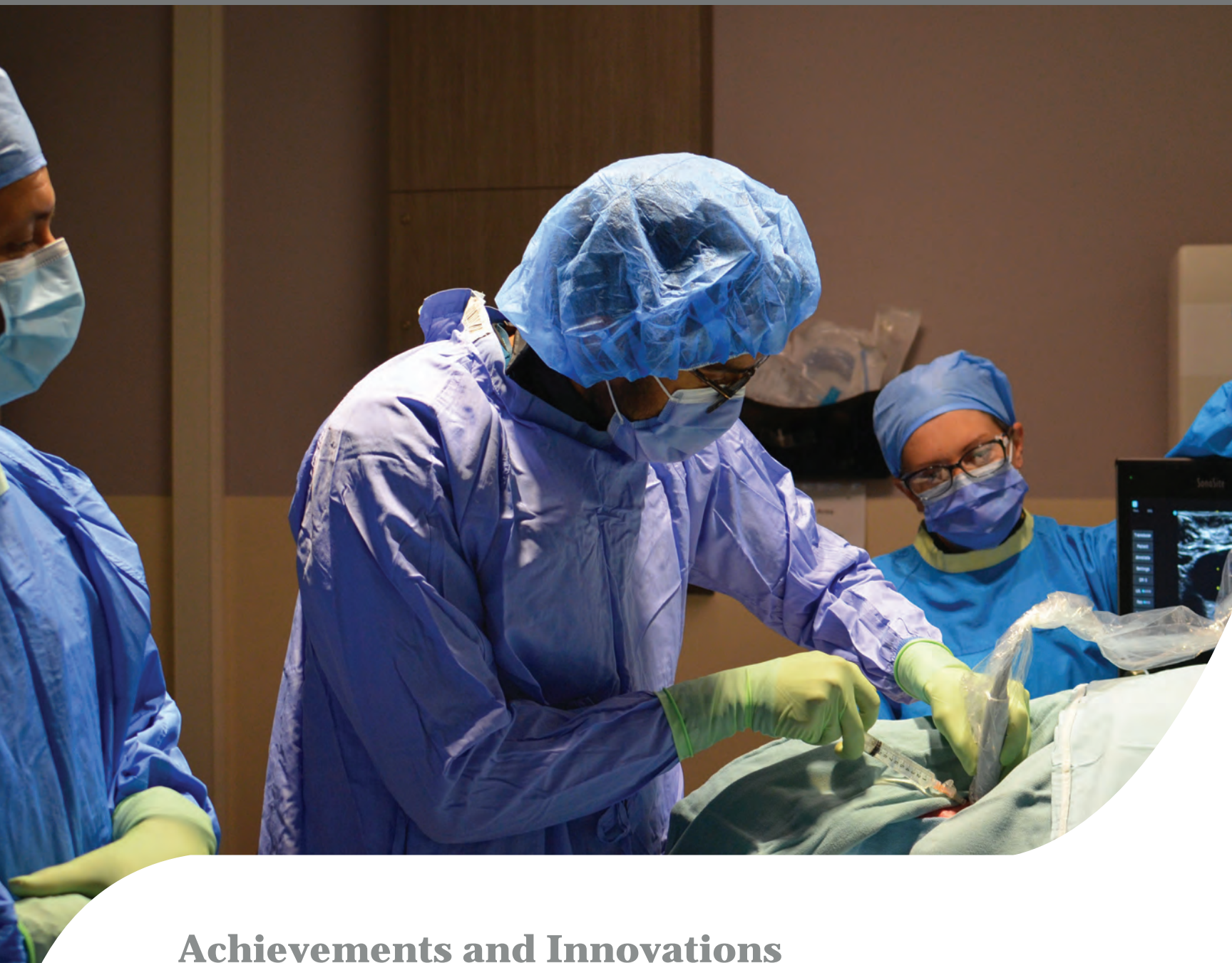
Data provided by the UME Office



4,893.5 Hours

UME Course Teaching

Data includes UME Course Teaching Hours by GFT and Major
Clinical members



Achievements and Innovations

The following section highlights some qualitative examples of how the AMHSP has allowed the South Sector AMHSP departments and arrangements to foster innovation and improvements in areas such as: continued high quality patient care virtually and in-person, providing excellent educational opportunities as well as faculty development, new innovations and technologies leading to enhancement of patient care and quality improvement, recognizing the social impact on access to health care and enabling access, and working with Indigenous communities and populations to increase specialized support.

Family Medicine Highlights, Achievements and Innovations



SOUTH HEALTH CAMPUS FAMILY MEDICINE TEACHING CENTRE RECEPTION



The Academic Department of Family Medicine (DFM), Cumming School of Medicine (CSM), includes AMHSP members who deliver primary care clinical services embedded in the community and built on the Patient's Medical Home (PMH), while educating a high volume of medical learners within this model of comprehensive, longitudinal primary care. In addition to education in the clinical environment, DFM AMHSP members deliver a breadth of formal medical education activities in undergraduate and postgraduate family medicine, as well contributing to faculty development and continuing medical education.



COVID-19
Physical
Distancing

The following sections highlight examples from the DFM where the AMHSP has been critical in supporting research, education, and innovation.

RESEARCHER SPOTLIGHT: DR. LARA NIXON

DFM AMHSP member Dr. Lara Nixon, an associate professor in the CSM, has been actively researching and advocating for older people with experiences of homelessness (OPEH). In

2023, Dr. Nixon and her collaborators K. Milaney, A.M. Toohey, S. Canham, and R. Henderson successfully secured a \$46,520 grant from the Canadian Institutes of Health Research titled "Co-designing Equity Care with Older People with Experiences of Homelessness (OPEH): Exchanging Knowledge and Planning System Improvement." Dr. Nixon studies harm reduction practices integrated with hous-

ing-based primary care for this vulnerable population. This grant builds on previous funding from Health Canada, and includes community partners with lived experience. Harm Reduction in Supportive Housing

Dr. Nixon explores how harm reduction policies and practices are implemented and experienced by older adults with histories of homelessness and the

Family Medicine Achievements and Innovations

care staff working with them. This research aims to improve the quality of life and health outcomes for older adults in supportive housing environments.

Community-Based Participatory Research

Dr. Nixon and her team are recognized for their work and commitment to involving the community in developing solutions for older people with experiences of homelessness.

Advocacy and Policy Involvement

Through her research and advocacy efforts, Dr. Nixon has worked tirelessly to improve the lives of older people struggling with homelessness and ensure their voices are heard in policy decisions affecting their well-being.



Dr. Nixon

RESEARCH PROJECT SPOTLIGHT: PLANETARY HEALTH – GREENING FAMILY MEDICINE CLINICS AND BEYOND DFM

AMHSP members Drs. Sonja Wicklum and Clark Svrcek are leading a faculty-wide initiative focused on planetary health and the intersection between the environment and health care. They spearheaded the creation of a Planetary Health Education Committee to oversee the implementation of targeted planetary

health education across degree programs and are leading community-partnered work to develop, implement, and evaluate tools and strategies that encourage behavior change in clinicians and consumers of health care.

Drs. Wicklum and Svrcek lead a team that is currently working to identify, evaluate, and disseminate toolkits and aids on sustainable healthcare for motivated family doctors and community clinics to initiate change and support more sustainable healthcare. Building on the work first developed within the DFM Academic Teaching Clinics, the team was awarded a grant from the Primary Health Care Integration Network to initiate the “Greening the Health Neighbourhood Collaborative Project”. This resulted in a partnership with the City of Calgary to adapt their existing climate change educational materials and infographics for dissemination through primary care clinics and other healthcare facilities.

The team was also awarded a UCalgary Vice President Research Transdisciplinary Connector Grant, and plans are underway for a fall conference to further the work of the Planetary Health Education Committee. Future work will involve ongoing partnership and knowledge translation at provincial, national and international levels.




MEDICINE EDUCATION

The AMHSP directly supports the Academic Teaching Clinics, which this year trained 107 family medicine residents and 122 undergraduate medical students.

AMHSP funding allows DFM members to play a significant role in the ongoing development and delivery of the new Undergraduate Medical Education pre-clerkship curriculum called Reimagining Medical Education (RIME). This involvement includes direct teaching, curriculum development, and educational leadership. The RIME curriculum focuses on generalism and social accountability, areas in which DFM members are highly knowledgeable and have significant expertise. Increased involvement of family physicians in undergraduate teaching positively influences the number of medical students who choose a career in family medicine.

In postgraduate family medicine education, the AMHSP supports DFM members in delivering teaching across two years of training, serving as competency coaches who are experts in clinical teaching, assessment, and mentorship. These physician teachers play a crucial role in ensuring that residents achieve the necessary competency to practice full-scope family medicine in any clinical setting. The AMHSP also supports education leaders within the postgraduate program to innovate, develop, and deliver a curriculum that places new family physicians in communities across Alberta.

Medicine Highlights, Achievements and Innovations



The Internal Medicine Alternative Medical Health Services Program (AMHSP) arrangement included 227 physicians spanning 12 Divisions within the Departments of Medicine and Cardiac Sciences in the 2023-2024 fiscal year.

Our physicians provide clinical services at Foothills Medical Centre, Peter Lougheed Hospital, Rockyview General Hospital, Richmond Road Diagnostic and Treatment Centre, South Health Campus, and Sheldon M. Chumir Health Centre (which includes the Elbow River Healing Lodge). In addition, Internal Medicine AMHSP members also provide clinical services at the Bridgeland Seniors Health Centre, the Calgary Urban Project Society (CUPS), the Alexandra community Health Clinic, the Stoney Health Centre, and at the Calgary Refugee Clinic and rural locations.

RESEARCH SPOTLIGHT - DR. MAY CHOI, TRANSLATIONAL RESEARCH PROGRAM AI.DX
Following in the footsteps of her mentor, Dr. Marvin Fritzler (Professor Emeritus, Director of MitogenDx), Dr. Choi's research is focused on biomarker discovery and validation for the prediction of clinical outcomes in autoimmune rheumatic diseases, and the prevention of autoimmune disease development and disease-related complications. Dr. Choi is a rheumatologist and clinician

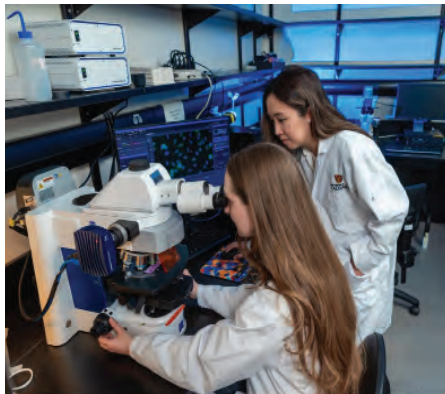
scientist who started on faculty in 2020 and is a Member of the McCaig Institute for Bone and Joint Health. Although her post-graduate training at the Brigham and Women's Hospital (Boston, MA) was in lupus, she conducts research in many other immune-mediated diseases including autoimmune inflammatory myopathies, systemic sclerosis, rheumatoid arthritis, and vasculitis. Dr. Choi continues to be an active part of MitogenDx as their Associate Director, and she also acts as the Associate Director of Translational Research for the University of Calgary Lupus Centre of Excellence.

