



ANNUAL REVIEW 2019

DISRUPTIVE INNOVATION

- 6 LETTER FROM THE EDITORS**
- 14 DISRUPTIVE INNOVATION – TECHNOLOGY IN THE HEALTHCARE UNIVERSE**
- 39 LET'S CREATE THE FUTURE OF HEALTH CARE TOGETHER – EMBRACING HEALTH CARE TECHNOLOGY AND DEVELOPING AN INNOVATION MINDSET IN MEDICAL EDUCATION**
- 46 DR. BRIAN GOLDMAN: DISRUPTIVE INNOVATION**



MEDSHOUSING.COM

Electives, Residency, Fellowship.



Find your home

info@medshousing.com

 **MEDS**HOUSING
GLOBAL HOUSING FOR THE MEDICAL COMMUNITY



Our Mission

THE CANADIAN FEDERATION OF MEDICAL STUDENTS IS THE NATIONAL voice of Canadian medical students. We **connect, support** and **represent** our membership as they learn to serve patients and society.

Our Vision

Tomorrow's physicians leading for health today.

THE CANADIAN FEDERATION OF MEDICAL STUDENTS (CFMS) WAS FOUNDED in 1977 in response to the recognized need for a national unifying body for medical students.

Our membership has since grown to more than 8000 students at 15 medical student societies across Canada. In addition, the CFMS welcomes individual members from non-member Canadian medical schools in Québec. At the CFMS, it is our mission to connect, support and represent our membership. As future physicians, we also advocate for the best health for all members of society.

The CFMS **connects** Canadian medical students and we seek to engage with our student members. Our cornerstone is www.cfms.org -- the online home of CFMS, available in both English and French. We also publish the *CFMS Annual Review*, a yearly magazine highlighting CFMS and medical student activities. Beyond connecting members to CFMS, we connect Canadian medical student with each other, through bi-annual meetings, numerous committees, programs and events. These student-to-student connections facilitate the sharing of local best practices across schools and create a sense of camaraderie among medical students.

The CFMS **supports** medical students through a wide variety of services and programs. We know our members value savings as they undertake costly medical training, and our discounts program includes disability insurance, laser eye surgery, hotels, medical apps for smartphones and more. We also host online databases with reviews on Medical Electives and Residency Interviews. Our Student Initiative Grants support and enhance local initiatives undertaken by Canadian medical students. Our Global Health international exchanges provide opportunities for members to experience medical learning in diverse global environments. Finally, in recent years we have taken a renewed focus in supporting the wellness of our members via wellness resources, a wellness member survey, and advocacy efforts.

The CFMS **represents** our membership at multiple forums. We provide the Canadian medical student perspective to our sister medical organizations, government and other partners that are helping to shape the future of medical education, medical practice and health care. Within Canada, we are proud of our work in medical education on projects such as the *Future of Medical Education in Canada*, The Royal College's *CanMEDS 2015*, and the *AFMC Student Portal*. Our advocacy work includes a national Lobby Day in Ottawa where we discuss health policy topics with parliamentarians in an effort to bring about positive change, both for Canadian medical students and the patients we serve. Internationally, our Global Health Program represents the Canadian medical student voice abroad.

Our CFMS Global Health Program (GHP) is vital within the CFMS. Focused on promoting health equity at home and abroad, the GHP represents Canadian medical students at the International Federation of Medical Students' Associations (IFMSA), and at the Pan-American Medical Students' Association (PAMSA). Our Global Health Program also connects medical students for health equity initiatives across Canada. The CFMS Global Health Program works toward globally minded education and coordinates national projects related to global health.

The activities of the CFMS are diverse, relevant and member-driven. We invite you to learn more about how the CFMS aims to serve its members through its vision of tomorrow's physicians leading for health today. ■

JOIN US

Standards | Education | Growth

ASSOCIATION
MÉDICALE
CANADIENNE  CANADIAN
MEDICAL
ASSOCIATION

Clinical, innovation and leadership support

- CPS on the RxTx mobile app, DynaMed Plus®, ClinicalKey® and more
- CMAJ
- Joule Innovation – grants and challenges
- The Joule app and podcasts
- Physician Leadership Institute



cma.ca/joule

Leading financial services

- Financial planning
- Investments
- Insurance
- Estate and trust planning
- Banking and borrowing¹
- Medical practice incorporation



MD Financial
Management

mdm.ca



Exclusive financial
services partner of the
Canadian Federation
of Medical Students

cfms.org

¹Banking products and services are offered by The Bank of Nova Scotia. Credit and lending products are subject to credit approval by The Bank of Nova Scotia.

MD Financial Management provides financial products and services, the MD Family of Funds and investment counselling services through the MD Group of Companies. For a detailed list of these companies, visit mdm.ca.

Joule™ is a trademark of the Canadian Medical Association, used under licence.



Better health care for all of us

Physicians-in-training

As a CMA member, you will join thousands of physicians-in-training from across the country in shaping the future of health care.

You will also get exclusive access to partners and resources to help you build your practice and plan your future.

GET INVOLVED



- Health Summit - build an innovation mindset
- Advocacy Skills Training Program – hone your advocacy skills
- General Council and Annual Meeting – be a leader within the CMA
- CMA Ambassador Program – health policy and leadership



ENGAGE WITH YOUR PEERS

- Member e-Panel surveys
- Communities of interest
- Regional member forums



STAY CURRENT ON KEY ISSUES

- Canada's aging population
- Canada's opioid crisis
- Marijuana legalization

JOIN THE CMA

cma.ca | 1-888-855-2555

memberservicecentre@cma.ca

To join the CMA, you must be a member of your provincial/territorial medical association.