Dr. Choi's translational research program AI.DX (Artificial Intelligence and Autoimmune Diagnostics) consists of six streams: 1) Biomarker Discovery, 2) Autoimmune Disease Biobank, 3) Artificial Intelligence in Biomarker Analysis, 4) Knowledge Translation and Patient Advocacy, 5) Clinical Trials, and 6) Indigenous and Global Health. Her team includes several senior lab technologists, coordinators, and undergraduate, graduate, and post-graduate students.

All the biomarker testing and analysis is conducted in her laboratory in the Health Research Innovation Centre. Most projects are done in collaboration with clinicians, research teams, and organizations from around the world. Within the Department of Medicine at the CSM, she collaborates across multiple disciplines including hematology, endocrinology, gastroenterology, respirology, and nephrology, as well as pediatrics. Her program has become an important translational research center. By leveraging machine learning to analyze extensive datasets—encompassing biomarkers and patient clinical information, this integration of machine learning with traditional research methods sets it apart. The establishment of a national biobank not only facilitates high-quality sample collection and storage but also supports collaborative research efforts across multiple institutions, making it a valuable resource for advancing scientific knowledge. The program has enhanced its research capabilities by establishing an extensive national and international network of research institution collaboration.

Medicine Achievements and Innovations

Since 2020, Dr. Choi has been a nominated PI or Co-PI on 26 peer-reviewed grants totaling nearly \$11 million. She received a Canadian Institutes of Health Research project grant in her first year and a Canadian Foundation of Innovation (CFI) John R. Evans Leaders Award in her second year as an early career investigator. This funding enables the team to sustain its operations, pursue ambitious research goals, and continue to make significant advancements in the field.



(Photo of May Choi and Lab member
photographer: Don Molyneaux)

ACUTE KIDNEY INJURY & THE UPTAKE RESEARCH INITIATIVE Guiding transition from hospital-to-home to improve patient outcomes

UPTAKE (Using Personalized risk and digital tools to guide Transitions following Acute Kidney Events) is a research initiative designed to implement and test innovations in care to improve the long-term outcomes for people in Alberta who have been hospitalized with Acute Kidney Injury (AKI). The UPTAKE project is focused around two inter-related randomized controlled trials, that build upon more than a decade of research on AKI at UCalgary. The trials include all patients 18 years of age or older who have been hospitalized with AKI stage 1-3.

UPTAKE-1: AKI can lead to chronic kidney disease (CKD) and related cardiovascular complications. For some individuals, the risks of these complications may be high, while for others, the risks are low. Previous research at UCalgary demonstrated that the risk of CKD following AKI could be predicted based on six routinely collected variables, and that outpatient follow-up strategies based on the risk model were superior to the

usual care decisions. In the UPTAKE project, clinicians and researchers are evaluating ways to improve the care, experiences, and long-term outcomes of people with AKI at the time of hospital discharge. This is achieved through the implementation of care interventions designed to improve continuity of care between hospital and home settings and are tailored to each individual person's specific medical conditions and CKD risk profile. The intervention is delivered through decision support tools and care pathways that are integrated with the Connect Care clinical information system across the province of Alberta. Its effectiveness is being tested in a pragmatic randomized trial, measuring the impact on important long-term kidney and cardiovascular health outcomes and patient experiences with their care. The project is funded by a Canadian Institutes of Health Research (CIHR) Transition in Care Team Grant.



UPTAKE-VIRTUAL CARE: Patients with AKI can also experience lengthy hospital stay and one in five are re-admitted to hospital within 30 days following discharge, often for preventable reasons such as heart failure, recurrent AKI, or infection. The UPTAKE-VC project is using digital algorithms implemented in Connect Care to identify patients with AKI and a high risk of readmission or death and testing whether care incorporating digital remote monitoring in the Virtual Home Hospital programs in the Calgary and Edmonton Zones improves patient experiences and outcomes during this particularly vulnerable period of the hospital-to-home transition. Patients are provided with a take home kit with the ability to monitor blood pressure, weight and check in with a physician. This randomized trial will compare the effect of the intervention to usual care on a

primary outcome of days alive at home in the first 45 days following AKI, in addition to processes of care, and patient experiences with their transition from hospital to home. The project is funded by an Alberta Innovates Partnership for Research and Innovation in the Health System (PRIHS) Digital Health Grant.



Geriatric Emergency Medicine Task Force, co-lead by Dr. Goodarzi (DOM) with Dr. M McGillivray (ED) for the Calgary Zone. This is a multi-disciplinary, multisite team focused on identifying, studying and developing tools to address concerns of older adults in the Emergency Department (ED). The primary goal is to improve quality of care, access to care, and implement an increased amount of evidenced-based geriatric approaches in the ED. The team is engaged in several ongoing quality improvement initiatives and research projects, focusing on areas such as delirium, agitation, diet status, exercise in the ED, and improving access to geriatric services from the ED. The team was recently awarded a CIHR grant to conduct this research, ranking #1 in its panel, and receiving the CIHR Institute of Aging Prize: Yves Joannette Award of Excellence in Research in Aging. This award is granted to the highest-ranking funded project in the CIHR Fall Project Grant that aligns with the Institute of Aging's goals.



The South MG&G AMHSP supports a population of approximately 2 million Albertans with or at risk of genetic diseases. The 11 Medical Geneticists (10.14 FTE) provide care to over 9000 patients of all ages (pediatric and adult) and families per year in a multi-disciplinary team environment. We work closely with our colleagues in Genetic Laboratory Services, Obstetrics/Gynecology, Pediatrics, Clinical Neuroscience, Medicine, and Oncology to provide genetic assessment, testing, diagnosis and management for both children and adults with hereditary disorders. The AMHSP also plays a critical role in supporting the educational, research and leadership mandate of both Alberta Health Services and the University of Calgary. MG&G currently operates on three sites, Alberta Children's Hospital for general genetics and metabolic genetics, Cambrian Wellness Centre for prenatal care, and the Richmond Road Diagnostic and Treatment Centre campus for adult services.

ADULT GENETICS CLINIC OPEN AT RICHMOND ROAD DIAGNOSTIC AND TREATMENT CENTER. Although Medical Genetics and Genomics is housed at the Alberta Children's Hospital, roughly 50% of all patients seen by our section are adults. We have an adult division under the section, headed by Dr. Renee Perrier a Medical Genetics and Genomics AMHSP Clinician. We are now moved into the RRDTC space, and are very excited about our new and spacious location! We moved in May with

a welcoming event on June 13, 2024. The entire Adult and Cancer Genetics services of physicians, genetic counselors, genetics assistants, admins and support staff is now settled and seeing patients. Medical Genetics now operates as four services over three sites at Alberta Children's Hospital for general genetics and metabolic genetics, Cambrian Wellness Center for prenatal genetics, and now RRDTC for adult genetics.

GENETIC SERVICES OPERATIONS QUALITY COUNCIL (G-SOQC)

The Section of Medical Genetics is active in a number of quality control processes. The G-SOQC was established under the direction of Genetic Services Operations Leadership Team in August 2023. Co-chaired by the Unit Manager and Patient Care Manager, the purpose of the G-SOQC is to provide a venue for front-line staff to participate in operational quality planning, control, assurance and improvement. The overall goal of G-SOQC is to serve Genetic Services through dedicated effort

Medical Genetics Achievements and Innovations

on driving and achieving key quality indicators (acceptability, accessibility, appropriateness, effectiveness, efficiency, safety).

ALBERTA CONGENITAL ANOMALIES SURVEILLANCE SYSTEM (ACASS). ACASS is a population-based registry that includes live births, stillbirths, and termination of pregnancies (<20 weeks of gestation) for the province of Alberta. It is currently supported by AHS. ACASS was initially established in 1966 as a Registry for Handicapped Children as part of the Canadian Congenital Anomalies Surveillance System that was formed after the response to severe limb defects following maternal exposure to thalidomide from 1958-1962. Dr. Charlotte Dafoe was the initial director to 1977. ACASS was ably led by Dr. Brian Lowry, a medical geneticist and former head of genetics at Alberta Children's Hospital from 1982 until his retirement in 2022. Dr. Mary Ann Thomas, a medical geneticist with our section, assumed the role in 2022, works

with Tanya Bedard, the ACASS program facilitator. ACASS serves as a vital public health surveillance service to collect valid data on birth prevalence of congenital anomalies in Alberta to monitor temporal or geographic changes, assess effectiveness of prevention programs, provide data for health program planning, and to conduct research into the etiology and natural history of birth defects. ACASS is an internationally recognized program, participating with the Centers for Disease Control in the US through their National Birth Defects Prevention Network, and as a member of the International Clearinghouse for Birth Defects Surveillance and Research. ACASS continues to actively publish high quality research on birth defects. We are very proud of ACASS!

A copy of the most recent ACASS report (2024) can be found at: <https://www.albertahealthservices.ca/info/Page15520.aspx>

SELECTED RECENT PUBLICATIONS:

Lowry RB, Bedard T, Grevers X, Crawford S, Greenway SC, Brindle ME, Sarnat HB, Harrop AR, Kiefer GN, Thomas MA. The Alberta Congenital Anomalies Surveillance System: a 40-year review with prevalence and trends for selected congenital anomalies, 1997–2019. *Health Promot Chronic Dis Prev Can.* 2023;43(1):40-8. <https://doi.org/10.24095/hpcdp.43.1.04>

Thomas MA, Bedard T, Crawford S, Grevers X, Lowry RB. Craniofacial Microsomia, Associated Congenital Anomalies, and Risk Factors in 63 Cases from the Alberta Congenital Anomalies Surveillance System. *J Pediatr.* 2023 Oct;261:113528. <https://doi.org/10.1016/j.jpeds.2023.113528>



Neurology Highlights, Achievements and Innovations

The Division of Neurology Arrangement is focused on prevention and care of patients with complex and common neurological disorders. Importantly, this focus goes far beyond direct patient care. It also includes innovation in health care delivery, research, education and leadership, all of which are prerequisites to patient care.

Division of Neurology

Arrangement Vision: To improve quality of life and productivity within society by reducing the burden of disability caused by neurological disorders.

Division of Neurology

Arrangement Mission: To be an international leader in neurological patient care, education, and research.

In an effort to promote the vision to improve quality of life and productivity within society by reducing the burden of disability caused by neurological disorders, the standing objectives of the Division of Neurology Arrangement in the area of clinical service delivery are:

- To provide timely, appropriate, integrated and efficient team-based clinical care to patients with neurological disorders in
- Calgary and Southern Alberta, in the Division of Neurology Arrangement's referral area.
- To develop clinical-academic programs in neurology of national and international stature. These programs will provide specialized assessment and treatment, develop, test and implement new forms of treatment and explore disease mechanisms.
- To work in partnership with the

Calgary Zone of AHS to develop effective population-based wellness promotion, prevention and disease management programs relevant to neurological disorders.

- To be accountable to stakeholders for the quality and quantity of agreed upon services to be provided.
- To advance team-based service delivery models in order to optimize use of physician resources and to promote efficient and effective delivery of health care services. Where possible, this includes prevention of neurological disorders for individuals at risk.

INNOVATIONS AND IMPROVEMENTS

The Division of Neurology AMHSP does allow for innovations and improvements. While the move to virtual care during the pandemic led to major financial

impacts for fee for service physicians, we have been able to identify that virtual care may be not only appropriate but even preferred in some programs, for the right type of patients. In these cases, the AMHSP makes it simple to provide telephone or 'zoom' clinics for patients while still ensuring that patient needs are met and the physicians providing the virtual care are not financially disadvantaged. The benefits to patients, where appropriate, are quite substantial—for many neurology patients, simply coming to the hospital is an ordeal as they may have physical or cognitive barriers that make driving or navigating the facility quite challenging. Further, paying for transport, parking, and lost wages for care providers who have to take time off to attend appointments, all have an impact on some patients, and this impact is mitigated with virtual patient visits, when they are appropriate.

Neurology Achievements and Innovations



In addition, through the work of AMHSP members, we have found strategies to improve access to specialty advice for family physicians. Neurology has a very well-developed system for SpecialistLink, which allows family physicians to call for patient care advice during weekdays, and over the last two years, we have developed e-referral capacity for general neurology and stroke. Uptake of these programs grew substantially during the pandemic.

Other Innovations and Improvements:

The AMHSP has allowed physician outreach to occur. In addition to outreach clinics to CUPS, Elbow River Healing Lodge, and the Alex clinic, some of our physicians now do outreach for movement disorders patients to long term care facilities.

- Funding secured to pilot a new palliative clinic for patients with late-stage movement disorders. This program has now been live for a year and has been met with a very positive response from families and caregivers.
- A functional neurologic disorders clinic has been launched, which provides cutting edge expert care to a group with high health care utilization who benefit from long appointments. The AMHSP remuneration model is critical to supporting transformative care for these

patients.

- ALC Audits for inpatient care led to improvement in ALC reporting on wards
- Our general neurology program lead, along with our departmental QI lead joined forces to lead a major initiative to bring all of our neurology programs into a central triage program. Part of this work included reviewing and rationalizing the referral criteria for all of our programs leading to a 20% decrease of inappropriate referrals being accepted. This is vital work, given our current wait time for neurology appointments is 18 months.
- Multiple AMHSP members had major leadership roles in Connect Care, and led very successful transitions to Connect Care across our four hospital sites
- Developed a set of inpatient neurology quality indicators with a national group, including numerous members of our arrangement, which will be used goingforward to develop quality initiatives for inpatient neurology care, including audit and feedback for neurologists.
- Multiple internationally acclaimed clinical trials and research advances in stroke, movement disorders, epilepsy, and multiple sclerosis. These research advances will directly impact patient care, but also facilitate recruitment of the best clinicians and scientists from around the world

OTHER METRICS AND DATA OF NOTE

Expansive population growth in the Calgary zone and changing demographics have greatly increased outpatient workflow volumes. We continue to have clinic wait times in many clinics beyond our targets. We plan to recruit fee for service neurologists to complement the work done by our AMHSP colleagues. We have managed to recruit one fee-for-service neurologist but had some failed fee-for-service recruitments. The AMHSP allows for the promise of a stable income, and with that in place, we are planning to recruit several neurologists such that our AMHSP remains fully subscribed for 2023-2024 fiscal year (indeed, oversubscribed, as we were fortunate to also recruit a new Department Head this year, who is a neurologist).

Neurosurgery Highlights, Achievements and Innovations

The Division of Neurosurgery at the University of Calgary and Alberta Health Services is fully integrated with its partner sections of Neurology, Physical Medicine and Rehabilitation (PM&R) and Translational Neurosciences within the Department of Clinical Neurosciences.



With a highly integrated and programmatic approach, sub-specialized care is provided to the patient population. This population includes the geographic region of Southern Alberta as well as Eastern British Columbia in the Kootenay Region and Western Saskatchewan, encompassing an approximate catchment population of 2.5 million. Care is provided by 16 neurosurgeons, (currently 14 Geographic Full Time (GFT) Participating Physicians, and two major clinicals), all of whom are sub-specialists and also provide general and emergency neurosurgical services. The Division of Neurosurgery provides five specialist call services: general neurosurgery, pediatric neurosurgery, spine surgery, vascular neurosurgery, and interventional neuro radiology. There are no fee-for service physicians in the group; All members of the Division

of Neurosurgery participate in the Neurosurgery AMHSP.

Specialized programs include cerebrovascular and endovascular neurosurgery, epilepsy neurosurgery, adult hydrocephalus, neuro-oncology, skull base surgery, pediatric neurosurgery, peripheral nerve surgery, functional neurosurgery, stereotactic radiosurgery and spine surgery. In partnership with neurology, rehabilitation medicine, orthopedic surgery, neuroradiology, and radiation oncology, division participating physicians provide the highest quality of sub-specialized care for this patient population.

MULTIDISCIPLINARY ADULT HYDROCEPHALUS PROGRAM
UNIVERSITY OF CALGARY
The Adult Hydrocephalus Program encompasses neurosurgery, general

surgery, anesthesiology, neurology, neuroradiology, neuro-ophthalmology and psychiatry disciplines. Allied health involvement includes physiotherapy, occupational therapy and neuropsychology.

The clinic services a unique population that suffers from a chronic disease that can cause significant neurological disability (including but not limited to dementia), but that is also associated with a risk of acute clinical deterioration. These patients benefit from long-term care that is more substantial than many other neurosurgical patients and that is generally beyond the scope of family physicians and many Neurologists and Neurosurgeons. In addition, the clinic provides new and established patients with urgent clinical issues urgent assessment avoiding unneces-

Neurosurgery Achievements and Innovations

sary Emergency Room utilization and fragmented care. Furthermore, many patients have other significant medical and not uncommonly, social co-morbidities that increase the complexity and challenges associated with patient care.

Patient assessment is done according to defined process maps which include the use of clinic-based objective cognitive and gait testing, and selective neuroradiology investigations including some which are not available at other centers. At weekly Hydrocephalus rounds all patients undergoing assessment for a new diagnosis or potential candidates for surgery are reviewed and management strategies are developed. Certain complex patients are further reviewed with neurology, neuro-ophthalmology and neuroradiology. The surgical treatment of hydrocephalus by the Calgary Hydrocephalus program provides quantifiable positive patient outcomes and has resulted in a significant reduction of peri-operative complications. The surgical approach for surgical treatment has evolved past the basic levels offered in most other centers and now incorporates general surgery for ventriculo-peritoneal shunt insertion and anesthesiology for ventriculo-atrial shunt insertion. Endoscopic treatment of hydrocephalus is also very well developed in Calgary and provides successful treatment for a large number of patients without the need for shunt insertion. In addition, the endoscopic resection of colloid cysts causing hydrocephalus is not otherwise available in Western Canada.

ROBOTIC SURGICAL ASSISTANT FOR EPILEPSY AND FUNCTIONAL NEUROSURGERY

The Calgary Epilepsy Surgical Program is a multi-disciplinary comprehensive adult and pediatric group of clinicians and researchers tasked with treating and investigating patients with epilepsy refractory to medical management. One third of epilepsy patients are refractory and of these almost 50 % may be candidates for seizure surgery capable of reducing early death from epilepsy, improving quality of life and reducing health care utilization.

Minimally invasive stereotactic techniques for intracranial depth electrode electroencephalography (sEEG) have replaced traditional means performed through large craniotomies and the implantation of subdural electrodes. Robotic Assistants have become the preferred means of performing sEEG in both pediatric and adult epilepsy patients. The recently launched Laser interstitial thermal therapy (LITT) program for MRI-guided laser ablation is currently being used to treat epileptic foci but also has applications in other areas including movement disorders and neurooncology. It too is made possible by the precise stereotactic placement with robotic assistance. The adoption of more minimally invasive surgical techniques as with Robotic Assisted SEEG and LITT therapy reduce post-operative discomfort and complications, as well as shorten hospital stays and are expected to lead to better health outcomes, improved patient and family experience of care, better clinician and staff satisfaction, and wiser allocation of resources.

MR GUIDED FOCUSED ULTRASOUND PROGRAM

The MR guided Focused Ultrasound (MRgFUS) platform, was launched in the spring of 2017. While the program started with philanthropic support for the acquisition of a human MRgFUS system for neurosurgery, a CFI infrastructure grant enabled a significant expansion of the program, which now has three major themes: neurosurgery, drug delivery, and neuromodulation. Infrastructure spans the range from basic FUS technology development, to preclinical MRgFUS, to neuronavigated human FUS equipment, to human MRgFUS. Experiments are ongoing in all three research themes and >30 human neurosurgical procedures for movement disorders have been completed.

Clinical outcomes have been comparable to prior published data, and new important methods to avoid complications, and to apply this therapy for completely different indications have been identified. For example, through collaboration with other centers as well as UofC psychiatry, to treat patients

with severe Obsessive Compulsive Disorder with MRgFUS anterior capsulotomy. Four patients have been treated thus far with early significant improvements as measured by the Yale-Brown Obsessive Compulsive Scale.

Expected benefits of the program include more patients willing to undergo brain lesioning procedures using this less-invasive technology, cost savings for ongoing health care of patients with these chronic conditions, and development of new therapies (such as for specific kinds of pain, epilepsy, brain tumors and treatment for radiation necrosis).

THE PITUITARY INTER-DISCIPLINARY TEAM-BASED ENDOCRINE TREATMENT PROGRAM (PITNET)

The Pituitary Inter-disciplinary Team-based Endocrine Treatment Program (PITNET) brings together neurosurgery, neuro-ophthalmology, otolaryngology and endocrinology to facilitate the care of patients with pituitary and sellar tumors.

The benefits of the PITNET program have included streamlining of patient care, fostering research initiatives, and enhanced teaching to both local and distant learners. Combined multidisciplinary clinics address the needs of both new and follow-up patients and have reduced clinic visits for many patients by providing up to three specialist assessments in one visit. Current research directions are focused on cost-effectiveness, the role of optical coherence tomography in patient management, comparisons of surgical approaches, and the utility of fMRI in optic compressive neuropathy. With a high concentration of surgical patients, the program has facilitated focused training on the diagnosis and management of these lesions to residents in the Section of Neurosurgery and to visiting neurosurgical fellows including international fellows from Australia and the Philippines.

Pediatrics Highlights, Achievements and Innovations

The Department of Pediatrics Academic Medicine and Health Services Program (AMHSP) includes a total group of over 120 physicians who provide expert care for the pediatric population of southern Alberta. This population includes a diverse age range, from extremely preterm infants to adolescents transitioning to adult care. The care spectrum is also incredibly vast, from innovative community care for complex patients to acute life-saving interventions. The Department of Pediatrics provides care, education, research, and leadership in child health for a catchment area that includes Southern Alberta and parts of British Columbia. The Department of Pediatrics AMHSP played a key role in the response to the Shiga toxin-producing E. coli (STEC) outbreak in the fall of 2023-2024.

THE PRECISION NEURODEVELOPMENT LAB

Founded in September 2022 by AMHSP Physician Dr. Sarah MacEachern MD PhD FRCPC, the Precision Neurodevelopment Lab aims to positively impact the everyday life of children with neurodevelopmental disorders (e.g., autism, intellectual disability) by conducting inclusive and equitable research using innovative precision medicine

methodologies. This includes both population-level precision medicine approaches using “big data” and machine learning methodologies and individual-level precision medicine approaches designed to address the needs of a specific complex child. Dr. MacEachern’s clinical work informs and directs her research program to ensure that – in collaboration with patient partners – her and her team are addressing common, real-world

challenges that these young people and their families face.



Pediatrics Achievements and Innovations

As a Developmental Pediatrician at the Alberta Children's Hospital (ACH), Dr. MacEachern's clinical areas of expertise include diagnosing neurodevelopmental disorders (NDDs) in children and comprehensively assessing and treating children with NDDs who have behaviors of concern (BoC; e.g., aggression, self-injury) using complementary health, advocacy, and psychopharmacological approaches. She sees a large diversity of patients with NDDs in her clinical practice and has established a complementary research program focused on children with NDDs who have BoC.