27

- | | |
|------------------------|--|
| CFMS letters | |
| 6 | Letter from the Editors |
| 7 | Letter from the President |
|
 | |
| CFMS activities | |
| 8 | The learners are here |
| 10 | A collaborative approach to healthcare technology in Atlantic Canada |
| 12 | Accountable for our patients & our planet |
| 14 | Disruptive innovation – technology in the healthcare universe |
| 15 | AI is not a threat to the medical profession |
| 16 | Health-promoting learning & working environments and disruptive innovation |
| 17 | IFMSA Americas Regional Meeting in Quito, Ecuador |
| 18 | IFMSA General Assembly (August 2018) CFMS delegation report |
| 20 | Perspectives from Ontario – a year at a glance |
| 21 | Stakeholder perspectives on seniors care and aging |
|
 | |
| 23 | TEDMED: Reflecting on finding clarity through chaos |
| 24 | The financial implications of gendered caregiving |
|
 | |
| Global health | |
| 26 | IFMSA August meeting - SCORA sessions report |
| 27 | The cost of care: Perspectives from global health research |
|
 | |
| Initiatives | |
| 29 | Behind the curtain: Reflections on experiential learning in refugee health |
| 30 | Finding our common humanity: Experiences from Homeless Connect Toronto 2018 |
| 32 | MUN Medicine's Opioid Awareness & Support Team (OAST) |
| 33 | The Stem Cell Club – Working together across Canada to support stem cell donor recruitment |

All editorial matter in the *CFMS Annual Review 2019* belong to their authors and do not necessarily reflect the views of their educational institutions, the Canadian Federation of Medical Students (CFMS), the *Annual Review* staff or the advertisers. The CFMS assumes no responsibility of liability for damages arising from any error or omission or from the use of any information or advice herein.



Cover art

Title
"Now I am convinced"

Materials/Medium
Watercolour on paper, 11"x14", 2017

Artist
Flora Eunji Jung
University of Toronto
Class of 2021

WHY BECOME A RESIDENT AFFILIATE OF THE ROYAL COLLEGE?

WE WILL BE YOUR PARTNER THROUGHOUT
YOUR SPECIALIST CAREER.

Once you are in a Royal College residency program, joining us for free as a Resident Affiliate is the first step towards taking ownership of your professional development.

We'll provide you with the knowledge, tools and networks needed to complete residency and sustain a rewarding practice in specialty medicine.



**Adel Arezki represents
CFMS on the Royal
College's Fellowship
Affairs Committee.**



LET US SUPPORT YOUR DEVELOPMENT.
www.royalcollege.ca/join



**Adel Arezki représente
la FEMC au Comité des
affaires des Associés
du Collège royal.**

POURQUOI DEVENIR RÉSIDENT AFFILIÉ DU COLLÈGE ROYAL?

NOUS SERONS VOTRE PARTENAIRE TOUT AU LONG
DE VOTRE CARRIÈRE DE SPÉIALISTE.

Une fois que vous êtes inscrit dans un programme de résidence reconnu par le Collège royal, devenir résident affilié est le premier pas vers votre développement professionnel, et c'est gratuit.

Le Collège royal vous donnera accès aux connaissances, aux outils et aux réseaux nécessaires pour vous aider à mener à bien votre résidence et à poursuivre une pratique enrichissante en médecine spécialisée.

**LAISSEZ-NOUS CONTRIBUER À VOTRE DÉVELOPPEMENT.
www.collegeroyal.ca/adhesion**



35

56

Experiences	Featured interview
35 A snapshot of rural Saskatchewan	46 Dr. Brian Goldman: Disruptive innovation
36 How a week at camp will make me a better physician	
Opinions	Creative works
37 On failure	49 In the shadows, in the way
38 Protect thyself: The wilderness of clerkship	50 Rhythm of life
39 Let's Create the Future of Health Care Together – Embracing Health Care Technology and Developing an Innovation Mindset in Medical Education	51 cpr/arachnoid aneurysm/courvoisier's law
	51 The tight rope
	52 Systems
	53 Swamp skin epidemic
	56 Past lives
	56 Tradition
CFMS Awards	Photo Album
41 CFMS - MD Financial Management Leadership Award Winners	57 Babies, engagements and CFMS events
44 CFMS - MD Financial Management Travel Award Winners (Spring General Meeting)	58 Executives and representatives
45 CFMS - MD Financial Management Travel Award Winners (Annual General Meeting)	



Letter from the editors

Dear friends and colleagues,



Connor Brenna
Annual Review Editor
University of Toronto,
Class of 2021

It is with great pleasure that we present to you the 2019 issue of the Canadian Federation of Medical Students *Annual Review*. The *Annual Review* serves as a two-way line of communication between the CFMS and the medical students it represents. It contains updates on the activities of our national executive team as well as a range of experiences and inspirations of Canadian medical students. In 2018, the CFMS celebrated our 41st anniversary of representing, connecting, and supporting medical students across Canada. In 41 years, we have watched the system around us revolutionized time and time again. The theme of this year's *Annual Review* is Disruptive Innovation.