Thanks in part to protected research time as an AMHSP member, Dr. MacEachern is emerging as a leader in the research and care of children with NDDs who have BoC locally and nationally. As of January 2023, she is the Medical Lead for the NDD Care Coordination Program (NDD-CC) at ACH. This program helps children with NDDs and medical complexity and their families navigate health and social care systems to meet their functional needs and thrive in society. She is also a member of the Canadian Sleep Research Consortium (CIHR-funded Spring 2023), a Steering Committee Member of the Sleep Health Equity Engagement Project (SHEEP) Team, and a Founding Member of the Canadian Pediatric

Society Sleep Special Interest Group. She was awarded the 2024 Department of Pediatrics Rising Star award in recognition of "outstanding achievements in individual and collaborative research across basic, clinical, health services, and population health."

MARVEL-OUS URGENT NEUROLOGY CLINIC (MUNC)

The MARVEL-ous Urgent Neurology Clinic was established in 2022 to address the need for semi-urgent outpatient neurology follow-up for patients seen in the Emergency Department. The goal of the clinic is to provide timely, appropriate access to neurology care for patients who do not require immediate consultation or hospital admission but would benefit from being seen within two weeks.

Modeled after similar clinics within the Alberta Children's hospital, such as the Pediatric Urgent Follow-up Clinic, and inspired by national and international models, the clinic leads collaborated with Emergency Department colleagues to establish clear referral criteria.

This clinic is an example of an innovative approach to care made possible by AMHSP funding. Our team of pediatric AMHSP funded neurologists and dedicated nurses brings a unique energy to the program. To highlight their strengths—and in the spirit of promoting the clinic—the team has adopted Marvel character alter-egos. The physician team includes Dr. Colleen (Nebula) Curtis, Dr.

Mary (Thor) Dunbar, Dr. Alice (The Hulk) Ho, Dr. Aleksandra (Fury) Mineyko, and super-powered nurses Lisa Bodell, Lanna Bryksa, Jeremy Little, Shannon Searle, and Tammy Still.

The Department of Pediatrics is proud to celebrate the clinic's success over the past two years. The MUNC clinic has increased patient access to timely subspecialty care and continue to meet their two-week follow-up goal, with high fidelity to the referral criteria. Most importantly, they have filled a critical gap in pediatric neurology outpatient care.



PM&R Highlights, Achievements and Innovations

The Division of Physical Medicine and Rehabilitation Arrangement (PM&R Arrangement) is closely linked with Neurology and Neurosurgery within the Department of Clinical Neurosciences in AHS Calgary Zone and the Cumming School of Medicine, University of Calgary. Participating Physicians who work in the PM&R Arrangement are physiatrists. This PM&R Arrangement provides complex care to a multitude of neurological, locomotor and musculoskeletal deficits, and is a major clinical resource for Albertans living in the geographical area south of Red Deer. Although located in Calgary, the PM&R Arrangement provides extensive consultations to patients and their caregivers in Southern Alberta, South-eastern British Columbia and South-western Saskatchewan.

A significant focus of the PM&R Arrangement to this point has been NeuroRehabilitation, with inpatient and outpatient programs focusing on the rehabilitation of people with stroke, spinal cord injury, acquired brain injury and general rehabilitation. The PM&R arrangement has a growing focus on musculoskeletal, amputee, burn and cancer rehabilitation. With an increasing aging population there will clearly be an increase in the number of patients with neurological and musculoskeletal disorders.



Division of PM&R Arrangement Vision: To develop a comprehensive service model for delivery of PM&R services within the Calgary Zone of AHS and to enhance the research and educational role of Physiatry within the Cumming School of Medicine at the undergraduate, postgraduate and continuing medical education levels.

Division of PM&R Arrangement Mission:

To provide evidence-based care that is patient and family focused in a timely fashion to allow for the best possible opportunities for patients to recover as much independence as possible for both physical and cognitive recovery following a disabling insult at birth or acquired later in life.

In an effort to promote the vision to improve quality of life and productivity within society by reducing the burden of disability caused by neurological and musculoskeletal disorders, the standing objectives of the PM&R Arrangement in the area of clinical service delivery are:

- **To meet the PM&R needs of the growing population of Calgary and Southern Alberta for both adults and pediatrics across neurorehabilitation and musculoskeletal with regards to rehabilitation. This is to be done across the continuum from home to inpatient back to home and follow up within the community in a seamless manner.**
- **To involve PM&R more actively within the undergraduate continuing medical education programs and to maintain a first class residency training program.**
- **To develop an environment that enhances PM&R research**

PM & R Achievements and Innovations



The AMHSP has allowed a significant number of innovations within the University of Calgary section of Physical Medicine and Rehabilitation. A few examples of these include:

Advocating for Improved Responsiveness in Mass Casualty Events: Dr. Vincent Gabriel, Director of the Calgary Burns program, was involved in evaluating responses to a recent mass casualty event as part of his academic program. After a series of interviews and analyses his team produced produced a manuscript titled “Burn mass casualty incident planning in Alberta” which was published in the journal Burns. The manuscript makes recommendations around health systems changes necessary to better deal with future mass casualty events.

HELPING CHILDREN WITH DISABILITY WALK:

Dr. Elizabeth Condcliffe leads a program that uses robotic exoskeletons to help children with paralysis walk again. She recently hosted a CIHR Café Scientifique at Telus Spark for the public to discuss her work. She has received a SickKids Foundation and CIHR New Investigator Research Grant (\$299,439) as well as a Mitacs award to support her cutting edge robotics research.

LEADING NATIONALLY AND INTERNATIONALLY FOR STROKE RECOVERY

Dr. Sean Dukelow leads the CanStroke Recovery Trials platform (www.canadianstroke.ca), a group of 37 researchers who are conducting multiple clinical trials examining new treatments for stroke rehabilitation which have the potential to improve post-stroke outcomes. This includes the CAMAROS trial, for with Dr. Dukelow is the Principal Investigator. CAMAROS is evaluating a novel pharmacologic treatment for post-stroke motor recovery in 12 centres across Canada. Dr. Dukelow is also a member of the executive committee of the International Stroke Recovery and Rehabilitation Alliance (ISRRA, <https://stroke-recoveryalliance.com>) which sets the agenda for stroke rehabilitation research worldwide.



Psychiatry Highlights, Achievements and Innovations

The Calgary Department of Psychiatry combines all aspects of clinical and academic service delivery under one Department, which includes the continuum of clinical service from prevention to rehabilitation. Educational activities include the teaching of students and residents by psychiatrists delivering high-quality patient care.

Department of Psychiatry

Arrangement Vision: Advancing mental health solutions for our community.

Department of Psychiatry Arrangement Mission:

- Promote the highest quality care for individuals with mental disorders and their families
- Support mental health promotion and prevention of mental illness
- Promote a successful learning environment through psychiatric education and research
- Advance and optimize our treatment-options for mental illness
- Represent the profession of psychiatry
- Collaborate and develop networks
- Develop innovative service delivery models
- Integrate mental health care with other fields of health care
- Work to reduce the stigma of mental illness

The mandate of the Calgary Department of Psychiatry encompasses the full breadth of clinical, educational, research, and administrative services required by the 1.8 million citizens who currently call Southern Alberta home. Under the leadership of a single Department Head and Executive Committee, the Department successfully blends its academic mandate as set forth by the University of Calgary Cumming School of Medicine

and its clinical mission as set forth by Alberta Health Services (Calgary Zone).

The Department is comprised of psychiatrists working in hospital-based and community-based settings. Services provided by the Department support and integrate with many areas of the broader health system, reflecting the comparatively high prevalence and potential complexity of mental

health issues experienced either directly or indirectly by the general public. The Department's services encompass the complete spectrum of mental health disorders in patients ranging from infancy to old age, tackling issues as complex as behavioral disorders, substance use disorders, depression, anxiety and other mood disorders, suicide, dementia, and forensic psychiatry. Treatment programs often involve multidisciplinary health care teams

Psychiatry Achievements and Innovations



and innovative partnerships with other health care providers, an example of which is the Department's highly successful Shared Care Program with Family Physicians.

INNOVATIONS AND IMPROVEMENTS

1. In an effort to ensure we are delivering data informed care, both from a content perspective and from a best care at the best location perspective, AMHSP members with a focus on Health Systems are working with both community providers, AHS, justice and other key stakeholders to expand our understanding of mental health care within the Calgary landscape. Work to share the rich data available within Alberta is a priority of both the PRECISE-MH project and initiatives within the youth mental health space. The goal is to develop evidence-informed best practices.

2. The new Centre for Child & Adolescent Mental Health was completed during this past year. This is a warm and welcoming one-stop resource dedicated to helping young people who are struggling with

mental health issues and is tailored to meet the mental health needs of kids and teens and give them direct access to on-site assessment and therapy – all integrated with leading-edge research and training for the next generation of specialists. The AMHSP has allowed the expansion of research and ensuring unique types of care have been developed and tested in this space, as well as supporting the successful recruitment of experts from across Canada.

3. We are focused on improving education to ensure educational concepts reflect what is seen clinically. There is also an effort to really engage learners, to continue to optimize retention, with a focus on ensuring those trained in Alberta stay in Alberta.

Other Metrics and Data of Note
We have expanded our partnerships with AHS and Alberta Health around using data to inform care. Our AMHSP member just became the Scientific Director of the provincial Mental Health and Addiction portfolio.

We are using research to inform clinical improvements and therapy options.

Appendices

South Sector AMHSP Arrangement Annual Reports, 2023-24

- A. Family Medicine AMHSP
- B. Internal Medicine AMHSP
- C. Medical Genetics AMHSP
- D. Neurology AMHSP
- E. Neurosurgery AMHSP
- F. Pediatrics AMHSP
- G. PM&R AMHSP
- H. Psychiatry AMHSP

South Sector AMHSP Arrangement Financials

- I. South Sector Summary
- J. Detailed signed financial statement



South Sector Summary

The physician and program support data included on the following pages was provided by the Provincial – Alberta Academic Medicine and Health Services Program (AMHSP) in the Dean's Office at the Cumming School of Medicine, University of Calgary.

The headcount and FTE data in this section takes into account prorated start and end dates as well as when members leave for, or return from, a Research & Scholarship Leave (RSL) part way through the year.

Alberta AMHSP (South Sector) Annual Report 2023-24

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A. FAMILY MEDICINE

The Academic Department of Family Medicine (DFM), Cumming School of Medicine (CSM), promotes excellence in family medicine by integrating education, research, clinical service, and innovation. DFM AMHSP members deliver clinical services in collaborative, integrated and innovative medical homes, while educating a high volume of medical learners in comprehensive, longitudinal primary care. DFM AMHSP members deliver a wide range of formal education activities to medical students, residents, and international medical graduates, emphasizing a generalist and comprehensive approach to patient care which is essential for addressing the diverse health needs of the people of Alberta.