The ground beneath our feet is changing. Heraclitus, 2500 years ago, famously said that one cannot step twice into the same river: the water is in constant flux. This idea of radical change applies to few vocations as well as it does to our own. The very nature of our craft will be different by the time we emerge from our training for it. Some changes happen faster or slower than others, and some are more or less meaningful, but all are a cause for excitement. In the last several decades, Canada's healthcare system has been the target of major transformation.

These changes can happen in leaps and bounds. Electronic medical record systems and integrated health databases are changing the way we create and manage patient data. Artificial intelligence is finding unprecedented application both within and beyond medicine (Siri, make me dentist appointment!). A growing number of Nurse Practitioners are providing services to Canadians who have traditionally been without access to care. In contrast to these ground-breaking innovations, many areas of medicine remain at a standstill. So many of us still use pagers for our call shifts. We fax documents instead of emailing PDFs. Many hospitals in Canada still operate with paper charting, and handwritten discharge summaries and notes. Will the concept of "Disruptive Innovation" thrust healthcare fully "into the 21st century"? Who (or what) will step up to solve the unsolved problems in this system?

Canada's healthcare system poses several barriers to entry for disruptive innovators, by virtue of its unique situation at the intersection of government, business, and patient populations. Nonetheless it is recognized as a system which can benefit greatly from disruption, given its unprecedented economic scale.

In the 2019 edition of the *Annual Review*, we celebrate the big changes and the people who inspire them. Disruptive Innovation is a hot topic in the medical community: consider the upcoming Canadian Conference of Medical Education titled "Disruption Driving Change, Would Sir William Osler Adapt?", or the inaugural CMA Health Summit focused on "inspiring a future of better healthcare" (August 2018). The Health Summit featured keynote speaker and astronaut Chris Hadfield, a champion of futuristic thinking, to address the question of how innovators and great minds drive change. Hadfield spoke about how astronauts plan for the worst, visualize defeat, and embrace the power of negative thinking. There were many parallels drawn between this mindset and innovation in medicine: is planning for a space shuttle crash really all that different from planning how a surgery might go wrong or how a treatment may fail? Stretching this line of thinking even further, it seems that contingency planning can be found at the root of all innovation and design. Creation of the new is built from the failure of the old, whether that is failure in design or failure to meet a need that currently exists. In the context of healthcare, could further embracing "negative thinking" about the failures and flaws of our current system lead us to create positive, futuristic change?

This edition of the *Annual Review* features an interview with Dr. Brian Goldman, ER physician and host of CBC's "White Coat, Black Art", which offers professional insights on Disruptive Innovation in medicine and what it means for students in the field. The 2019 *Annual Review* is also packed with ongoing student initiatives, intensely personal reflections, creative works, rich personal experiences, and thought-provoking opinions of medical students across Canada. Many of us born in the era of technology recognize the advantages and conveniences of technology, but we are in a unique position as medical learners to recognize that innovation is not always equivalent to technology. Ultimately, we will be the innovations that move and shake this profession. To all of the medical students who contributed to this edition of the *Annual Review*, we would like to thank you for sharing your thoughtful work. To all of the readers of the *Annual Review*, we hope you enjoy reading these pieces as much as we have. ■

Go forth and disrupt,

All editorial matter in the *CFMS Annual Review* 2019 belong to their authors and do not necessarily reflect the views of their educational institutions, the Canadian Federation of Medical Students (CFMS), the *Annual Review* staff or the advertisers. The CFMS assumes no responsibility of liability for damages arising from any error or omission or from the use of any information or advice herein.

Connor Brenna
CFMS *Annual Review* Editor
University of Toronto, Class of 2021

Victoria Januszkiewicz
CFMS VP Communications
Memorial University of Newfoundland, Class of 2020

Letter from the president

Dear friends,



Stephanie Smith
CFMS President
University of Calgary,
Class of 2019

I am so excited to present the 2019 *Annual Review* from the Canadian Federation of Medical Students (CFMS). In this publication, you will see the thoughts and ponderings from many of our amazing members, as well as a fantastic feature interview with Dr. Brian Goldman of CBC's White Coat, Black Art.

This year I have had the pleasure of working with medical student learners coast to coast on the unmatched Canadian Medical Graduate crisis, the Learner Education handover, the Elective Diversification Policy among many other important issues.

Learner and physician wellness are topics on the priority list of many organizations of late, and this is also true at the CFMS. It can be difficult to find a stable place to plant your feet in the study of medicine, which is in constant flux. There are new testing methods, new protocols, increasing competition, increasing drive to participate in more and more activities, and in intense pressure to perform. In a world of increasing stress and pressure, with no guaranteed increase in time for wellness and relaxation, how can we get better or stay well? How we can disrupt the system so that we can be healthy, happy, and well?

In a publication dedicated to disruptive innovation, I wanted to highlight our Simulated Training for Resilience in Various Environments (STRIVE) program, launched over the last year. The STRIVE program is based on military resiliency techniques and founded from the "Big Four".

The program is founded from the "Big Four" and the skills are reinforced through simulated experiences with high fidelity mannequins, actors and role-playing scenarios.

The Big Four are:

1. *Tactical Breathing*
2. *Goal Setting*
3. *Visualization*
4. *Self-Talk*



All of the Big Four directly relate to medical training and the many stressful situations you can face in pre-clerkship, clerkship, and residency. One example of the Big Four that can be directly observed in medical training is Goal Setting.

Imagine you are in a high-stress situations (like many that occur in the medical profession) it is important to note that the point of goal setting changes. Using goal setting at these times is not about "What are you going to do with the rest of your life?" type of goals. It means "How are you going to get through the next few minutes?" You can do this by asking yourself: What's Important Now (WIN)? The acronym essentially allows the brain to key in on the very next thing that needs to be done. Using WIN, we are forced to focus on what is important at a particular moment in time, enabling us to prioritize immediate threats in our efforts and actions. This is just one example of how the STRIVE program can provide medical trainees with skills to help them through high-stress situations.

This training is starting to be rolled out across the country with the concept that once students or staff from each school get trained, they are able to then teach the training to more medical trainees at their own institution. This model is not just about building resiliency, it is about building a resiliency program that is sustainable. Formal training has already occurred in Calgary, at the OMSA Leadership Conference and at the CFMS AGM last year. Students from many of our member schools have participated in these sessions. Our goal is to ultimately see this training implemented and endorsed at every medical school across the country.

With thoughts of resiliency and wellness ever at the forefront of our minds, I leave you with my sincere best wishes. While we know that the future of the Canadian medical system is bright like our members, we at the CFMS are committed to ensuring that our members not only survive in medicine, but ensure they thrive in medicine. ■

Sincerely,

Stephanie Smith
CFMS President
University of Calgary, Class of 2019





The learners are here

Victoria Januszkiewicz

CFMS Vice-President Communications

Memorial University of Newfoundland, Class of 2020

COMING OFF OF A 4-HOUR flight back from London at the end of a summer vacation with my husband, I packed my bags to head immediately to Winnipeg. I was quite excited: I had been selected to attend the inaugural CMA (Canadian Medical Association) Health Summit as a CMA Ambassador. I wasn't sure what to expect, but the agenda was packed and I knew there were going to be a significant number of other learners present. Seeing many of my dear friends from CFMS at the summit, we immediately tweeted a picture, captioned, "The Learners are here"; and we were.

During the first day of the conference, the "First Fifteen" group of CMA Ambassadors (medical trainees/physicians who are in the first 15 years of their training/careers) were brought together. We first attended a presentation by fellow First Fifteen member, medical student, and PhD, Dr. Philip Edgcumbe. Philip, who I now think of as a colleague and friend, gave a presentation titled "Why is physician innovation critical to the future of healthcare?". Philip is a brilliant innovator himself, and he talked to us about the ABC's of innovation. He encouraged us to converse, brainstorm bad ideas, think about what we would die to have, and remind ourselves that failure is okay.



He then gave us the task of creating a medical invention based on a need we felt existed for patients. There were no guidelines and the idea could be as bold and as unrealistic as possible, we just had to try and meet a need.

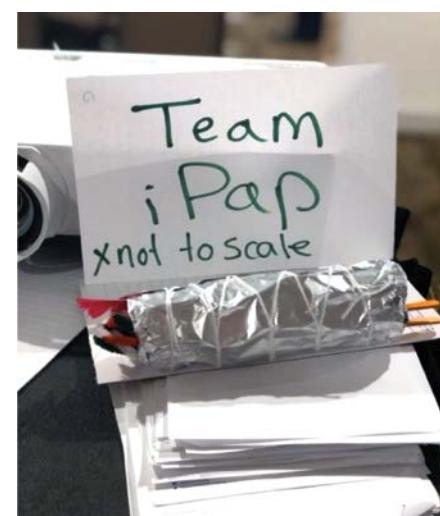
Our group chatted for a while and some ideas were starting to form, and then I was reminded of my clinical experience which took place over the first part of my summer vacation. I spent two weeks participating in a summer observership program in New Brunswick, and one week in a clinic that almost entirely focused on providing culturally-safe and competent care to male and female transgender patients. One service that was provided at the clinic was IUD insertion, along with other basic reproductive care services (i.e. pap smears). I've always had a strong interest in Obstetrics and Gynecology, and prior to this experience had spent a significant amount of time shadowing in traditional gynecology clinics where services are primarily provided to birth-assigned females who identify as females.

While it has been my experience that most women do not enjoy coming to have their regular PAP smears done, you can typically get through the process quickly by making small talk and joking about the "pains of being a woman". However, I have also encountered female patients who have suffered rape and sexual abuse first-hand, and I can tell you that no amount of small talk makes this experience pleasant for the woman who is so vulnerable and exposed during this time. This summer, I also experienced the traumatic experience that is a routine pap smear for patients who were born female/assigned as female at birth, who now do not identify as female (whether they identify as transgender, non-binary, or somewhere else along the spectrum).



The procedure by definition reminds the patient that they are biologically female; that despite some working so hard to separate themselves from their assigned-sex, it is still intimately a part of themselves. For them to be placed in a vulnerable position, literally exposed, the process can cause acute psychological stress for many of these patients. One of the patients once mentioned to me, "If only we could just do this ourselves, how is there not a less invasive way of doing this?"