The AMHSP enables DFM members to be provincial and national leaders in organizations delivering clinical services, research, and education in family medicine. By fostering research in family medicine, the AMHSP supports the development of new practices and evidence-based care, leading to improved treatment strategies and better health outcomes for patients

Demographics

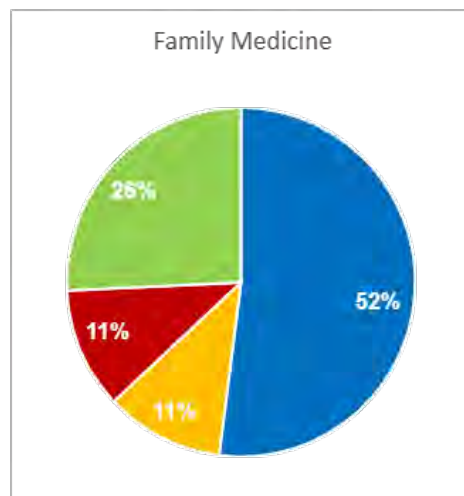
Family Medicine AMHSP membership

53 AMHSP Members



Physician Individual Services Agreement (ISA) Data

Percent time in each of the CARE (Clinical, Administration, Research, Education) pillars

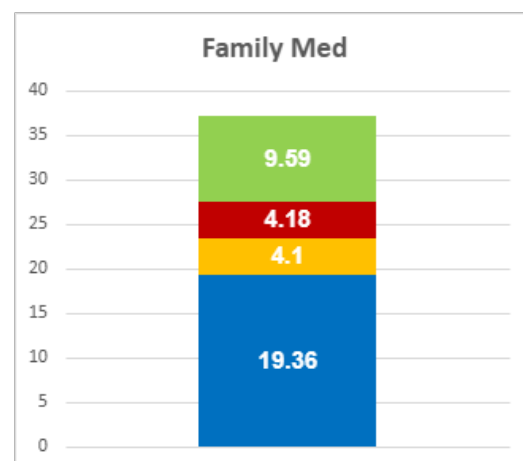


Family Medicine -
Gender Distribution



Male Female X

Overall FTE



Recruitment numbers into Family Medicine AMHSP arrangement



Overall, the total number of AMHSP members has increased from 44 in 2022-23 to 53, with an increase in total clinical FTE, and an increase in overall number of new recruits. Recruitment efforts by the DFM have been significant and are ongoing. Currently, 44% of current AMHSP members are graduates of the UCalgary Family Medicine Postgraduate Program, showing that the AMHSP is a powerful tool for recruitment and retention of family medicine residents into academic clinical practice and teaching.

Net Change to Total Number of AMHSP Members: +7

Clinical Metrics

Family Medicine AMHSP gross shadow billing



\$ 4, 049, 438.77 in Shadow Billings by AMHSP members within Academic DFM teaching clinics

\$ 1,137,522.66 Clinical revenue for work done by AMHSP members outside of Academic DFM teaching clinics

Family Medicine AMHSP billing per clinical FTE

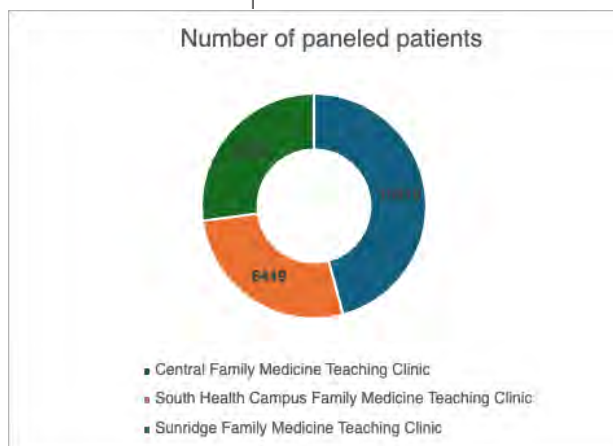


Outpatient clinical data

Total paneled patients and outpatient visits include metrics for AMHSP members and Clinical Preceptors

Total paneled patients





Central Family Medicine Teaching Clinic: **10,918**

South Health Campus Family Medicine Teaching Clinic: **6,449**

Sunridge Family Medicine Teaching Clinic: **6,458**

Academic Family Medicine Teaching Clinic Metrics

Metrics below are based on total clinical delivery with the Academic Teaching Clinics and includes AMHSP members and clinical preceptors.

The three Academic Teaching Clinics are led by family physicians working within teams to serve patients in their communities through the collaborative, integrated, and innovative patient medical home model, while providing outstanding teaching and learning experiences in family medicine, and supporting primary care research, scholarship, and quality improvement.

Clinical Activity

1. Volume of clinical activity (# of patient-care encounters): **95,536**
2. ASAME adjusted panel size per 0.1 FTE: **143.99**
3. % of virtual visits: **49.34%**
4. % of telephone/e-consults to specialty out of total referrals: **10.6%**
5. Utilization of allied health service professionals and programs: **2022 patient visits**

Measures of Clinical Excellence in Primary Care

Patient Feedback:

Data based on 761 completed patient experience surveys

- % of patients who rated their overall experience and care at the DFM clinics as "Excellent" or "Very Good": **91%**
- % of patients who felt they "Always" or "Usually" had enough involvement in treatment and care decisions: **95%**

Continuity:

Higher levels of patient continuity with their primary care teams improves patient outcomes. Within the Academic Teaching Clinics, patients see a member of their primary care team 92% of the time.

Access:

After-hours access is provided by regular evening clinics, as well as an on-call program in collaboration with Health Link. The use and benefit of evening clinics has been steadily increasing and has been shown to reduce patient visits to acute care settings outside of the medical home.

- # of evening clinic appointments: **2308** (this is an increase of 1120 from 22/23)
- # of evening clinics: **157**
- % of patients attending an evening clinic appointment who would have gone to ED/Urgent Care/Walk in if they did not have access to an evening clinic: **46%**

Clinical Education:

The AMHSP is integral in supporting the Academic Teaching Clinics to manage a large number of learners annually, including the high intensity activities of supervision, assessment, and coaching of remedial and probationary learners. AMHSP members also provide clinical supervision and assessment during the mandatory externship rotation through the Alberta International Medical Graduate (AIMG) program, supporting increasing numbers of AIMGs in our residency program.

- Total postgraduate learners in the Academic Teaching Clinics: **107, including 20 international medical graduates**
 - This represents 70% of residents in the Calgary Core Family Medicine Postgraduate Program
- Total undergraduate medical learners in the Academic Teaching Clinics: **122**
 - Pre-clerkship: **70**
 - Clerkship: **52**

Education Metrics

Undergraduate medical education (UME) activity

UME COURSE TEACHING



661 hours

Total UME course teaching hours by AMHSP physicians (pre-clerkship curriculum)

UME Course teaching hours by GFT members: **73.5**

UME Course teaching hours by Major Clinical members: **587.5**

CLINICAL TEACHING HOURS (CLERKSHIP)



3,255 total clerkship clinical teaching hours by AMHSP physicians.

Postgraduate medical education (PGME) activity

NUMBER OF CORE & SPECIALTY PGME TRAINING PROGRAMS

9

Family Medicine Core & Specialty Training Programs

- Calgary Core 2 year
- Rural Core 2 year
- Enhanced Skills – Addiction Medicine
- Enhanced Skills – Care of The Elderly
- Enhanced Skills – Family Practice Anesthesia
- Enhanced Skills – Health Equity
- Enhanced Skills – Maternity Newborn Care
- Enhanced Skills – Palliative Care
- Enhanced Skills – Sports and Exercise Medicine
- Enhanced Skills – Family Medicine Emergency Medicine

NUMBER OF PGME RESIDENTS

203 PGME Residents

Research Metrics

Research funding and grants*

TOTAL ANNUAL REVENUE

 **\$2,911,576** total annual research revenue

- Total research revenue for AMHSP members: **\$1,820,000**

BREAKDOWN OF RESEARCH REVENUE

 **\$913,340** Total CIHR revenue for AMHSP members**\$913,340** clinical research revenue for AMHSP members **53** publications by family medicine AMHSP members

Leadership



17

administrative leadership roles



30

educational leadership roles

B. INTERNAL MEDICINE

The Internal Medicine Alternative Medical Health Services Program (AMHSP) arrangement included 227 physicians spanning 12 Divisions within the Departments of Medicine and Cardiac Sciences in the 2023-2024 fiscal year. Our physicians provide clinical services at Foothills Medical Centre, Peter Lougheed Hospital, Rockyview General Hospital, Richmond Road Diagnostic and Treatment Centre, South Health Campus, and Sheldon M. Chumir Health Centre (which includes the Elbow River Healing Lodge). In addition, Internal Medicine AMHSP members also provide clinical services at the Bridgeland Seniors Health Centre, the Calgary Urban Project Society (CUPS), the Alexandra community Health Clinic, the Stoney Health Centre, and at the Calgary Refugee Clinic and rural locations.

Demographics

Internal Medicine AMHSP membership distribution by Specialty



227

Members

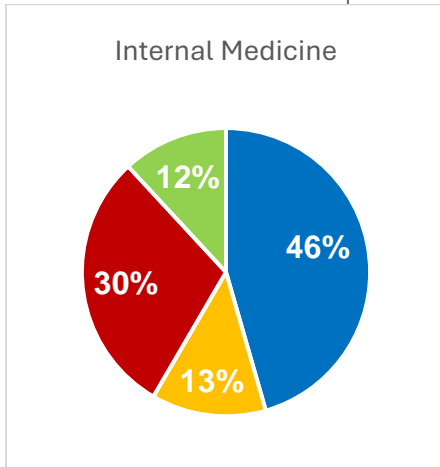
Internal Medicine -
Gender Distribution



Male Female

Physician Individual Services Agreement (ISA) Data

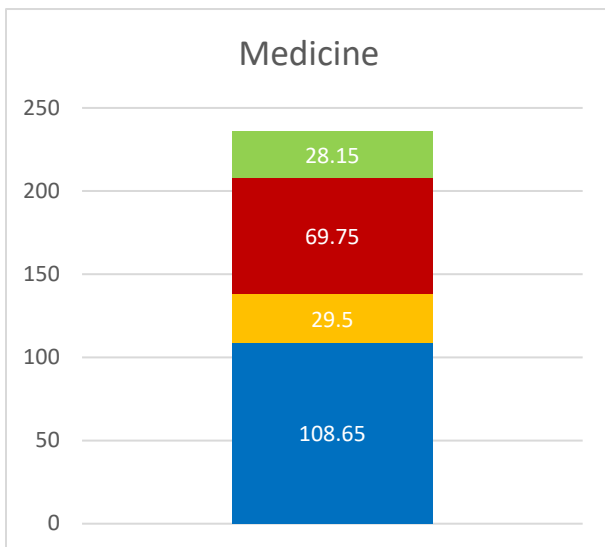
Percent of time in each of the CARE (Clinical, Administration, Research, Education) pillars



Note: Percent of time in the Administration pillar is elevated as the Department of Medicine's AMHSP membership includes members with Senior Leadership Appointments with Alberta Health Services and the University of Calgary.

Overall FTE

Internal Medicine AMHSP Total FTE: 204.06



Recruitment numbers into Internal Medicine AMHSP arrangement



10

Full AMHSP Members joined the DOM – 5 were previous locums

Net Change: +1

Clinical Metrics

Internal Medicine AMHSP Gross Shadow Billing

**\$42,467,090**

in Shadow Billings for Q4 YTD

Internal Medicine AMHSP Shadow Billing per Clinical FTE**\$455,655.47**

Total Clinical FTE: 93.20

Outpatient Clinical Data

Note: Outpatient Clinical Data is for the entire Department of Medicine (both AMHSP and FFS members).