My sharing of this experience and perspective became the inspiration for our team's "prototype" and brain-child, the "I-Pap". I preface the description of



this prototype with the fact that it was founded with “no-limitations” on imagination, and not based on any research. We had no concept of how this technology could even be put together. However, in the spirit of being bold, we committed to the challenge Philip presented us with and created an idea to have a device that could be inserted – similarly to a tampon – and which could then eject a piece when the cervix was reached and be twisted to collect the sample. We even ventured to think that maybe we could have some type of camera built-in, like a small scope, to assist users in knowing that they have reached the cervix (we decided the camera could connect with any device that had Bluetooth capability). Although the idea was likely outlandish, the sentiment of why we chose to create this prototype resonated with every health-care provider in the room. I was surprised by the genuine reaction in the room. People were intrigued by our sharing of this unique patient experience, and believed that this concept would be a way to provide care that was truly patient-centred. “Team i-Pap” was actually voted by the group to be the best prototype, as its concept was solely based around meeting a need and reducing a pain point of a great number of patients. Our example was just one of many designed that afternoon to meet unique needs of a number of different patient populations. Medical learners, resident doctors, and early practice physicians clearly demonstrated just

how in-tune they are with needs of their patients. We were able to recognize that the intentions of our actions count more than just the action of creating something new and “innovative”.

In fact, throughout the Health Summit, it was comments from these fellow First Fifteen members that tried to keep all the talk of ‘big tech’ and innovation balanced with thoughts of equity, access, and intention. Many of the First Fifteen have grown up surrounded by technology, and are so comfortable with it, that we are not necessarily overwhelmed or oversold on it.

The sentiment I felt during this initial innovation workshop came full circle during one of the first sessions of the Health Summit: there was a talk given by patient advocate Judith John. This was the first time I had observed a patient highlighted as a key speaker for a medical event. Judith spoke about care from the patient perspective and one quote stayed with me: “Without compassion and empathy you are just doing health practice and not health care”. Judith brought forth a very interesting perspective at this conference, because in the face of outstanding technology (including a hologram presenter just before her!) she wanted us to focus on the fact that the technology and the innovation means nothing if it is not done with the patient perspective and the needs of the patient at the heart of the project. I found it very interesting that many of my colleagues I interacted with

“While it has been my experience that most women do not enjoy coming to have their regular PAP smears done, you can typically get through the process quickly by making small talk and joking about the ‘pains of being a woman’.”

at the conference felt this way even before this session, but it was a very powerful reminder – and great encouragement – to keep this line of thinking at the forefront of our future clinical practice.

This conference came at an interesting time for me, as I was on the brink of beginning clerkship. I actually had to miss my first day of clerkship to attend. The words of Judith John have remained with me throughout my clerkship experience. If I have learned anything in the past several months since the Health Summit, I would say that I have learned that we need to maintain the human connection in medicine, and we need to have the needs of others at the forefront of not only our innovative thinking and research but also in our daily interactions. It is my opinion that the majority the learners are already here, doing this every day, and I can’t wait to see what we can do in the years to come. ■





A collaborative approach to healthcare technology in Atlantic Canada

Dax Bourcier
CFMS Atlantic Regional Representative
University of Sherbrooke, Class of 2021

“Healthcare delivery in Canada is one of the most vulnerable industries to be disrupted by technology.”

THIS QUOTE HAS BEEN lingering in my head ever since Zayna Khayat, world-renowned future strategist, spoke at the 2018 CMA Health Summit in Winnipeg. Privatization, continuous accessibility, de-centralization, and preventative healthcare are some of the main themes that have the potential to govern the future of Canadian healthcare. When comparing health delivery models with other countries, the Canadian model is arguably archaic and lagging behind in technology. The fate of Canadian healthcare delivery depends on how effectively and quickly it integrates technology. So, why is it so hard to adapt technology? More importantly, what can we do now to enable this revolution of our healthcare system in Canada?

“When comparing health delivery models with other countries, the Canadian model is arguably archaic and lagging behind in technology.”

It is with these questions in mind that I began my role as Atlantic Regional Director with the CFMS. This moment also coincided with my first exposure to how the Canadian Health Act is enacted outside of my own province of New Brunswick. I quickly realized that the differences among provinces were substantial. While no single provincial system is better than another, the dissimilarities between them is one of the reasons why adapting technology is challenging. The idea of implementing an Atlantic-wide technological initiative that is compatible to all, and that is likely to be adopted by all, is practically “mission impossible.”

The solution might lie in rethinking why we want to implement technology in the first place. Start With Why is the title of a bestselling book by Simon Sinek, who breaks down the strategy that great leaders use to inspire everyone to take action. The concept puts forward the importance of starting any process of change by asking “why?” Why we do something should be the common driving force to reach a vision rather than what we do. What we will do to reach a vision should be secondary, and fully depend on the “why” foundation. For example, a company that sells telepresence robots for out-patient care could pitch their product by listing all its features, low cost, cutting edge technology (the “what”). Or, they could pitch their company by saying that their sole mission is to make time for physicians (the “why”), and that they also make great robots (the “what”). By identifying a “why” that targets a common need in the customers involved, a company is more

“The idea of implementing an Atlantic-wide technological initiative that is compatible to all, and that is likely to be adopted by all, is practically “mission impossible.”

likely to be sustainable in the long-term. When applied to health advocacy, this approach demonstrates the importance of first engaging stakeholders on a basis that involves a common need, and then to collaborate in order to find a solution.

In Atlantic Canada, the first steps of a collaborative process on the theme of improving Health Human Resources (HHR) is underway with the creation of the Atlantic Task Force. It all began in early 2018 when the previous CFMS Atlantic Regional Director, Victoria Januszkiewicz, began surveying Atlantic Medical Society presidents on what the biggest need for their students were. Commonly, the theme of Health



FLAT RATE PRICING FOR MEMBERS OF THE CANADIAN FEDERATION OF MEDICAL STUDENTS

SPECIAL OFFER
\$1,000*
per eye on
Custom LASIK

Book your **free consultation** today
at lasikmd.com/cfms or by
calling 1-866-216-4331.