**51,172** outpatient clinic referrals**4,239 Seniors Health outpatient clinic referrals in 2022-23****53,933 – CAT outpatient Clinic Referrals****Inpatient Metrics****37,721** inpatient consults

(Consults ordered for inpatients are as per Sunrise Clinical Manager & ConnectCare data. Usually, the consult is ordered with a physician's name attached. However, sometimes the order includes only a group name (eg. SHC GIM Medical Teaching Unit). Either are accepted but restricted so that there is no double counting.

NUMBER OF INPATIENTS ADMITTED BY INTERNAL MEDICINE AMHSP MEMBERS IN THE FOUR CALGARY ADULT HOSPITALS**(FMC, PLC, RGH, SHC)****4,417** Inpatients admitted

Source: Sunrise Clinical Manager (SCM)

**9,795** inpatients attended

Source: Sunrise Clinical Manager (SCM)

Education Metrics

Post-Graduate Medical Education (PGME) Activity

NUMBER OF CORE & SPECIALTY PGME TRAINING PROGRAMS

11 Internal Medicine Core & Specialty Training Programs

Post-Graduate Medical Education (PGME) Activity

196 PGME Residents

183 DOM and 13 Cardiology

Total Clerkship Clinical Teaching Hours

 **2,975** hours, 300 of those clerkship teaching

(entire DOM, not AMHSP specific)

Research Metrics

Research Funding and Grants*

TOTAL RESEARCH REVENUE

 **\$31.03 Million**

CANADIAN INSTITUTES OF HEALTH RESEARCH (CIHR) REVENUE

 **\$6.15 Million**

CLINICAL RESEARCH REVENUE

 **\$1.72 Million**

* amounts received in 2023-24, not amounts awarded

Publications


916

publications by Internal Medicine AMHSP members

Leadership


80

Educational Leadership Roles


108

Administrative / Clinical Leadership Roles

C. MEDICAL GENETICS & GENOMICS

The South MG&G AMHSP supports a population of approximately 2 million Albertans with or at risk of genetic diseases. The 11 Medical Geneticists (10.14 FTE) provide care to over 9000 patients of all ages (pediatric and adult) and families per year in a multi-disciplinary team environment. We work closely with our colleagues in Genetic Laboratory Services, Obstetrics/Gynecology, Pediatrics, Clinical Neuroscience, Medicine, and Oncology to provide genetic assessment, testing, diagnosis and management for both children and adults with hereditary disorders. The AMHSP also plays a critical role in supporting the educational, research and leadership mandate of both Alberta Health Services and the University of Calgary. MG&G currently operates on three sites, Alberta Children's Hospital for general genetics and metabolic genetics, Cambrian Wellness Centre for prenatal care, and the Richmond Road Diagnostic and Treatment Centre campus for adult services.

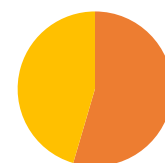
Demographics

Medical Genetics & Genomics AMHSP membership


11

AMHSP Members

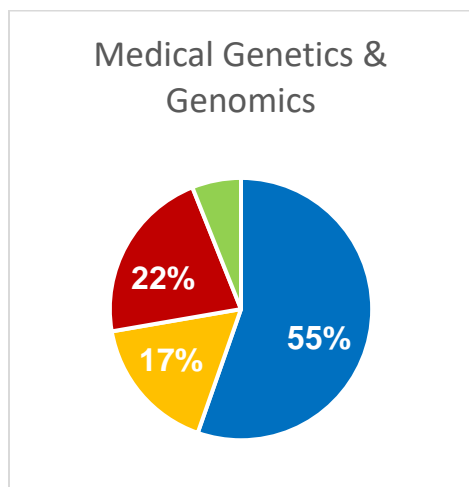
Med Gen-
Gender Distribution



Male Female

Physician Individual Services Agreement (ISA) Data

Percent of time in each of the CARE (Clinical, Administration, Research, Education) pillars



Total FTE: Participating Member FTE 10.14 (no locums)

Departures from Medical Genetics & Genomics AMHSP arrangement

One member left the Medical Genetics & Genomics AMHSP arrangement, due to either resignation or retirement.

Recruitment numbers into Medical Genetics & Genomics AMHSP arrangement

0 new recruits in 2022-23

Net Change: -1

Clinical Metrics

Medical Genetics & Genomics AMHSP gross shadow billing

Our plan as per our Schedule A does not report shadow billing and there is no PSB draw for the plan.

Medical Genetics & Genomics AMHSP shadow billing per clinical FTE

Our plan as per our Schedule A does not report shadow billing and there is no PSB draw for the plan.

Outpatient clinical data

Outpatient Clinic Referrals

7,545 outpatient clinic referrals

Total Number of Outpatients Seen / Total Outpatient Visits

 **11,357** outpatients seen / total outpatient visits

Medical Genetics & Genomics AMHSP inpatient clinical data

Total Number of Inpatient Consults / ED Visits

 **968** inpatient consults (Genetic 668, Metabolics 300)

Education Metrics

Undergraduate medical education (UME) activity

UME COURSE TEACHING

 **51.5** hours

Medical Genetics & Genomics AMHSP members completed a total of 51.5 hours of UME course teaching in 2023-24 including 11.5 lectures and 40 hours of small group teaching. *This number is reported by the Arrangement, the total number in the main report is direct from the UME office and not broken down.*

TOTAL CLERKSHIP CLINICAL TEACHING HOURS

 **100** hours

Post-Graduate medical education (PGME) activity

NUMBER OF CORE & SPECIALTY PGME TRAINING PROGRAMS

1 Medical Genetics & Genomics Core & Specialty Training Program

NUMBER OF PGME RESIDENTS

6 PGME Residents

Research Metrics

Research funding and grants*

TOTAL ANNUAL REVENUE



\$5.04 total research revenue



\$3.08 total CIHR revenue

Publications



69 publications

Leadership

4 administrative leadership roles



2 educational leadership roles



D. NEUROLOGY

The Division of Neurology Arrangement is focused on prevention and care of patients with complex and common neurological disorders. Importantly, this focus goes far beyond direct patient care. It also includes innovation in health care delivery, research, education and leadership, all of which are prerequisites to patient care.

Division of Neurology Arrangement Vision: To improve quality of life and productivity within society by reducing the burden of disability caused by neurological disorders.

Division of Neurology Arrangement Mission: To be an international leader in neurological patient care, education, and research.

In an effort to promote the vision to improve quality of life and productivity within society by reducing the burden of disability caused by neurological disorders, the standing objectives of the Division of Neurology Arrangement in the area of clinical service delivery are:

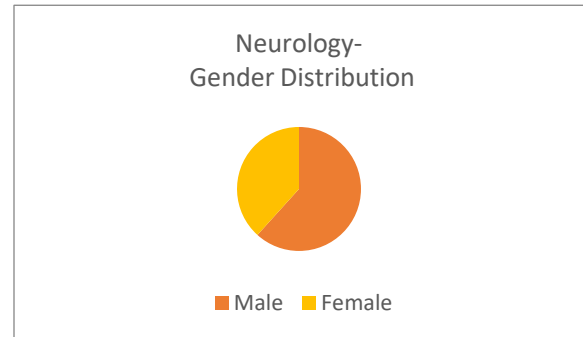
- To provide timely, appropriate, integrated and efficient team-based clinical care to patients with neurological disorders in Calgary and Southern Alberta, in the Division of Neurology Arrangement's referral area.
- To develop clinical-academic programs in neurology of national and international stature. These programs will provide specialized assessment and treatment, develop, test and implement new forms of treatment and explore

disease mechanisms.

- To work in partnership with the Calgary Zone of AHS to develop effective population-based wellness promotion, prevention and disease management programs relevant to neurological disorders.
- To be accountable to stakeholders for the quality and quantity of agreed upon services to be provided.

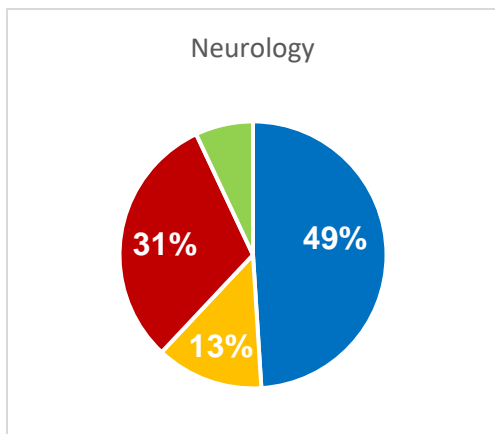
To advance team-based service delivery models in order to optimize use of physician resources and to promote efficient and effective delivery of health care services. Where possible, this includes prevention of neurological disorders for individuals at risk.

Demographics



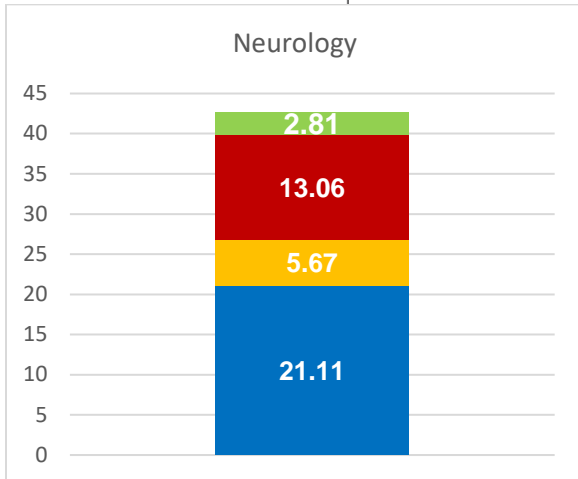
Physician Individual Services Agreement (ISA) Data

Percent of time in each of the CARE (Clinical, Administration, Research, Education) pillars



Overall FTE

Neurology AMHSP Total FTE: 42.65



Recruitment numbers into Neurology AMHSP arrangement



4

Full AMHSP Members

Net Change to AMHSP Members. **+3**

Departures from Neurology AMHSP arrangement

In 2022-23 one (1) member left the Neurology AMHSP Arrangement, either due to resignation or retirement.

This number does not include members who were on a Leave of Absence or Sabbatical

Clinical Metrics

Neurology AMHSP gross shadow billing



\$7,675,503.85

Neurology AMHSP shadow billing per clinical FTE



\$363,595.63

per Clinical FTE

Outpatient clinical data

Total Number of Outpatient Visits

 **34,652** outpatient visits

Total Number of Outpatient Referrals

 **XX** outpatient referrals

AMHSP inpatient clinical data

Total Number of Inpatient Visits

 **4890** inpatient visits

Total Number of patients admitted

 **1,768** Patients admitted

Education Metrics

Undergraduate medical education (UME) activity

UME COURSE TEACHING

 **315** hours

MC: 182 hours | 133 GFT Hours

CLERKSHIP CLINICAL TEACHING HOURS:

 **3700** hours

Post-Graduate medical education (PGME) activity

PGME Accredited Core & Subspecialty Residency Training Programs

22 Neurology Core & Specialty Training Programs

NUMBER OF PGME RESIDENTS

18 PGME Residents

Research Metrics

Research funding and grants

TOTAL ANNUAL REVENUE

 **\$8.59 M** total annual research revenue

BREAKDOWN OF RESEARCH REVENUE

 **\$2.46 M** total CIHR revenue**\$186.06K** clinical research revenue

Publications

 **297** publications

Leadership

 **58** administrative leadership roles **34** educational leadership roles

E. NEUROSURGERY

The Division of Neurosurgery at the University of Calgary and Alberta Health Services is fully integrated with its partner sections of Neurology, Physical Medicine and Rehabilitation (PM&R) and Translational Neurosciences within the Department of Clinical Neurosciences. With a highly integrated and programmatic approach, sub-specialized care is provided to the patient population. This population includes the geographic region of Southern Alberta as well as

Eastern British Columbia in the Kootenay Region and Western Saskatchewan, encompassing an approximate catchment population of 2.5 million. Care is provided by 18 neurosurgeons, (currently 16 Geographic Full Time (GFT) and two major clinical Participating Physicians), all of whom are sub-specialists and also provide general and emergency neurosurgical services. The Division of Neurosurgery provides five specialist call services: general neurosurgery, pediatric neurosurgery, spine surgery, vascular neurosurgery, and interventional neuro radiology. There are no fee-for-service physicians in the group; All members of the Division of Neurosurgery participate in the Neurosurgery AMHSP. Specialized programs include cerebrovascular and endovascular neurosurgery, epilepsy neurosurgery, adult hydrocephalus, neuro-oncology, skull base surgery, pediatric neurosurgery, peripheral nerve surgery, functional neurosurgery, stereotactic radiosurgery and spine surgery. In partnership with neurology, rehabilitation medicine, orthopedic surgery, neuroradiology, and radiation oncology, division participating physicians provide the highest quality of sub-specialized care for this patient population.

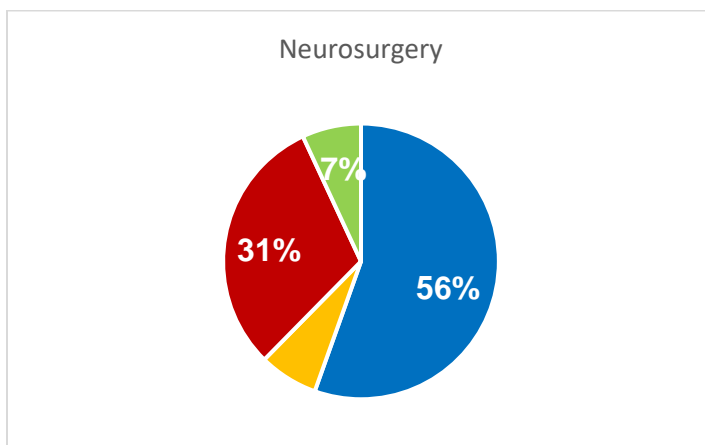
Demographics



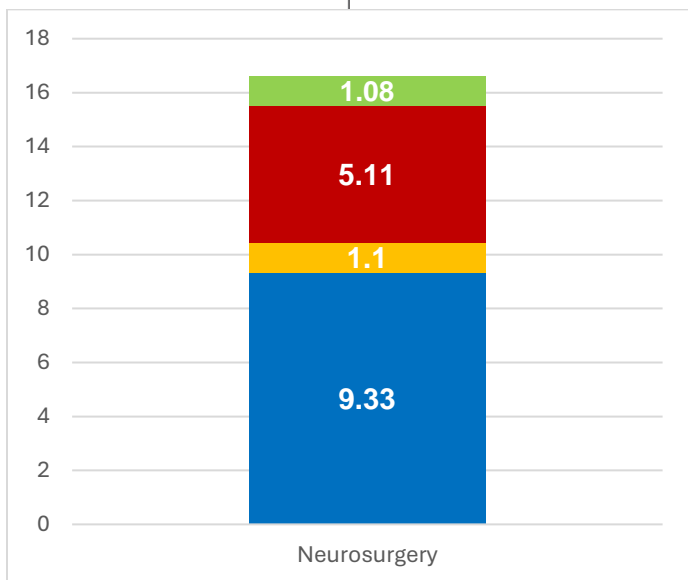
Physician Individual Services Agreement (ISA) Data

Percent of time in each of the CARE (Clinical, Administration, Research, Education) pillars

Overall FTE



Total FTE: 16.61



Recruitment numbers into Neurosurgery AMHSP arrangement



1

Full AMHSP Member

Net Change: +1

Clinical Metrics

Neurosurgery AMHSP gross shadow billing



\$11,811,109.88

in Gross Shadow billing (Q4 YTD)

Neurosurgery AMHSP shadow billing per clinical FTE



\$1,265,928.18

per Clinical FTE

Outpatient clinical data

TOTAL NUMBER OF OUTPATIENTS SEEN / TOTAL OUTPATIENT VISITS

 **11,066** outpatients seen / total outpatient visits**Neurosurgery AMHSP inpatient clinical data**

TOTAL NUMBER OF INPATIENT CONSULTS / ED VISITS

 **5,433** inpatient consults / ED visits

TOTAL NUMBER OF PATIENTS ADMITTED

 No accessible data**Education Metrics****Undergraduate medical education (UME) activity**

UME COURSE TEACHING

 **235** hours**Post-Graduate medical education (PGME) activity**

NUMBER OF CORE & SPECIALTY PGME TRAINING PROGRAMS

1 Neurosurgery Core & Specialty Training Program

NUMBER OF PGME RESIDENTS

14 PGME Residents**Research Metrics****Research funding and grants***

TOTAL ANNUAL REVENUE

**\$2.16M**

total annual research revenue

**\$130.05k**

CIHR research revenue

**\$192.13 k**

clinical research revenue

Publications

**58**

publications

Leadership

Members with administrative leadership roles

**22**

administrative leadership roles

Members with Educational Leadership Roles

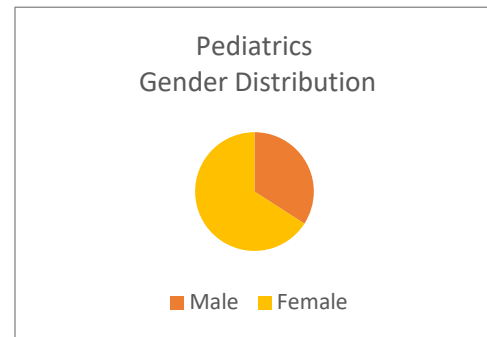
**11**

educational leadership roles

F. PEDIATRICS

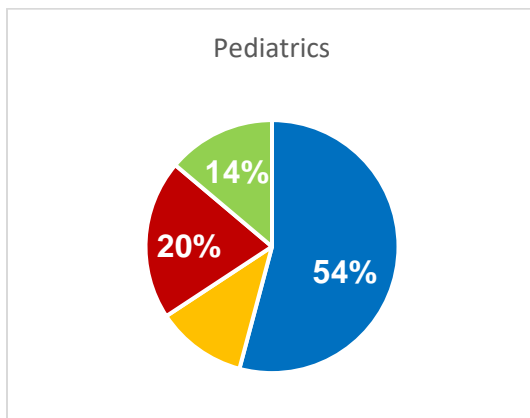
The Department of Pediatrics Academic Medicine and Health Services Program (AMHSP) includes a total group of over 120 physicians who provide expert care for the pediatric population of southern Alberta. This population includes a diverse age range, from extremely preterm infants to adolescents transitioning to adult care. The care spectrum is also incredibly vast, from innovative community care for complex patients to acute life-saving interventions. The Department of Pediatrics provides care, education, research, and leadership in child health for a catchment area that includes Southern Alberta and parts of British Columbia. The Department of Pediatrics AMHSP played a key role in the response to the Shiga toxin-producing E. coli (STEC) outbreak in the fall of 2023-2024.

Demographics

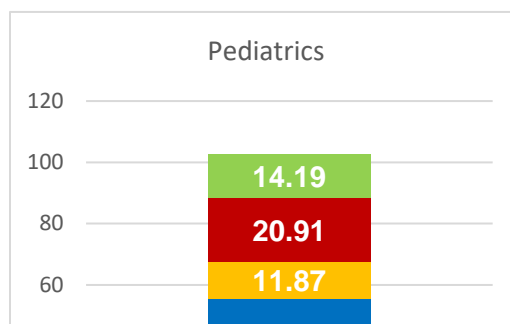


Physician Individual Services Agreement (ISA) Data

Percent of time in each of the CARE (Clinical, Administration, Research, Education) pillars



Overall FTE: 102.44



Recruitment numbers into Pediatrics AMHSP arrangement



1

Full AMHSP Members, 5 locums

Number of members who left the AMHSP plan (retirements, resignations, physicians moving to ffs, etc.)
3 members

NET CHANGE TO TOTAL NUMBER OF AMHSP MEMBERS

- 1 Participating Members
- +2 Locums

Total: + 1 Total Members

Clinical Metrics

Pediatrics AMHSP gross shadow billing



\$15,776,745.42

Total gross shadow billing (Q4 YTD)

Pediatrics AMHSP shadow billing per clinical FTE



\$307,232.61

per Clinical FTE

Outpatient clinical data

Total Number of Outpatient Visits



166,472 outpatient visits

(139,764 face-to-face, 54,689 Telephone/Telehealth)

**It is very difficult to report on our outpatient consults for our AMHSP-supported physicians only. A large percentage of the above outpatient visits would be within the AMHSP-supported sections.*

ACH EPIC Ambulatory Care had a total of 45,761 unique patients

Pediatrics AMHSP inpatient clinical data

Total Number of Emergency Department Visits:



76,049 ACH Emergency Department visits

Total Number of Patients Admitted



9,1822 Discharges tracked for pediatrics

o As the clinical activities and types of care provided by the four AMHSP departments differ, not all departments use the same metrics to measure clinical care. As such, the metrics reported in this section are not available for all AMHSP departments or arrangements.

o Please note: As with past years it is extremely difficult to source data for AMHSP members only, so we have used inpatient data for our department as a whole for the AMHSP report.

o Patient data for the Department of Pediatrics is from the Alberta Children's Hospital (ACH) 2023/24 Child Health Annual Report.

Education Metrics

Undergraduate medical education (UME) activity

UME COURSE TEACHING



1,433 hours

AMHSP = 617 hours

GFT = 390 hours

Part time (Fee for Service) = 415 hours

Residents = 11 hours

Other

8 Leadership positions in the Undergraduate Medical School, 5/8 of which are AMHSP

3 Master Teachers at the Undergraduate Medical School; 2 of 3 are AMHSP

CLERKSHIP CLINICAL TEACHING**734**

In-Training Evaluation Reports (ITERs) completed

Source: Office of Undergraduate Medical Education (UME)

Other

1,442 Total Pre-clerkship teaching hours

Total Clerkship elective weeks supported by AMHSP/GFT: 67 weeks

Post-Graduate medical education (PGME) activity**PGME ACCREDITED CORE & SUBSPECIALTY RESIDENCY TRAINING PROGRAMS****14**

Specialty Training Programs (12 plus 2 non-accredited programs)

NUMBER OF PGME RESIDENTS**100**

PGME Residents

Research Metrics**Research funding and grants*****TOTAL ANNUAL REVENUE****\$13.57M**

total annual research revenue

BREAKDOWN OF RESEARCH REVENUE**\$3.1 M**

total CIHR revenue

\$2.39M

clinical research revenue

Publications



263 unique publications

Leadership



21 administrative leadership roles



19 educational leadership roles

G. PHYSICAL MEDICINE AND REHABILITATION

The Division of Physical Medicine and Rehabilitation Arrangement (PM&R Arrangement) is closely linked with Neurology and Neurosurgery within the Department of Clinical Neurosciences in AHS Calgary Zone and the Cumming School of Medicine, University of Calgary. Participating Physicians who work in the PM&R Arrangement are physiatrists. This PM&R Arrangement provides complex care to a multitude of neurological, locomotor and musculoskeletal deficits, and is a major clinical resource for Albertans living in the geographical area south of Red Deer. Although located in Calgary, the PM&R Arrangement provides extensive consultations to patients and their caregivers in Southern Alberta, South-eastern British Columbia and South-western Saskatchewan.