LASIK MD
VISION

*Only applicable towards a Custom LASIK procedure for both eyes. Cannot be combined with any other discount, special offer or financing plan with deferred payment without interest. Not applicable on a previously completed surgery. Offer subject to change without prior notice. Proof of membership or enrolment required.

Human Resources was brought up with two core needs being:

1. Access to information/transparency related to prospective physician demand.
2. Need for an Atlantic centralized database for HHR, adapted for medical students that is kept up to date.

The Delphi method was then used to pick an official report on the prospective outlook of the Atlantic physician workforce as the initial solution. The recruitment of the Atlantic Task Force followed and is currently composed of 12 students representing every medical faculty and province in Atlantic Canada. To the best of our knowledge, this is the

first time there is a group of Atlantic medical students from each province working collaboratively on a common goal. Initially, the “why” of this project was to help support the career planning of Atlantic medical students. However, following the literature review our group soon realized that HHR is a national issue that not only involves medical students, but also other members of the medical community such as residents, practicing physicians, patients, medical associations, and provincial health authorities. Therefore, our group is continuing to identify the needs of the aforementioned stakeholders in order to create an environment of common interest and collaboration. The core concept

behind our work is to provide accurate prospective data on physician societal need to medical students early in their careers, so that when they make a choice for their specialty it can be based on both personal interest and societal need. We hope that this first report will be the springboard for further collaboration between stakeholders on the topic of Health Human Resources.

Ultimately, technology could be integrated to create an Atlantic HHR platform or even better a National HHR platform that would support the entirety of the medical journey to empower physician in their careers, while fulfilling the need of our society. ■



Accountable for our patients & our planet

Finola Hackett

CFMS Health and Environment Adaptive Response Task Force, Chair

University of Alberta, Class of 2019

Jessica Benady-Chorney (editing)

CFMS Health and Environment Adaptive Response Task Force, Committee Member

McGill University, Class of 2021

George T. Kitching (editing)

CFMS Health and Environment Adaptive Response Task Force, Committee Member

Western University, Class of 2021

WHAT DOES IT MEAN TO be a socially accountable physician? This is a question many of us grapple with as we go through medical training and transition into our clinical practice. Recently, medical leaders and organizations such as the CFMS and CMA have expanded their focus on issues such as equity and diversity in medicine, refugee and migrant health, Indigenous health, social justice and addressing the upstream determinants of health.

“... to become a socially accountable doctor in the 21st century, it is crucial to understand the impacts of our changing local and global environment on our patients.”

Now, a topic which touches on and integrates many of these areas has emerged at the forefront of awareness and advocacy in the medical community: planetary health. In 2017, *The Lancet*, one of the world's leading journals launched its new journal on this topic, defining planetary health as “a new interdisciplinary and transdisciplinary approach....which aims not only to investigate the effects of environmental change on human health, but also to study the political, economic, and social systems that govern those effects.”¹ In other words, it refers to the socially mediated impacts of climate and environmental changes on the health of our communities. A decade ago in 2008 on World Health Day, the WHO Director-General Margaret Chan stated that “climate change will affect, in profoundly adverse ways, some of the most fundamental determinants of health.”²

Thus, to become a socially accountable doctor in the 21st century, it is crucial to understand the impacts of our changing local and global environment on our patients.

To bring this message closer to home, the *Lancet Countdown Reports* for Canada in 2017 and 2018 described multiple urgent climate-related health impacts: from food insecurity in the Arctic, to stress and displacement from natural disasters such as floods and wildfires, to heat-related public health

emergencies, to mortality related to air pollution, to health benefits of carbon pricing, to the impact of climate change on mental health. In relation to clinical practice, groups like the Canadian Coalition for Green Health Care³ have highlighted how the delivery of care itself has a substantial ecological impact, one that can be mitigated by environmental management systems to conserve resources and minimize pollution.

Despite international and national reports sounding the alarm, it can be hard to see planetary health come into play as we study and practice medicine. I understood it on an analytical level but did not make the direct links until a recent experience in my fourth year of medical school.

As a clinical clerk, I spent three weeks this winter in a First Nations reserve northeast of Edmonton. When I spoke with community members, I learned that the water was once safe to drink from the reed-lined streams that flow through the community, and from the lake at its center. However, the region has had increasing resource extraction for oil and gas drilling over the past half-century. Due to the impact of pollutants such as heavy metals, the water became unsafe to drink, and eventually the community took matters into its own hands by petitioning the federal government for funding to build a new state-of-the-art water treatment plant.

While the treated water is now pristine and completely safe, there remained a major current issue: the water had to be trucked out to cisterns at each family's house on the reserve, and many cisterns were poorly maintained. I followed one of the public health workers in the community as he tested each tap and mentioned that he issues boil-water advisories regularly. Outbreaks of waterborne diseases are not uncommon among members living on the reserve, and lack of funding poses a barrier to upgrading all the cisterns to adequate quality.

What struck me the most was hearing the community member working at the treatment plant describe how his work aligned with his spiritual beliefs in value of water and its life-giving properties—beliefs that he affirmed in consultation with his elders: reconciling the importance of water in its natural state with the need to intervene to ensure the community's health.