A significant focus of the PM&R Arrangement is NeuroRehabilitation, with inpatient and outpatient programs focusing on the rehabilitation of people with stroke, spinal cord injury, and acquired brain injury and outpatient programs for neuromuscular disorders, cerebral palsy and other neuromotor disorders that begin in childhood. The PM&R arrangement also has a focus on musculoskeletal, amputee, burn and cancer rehabilitation. With an increasing population in Alberta there have been significant increases in the number of patients with neurological and musculoskeletal disorders.

PM&R Arrangement Vision: To develop a comprehensive service model for delivery of PM&R services within the Calgary Zone of AHS and to enhance the research and educational role of Physiatry within the Cumming School of Medicine at the undergraduate, postgraduate and continuing medical education levels.

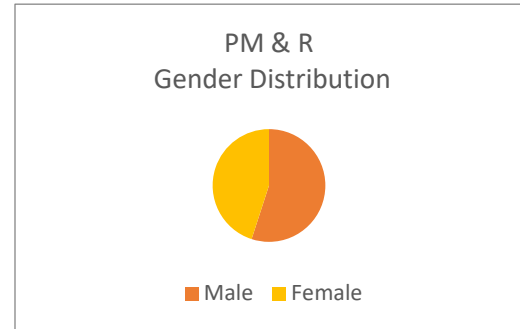
PM&R Arrangement Mission: To provide evidence-based care that is patient and family focused in a timely fashion to allow for the best possible opportunities for patients to recover as much independence as possible for both physical and cognitive recovery following a disabling insult at birth or acquired later in life.

To promote the vision to improve quality of life and productivity within society by reducing the burden of disability caused by neurological and musculoskeletal disorders, the standing objectives of the PM&R Arrangement in the area of clinical service delivery are:

- To meet the PM&R needs of the growing population of Calgary and Southern Alberta for both adults and pediatrics across neurorehabilitation and musculoskeletal with regards to rehabilitation. This is to be done across the continuum from home to inpatient back to home and follow up within the community in a seamless manner.

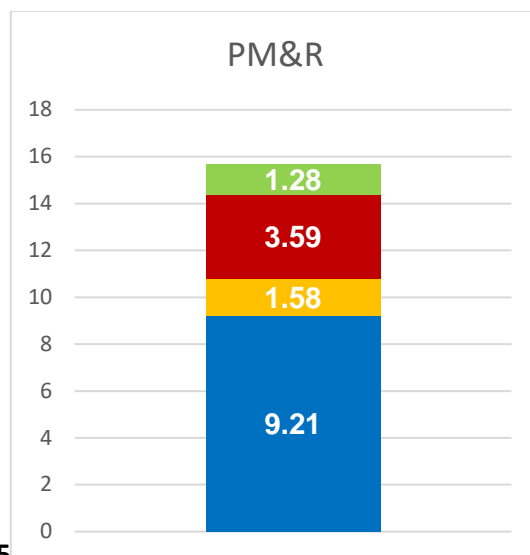
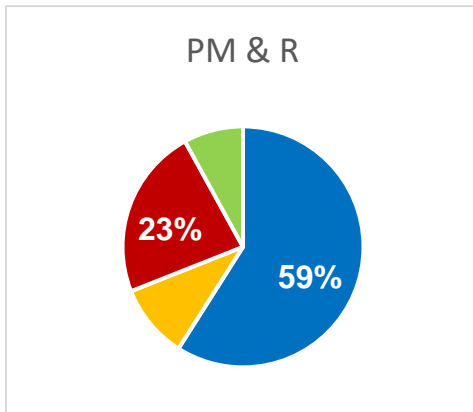
- To involve PM&R more actively within the undergraduate continuing medical education programs and to maintain a first-class residency training program.
- To develop an environment that enhances PM&R research

Demographics



Physician Individual Services Agreement (ISA) Data

Percent of time in each of the CARE (Clinical, Administration, Research, Education) pillars



Overall FTE: 15.65

Recruitment numbers into Physical Medicine & Rehabilitation AMHSP arrangement



Departures from Physical Medicine & Rehabilitation AMHSP arrangement – 1 Locum

Net Change: **+2**

Clinical Metrics

Physical Medicine & Rehabilitation AMHSP gross shadow billing



\$3,307,656.52
Q4 YTD

Physical Medicine & Rehabilitation AMHSP shadow billing per clinical FTE



\$359,137.52
per Clinical FTE

Outpatient clinical data

Total Number of Outpatients Seen / Total Outpatient Visits



14,859 outpatients seen / total outpatient visits

Physical Medicine & Rehabilitation AMHSP inpatient clinical data

Total Number of Inpatient Consults / ED Visits



778 inpatient consults / ED visits

Education Metrics

Undergraduate medical education (UME) activity

UME COURSE TEACHING



109 hours

Physical Medicine & Rehabilitation AMHSP members completed a total of 109 hours (107 MC hours and 2 GFT hours) of UME course teaching.

Post-Graduate medical education (PGME) activity

NUMBER OF CORE & SPECIALTY PGME TRAINING PROGRAMS

 **1** Physical Medicine & Rehabilitation Training Program

NUMBER OF PGME RESIDENTS

 **12** PGME Residents

Research Metrics

Research funding and grants*

TOTAL ANNUAL REVENUE

 **\$2.95 M** total annual research revenue

BREAKDOWN OF RESEARCH REVENUE

 **\$18,000** total CIHR revenue **\$6,470** clinical research revenue

Publications

 **49** publications

Leadership

Members with administrative leadership roles

 **29** administrative leadership roles

Members with educational leadership roles



11

educational leadership roles

H. PSYCHIATRY

The Calgary Department of Psychiatry combines all aspects of clinical and academic service delivery under one Department, which includes the continuum of clinical service from prevention to recovery. Educational activities include the teaching of students and residents by psychiatrists delivering high-quality patient care. The mandate of the Calgary Department of Psychiatry encompasses the full breadth of clinical, educational, research, and administrative services required by the 1.8 million citizens who currently call Southern Alberta home. Under the leadership of an academic Department Head and administrative Zone Medical Lead, as well as an Executive Committee, the Department successfully blends its academic mandate as set forth by the University of Calgary Cumming School of Medicine and its clinical mission as set forth by Alberta Health Services (Calgary Zone).

Department of Psychiatry Arrangement Vision: Advancing mental health solutions for our community.

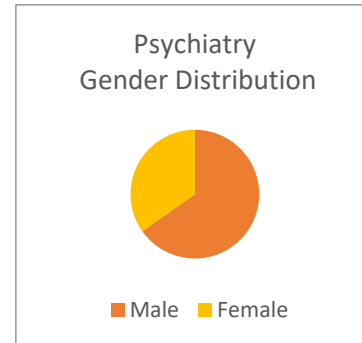
Department of Psychiatry Arrangement Mission:

- Promote the highest quality care for individuals with mental disorders and their families
- Support mental health promotion and prevention of mental illness
- Promote a successful learning environment through psychiatric education and research
- Advance and optimize our treatment-options for mental illness, with a focus on recovery
- Represent the profession of psychiatry
- Collaborate and develop networks
- Develop innovative service delivery models
- Integrate mental health care with other fields of health care
- Work to reduce the stigma of mental illness

The Department is comprised of psychiatrists working in hospital-based and community-based settings. Services provided by the Department support and integrate with many areas of the broader health system, reflecting the comparatively high prevalence and potential complexity of mental health issues experienced either directly or indirectly by the general public. The Department's services encompass the complete spectrum of mental health disorders in patients ranging from infancy to old age, tackling issues as complex as behavioral disorders, substance use disorders,

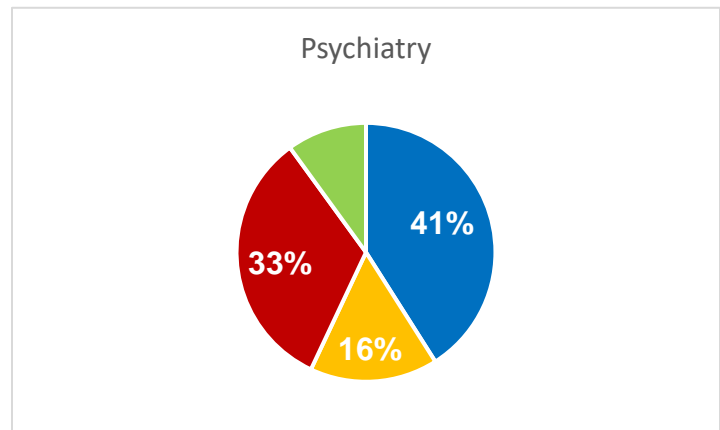
depression, anxiety and other mood disorders, suicide, dementia, and forensic psychiatry. Treatment programs often involve multidisciplinary health care teams and innovative partnerships with other health care providers, an example of which is the Department's highly successful Shared Care Program with Family Physicians.

Demographics

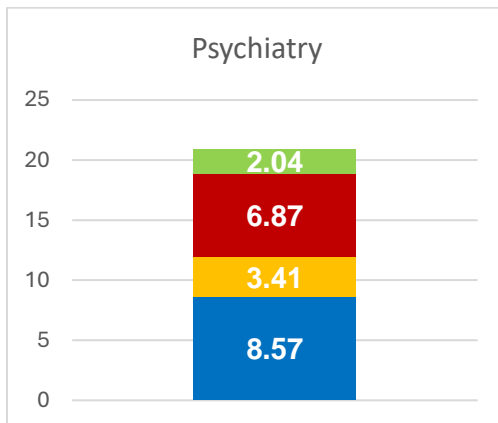


Physician Individual Services Agreement (ISA) Data

Percent of time in each of the CARE (Clinical, Administration, Research, Education) pillars



Overall FTE: 20.90



Recruitment numbers into Psychiatry AMHSP arrangement

2 Full AMHSP



Departures from Neurology AMHSP arrangement

In 2023-24 there was zero departures that left the Psychiatry AMHSP arrangement, either due to resignation or retirement.

Net Change to AMHSP Members +2**Clinical Metrics****Psychiatry AMHSP gross shadow billing****\$3,238,213.81**

in Shadow Billings for the 2022 calendar year

Psychiatry AMHSP shadow billing per clinical FTE**\$377,854.59**

per Clinical FTE

Outpatient clinical data**Total Number of Outpatient Visits****10,647** outpatient visits**AMHSP inpatient clinical data****Total Number of Inpatient Visits****3,116** inpatient visits/ED**Total Number of patients admitted****519** Patients admitted**Education Metrics****Undergraduate medical education (UME) activity**

UME COURSE TEACHING



Psychiatry AMHSP members completed a total of 79 hours (70 hours MC / 9 hours GFT) of UME course teaching in 2022-23. *This number is reported by the Arrangement, the total number in the main report is direct from the UME office and not broken down.*

Post-Graduate medical education (PGME) activity

NUMBER OF CORE & SPECIALTY PGME TRAINING PROGRAMS



NUMBER OF PGME RESIDENTS



Research Metrics

Research funding and grants

TOTAL ANNUAL REVENUE



BREAKDOWN OF RESEARCH REVENUE



Publications



Leadership

**21** administrative leadership roles**18** educational leadership roles