As Sir William Osler stated: "The good physician treats the disease; the great physician treats the patient who has the disease." In other words: the good physician treats the condition; the great physician treats the community who has the condition. Each health impact that stems from our environment, from water scarcity, to air pollution, to food insecurity, to the ecological grief of losing a home we once knew – these are all seen through the lens of a community and its members and their own economic, social, and cultural challenges and strengths.

I challenge you as a medical trainee or practitioner to see the connections between the patient in front of you, the community surrounding both of you, and the natural world in which you live. It is with this awareness that we may open the path to well-being for our communities and to the health of the planet on which we all depend. ■

The CFMS Health and Environment Adaptive Response Task force (HEART) was created in 2016 to coordinate medical student advocacy around climate change, environment, and health. One of HEART's major projects has been to create a set of core curriculum competencies for medical education in this area, and to promote their integration in schools across Canada. To learn more, visit: <https://www.cfms.org/what-we-do/global-health/heart.html>

References

1. Welcome to The Lancet Planetary Health. The Lancet Planetary Health. 1 April 2017; 1(1): PE1. [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(17\)30013-X/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(17)30013-X/fulltext)
2. The impact of climate change on human health. Statement by WHO Director-General Dr Margaret Chan. World Health Organization. 7 April 2008; <https://www.who.int/mediacentre/news/statements/2008/s05/en/>
3. Canadian Coalition for Green Health Care. <http://greenhealthcare.ca/>



Medical Students: your family medicine journey starts with us.

**FREE
CFPC MEMBERSHIP
FOR MEDICAL STUDENTS!
SIGN UP TODAY AT
WWW.CFPC.CA**

Follow us online:

@FamPhysCan
facebook.com/CFPC.CMFC/

THE COLLEGE OF
FAMILY PHYSICIANS
OF CANADA LE COLLÈGE DES
MÉDECINS DE FAMILLE
DU CANADA

SECTION OF MEDICAL STUDENTS • SECTION DES ÉTUDIANTS EN MÉDECINE



Disruptive innovation – technology in the healthcare universe

Travis Pickett

CFMS Education Committee, Technology and Innovation Representative
Memorial University of Newfoundland, Class of 2020

HELOCENTRISM IS AN astronomical model that depicts the planets revolving around the Sun, which sits at the center of the solar system. When this model was proven as a theory, it was immediately rejected by the authorities of the era – after all, how could the Earth not be the center of the Universe? Once this idea had been accepted, however, it led to scientific discoveries and exploration that changed the course of history. What started as an idea that disrupted the framework of human understanding made a lasting impact on history. Although an extreme example, a similar principle holds true in relation to technology and innovation in our healthcare system. Innovation and discovery challenge the ideas that people hold, making it inherently disruptive. Executed correctly, disruptive innovation can have a lasting impact on how the world operates.

In the modern era, implementation of new technologies forms disruptive innovation that cannot be ignored. In medical education, emerging technologies are shaping the way the physicians of the future are being trained. As the inaugural Innovation and Technology Officer for the Canadian Federation of Medical Student's (CFMS) Education Board, it is my goal to determine what technologies are available to trainees across Canada now, and what would be best suited for training in the future.

My experience with technology in medical education is mainly with the use of three-dimensional (3D) printing as one of the leading members of Memorial University's (MUN) *MUN*

Med 3D, Newfoundland and Labrador's first biomedical 3D printing facility. As the creation of physical objects from a digital space, 3D printing allows users to identify a problem and design a usable solution. As the technology becomes ever-more accessible, it offers opportunity for usage in areas such as anatomy training, pre-operative planning, and medical simulation, to name only a few. *MUN Med 3D* has capitalized on this technology and created an environment within the MUN Faculty of Medicine that fosters creativity and problem-solving. In the three years it has existed, hundreds of projects have come to fruition. These range from models for undergraduate medical education anatomy laboratories, to skills-training simulation models for medical trainees, to models that assist with the delivery of radiation therapy.

With the support of the *Atlantic Canadian Opportunities Agency*, *MUN Med 3D* was able to expand into the *Med 3D Network* in 2018. This is a network of 3D printers that has been created, with six sites across Newfoundland and Labrador and one site in New Brunswick. The goal of creating this network was to increase the accessibility of 3D printing to healthcare facilities across Atlantic Canada. Since these sites have been set-up, there have been multiple solutions created for day-to-day problems in healthcare. Individuals at each site have become inspired by the possibilities the technology creates. With 3D printing, problems that were impossible or expensive have now become possible and accessible.

Although powerful, 3D printing is not the only technology that is disrupting the way medical education is delivered. Augmented and virtual reality are technologies that also have huge potential within medical education. Augmented reality can be applied using various devices. It likely exists within your mobile phone's camera software. It is interactive digital image overlay using a device that overlaps with the surrounding environment. Virtual reality, on the other hand, is when one becomes immersed within an entire virtual space without evidence of the surrounding environment. With augmented reality, reality is supplemented – with virtual reality, a new reality is created. These technologies, though similar in nature, have very different applications within medical education. For example, anatomy phone applications exist with augmented reality settings, allowing users to interact with anatomical models in a new way. Virtual reality is being used for procedural training with student immersion into life-like environments.

Beyond this, further technologies such as portable ultrasound and even mobile information databases are shaping the way that medicine is taught and practiced. For example, many companies are developing new technologies in the field of personalized medicine to bring the diagnostics directly to the pockets of clinicians.

It is important to embrace change in medicine. As technology improves, so do outcomes and patient safety. In medical education, we can supplement learning with non-invasive techniques

such as simulation via 3D printing or virtual reality. Gone will be the days of the mantra “see one, do one, teach one”. If implemented correctly, these

technologies will allow the medical learners of tomorrow to be proficient without having to practice on patients. Although these technologies may disrupt

the current long-standing view of education in healthcare system, they may just be the Sun sitting directly at the center of it. ■

AI is not a threat to the medical profession

Adel Arezki

CFMS Quebec Regional Representative

McGill University, Class of 2021

MEDICAL INNOVATION IS booming, and we see it everywhere: “AI beats top dermatologists in diagnosing skin cancer!”, “AI able to detect pneumothorax with better accuracy than most well-seasoned radiologists”. Anything related to healthcare with the added buzzwords “AI”, “Blockchain” or “Robots” seems to make the headlines these days. With all the info about how technology may be surpassing doctors, we can’t help but think about our very own future. Are we getting ourselves into dead-end jobs? Will we all be unemployed in 20 years? How will the medical profession change with this unprecedented medical “age of enlightenment”? Let’s dive a little bit deeper into this topic.

In a paper released last year, Stanford researchers developed an algorithm based on a dataset of more than 110,000 AP chest X-ray images. This algorithm could accurately diagnose pneumonia, outperforming in the span of a few weeks four radiologists in accurately diagnosing this disease.¹ AI is coming, and it’s coming very fast; and AI’s applications are not limited to radiology, there are many other examples of it outperforming doctors in several other medical fields.²

Last year, the US Food and Drug administration approved an AI tool that can analyze images of the retina to diagnose diabetic retinopathy.³ This is the first instance of a device being authorized to provide a screening decision without a doctor’s interpretation of the image. It would be denial to think that other such devices will not hit the market in the next few years. Diagnosis, a process that had always been under doctors’ monopoly, can now be done independently by machines. This innovation has the potential to significantly improve outcomes of care. However, what is our place in a healthcare system where we’re outperformed in the very things we’re trained for?

It’s important to realize that AI replaces tasks, not humans. It can be tempting to go into “panic-mode” when thinking about how computers are getting more accurate than humans in analyzing images and numbers. AI has its strengths, but humans do too.

The empathy, compassion, and “humanity” in the delivery of care and patient interactions are a huge part of a patient’s healing process. In order to get to know a patient better, let them open up about how their diseases affect their lives, and partner with them to

determine the best treatment courses. Our patients are not clusters of data to be analyzed, but humans that experience their diseases in unique ways. AI will help us in the data analysis and not missing important diagnoses, which will enable doctors to provide high quality care that will be more personalized.

We must remember that we are all on the same team, it should not be AI vs. doctors. We must embrace new technology and be able to work together toward the end goal: providing the best care to our patients. AI won’t replace doctors, but it will make them way better. ■

References

1. <http://med.stanford.edu/news/all-news/2017/11/algoritm-can-diagnose-pneumonia-better-than-radiologists.html>
2. Loh E. Medicine and the rise of the robots: a qualitative review of recent advances of artificial intelligence in health BMJ Leader 2018;2:59-63.
3. <https://www.fda.gov/newsevents/newsroom/pressannouncements/ucm604357.htm>



Health-promoting learning & working environments and disruptive innovation

Victor Do

CFMS Director of Student Affairs

University of Alberta, Class of 2020

If you hear “disruptive innovation” and healthcare in the same line, chances are the conversation is referring to technological advances—whether it is how advancement of artificial intelligence (AI) will affect the job market, how modern EMRs may change how we provide patient care, or the impending “end of the stethoscope” as handheld ultrasounds make their claim to fame. These and many more advances are admittedly very exciting and of course a bit scary. These potential innovations come with promises to revolutionize healthcare delivery, and I expect they will. But there are other opportunities for disruptive innovation, with equally impressive opportunities to change health outcomes and also usher in a new positive culture in healthcare. I’m talking, of course, about physician/learner wellness and the need to create health-promoting learning and working environments. This may not be the first thing that comes to your mind when you think of disruptive innovation, but our potential as a profession is still very much unreach ed in large part because we must do better to address this issue. Culture is the foundation by which other innovations will develop. As a profession, during this time of immense change we need to lead the conversation on how we can leverage new technologies, an improved understanding of the many systemic factors that affect physician wellness, and the momentum surrounding a desire across the career spectrum from students to residents to practicing physicians.

In doing so, we can produce a more fulfilling, sustainable future, by creating health-promoting learning and working environments which truly disrupt for the better.

An abundance of data indicates how poor provider health negatively affects patient outcomes on many levels. From worse direct health outcomes, to lower patient and family satisfaction, to significant real and opportunity costs associated with lost hours and productivity, there may be no greater need right now than to create a new positive healthcare culture. So, what do we do? How can we spark a path of disruptive innovation here?

Let’s talk about work hours and occupational standards. Let’s address the pervasive culture of bullying and harassment. We are not immune to challenges relating to recognizing gender equity, creating a welcoming environment for sexual and

racial minorities, undertaking a process of reconciliation with our fellow Indigenous colleagues. We should not accept that feeling “burnt out” is just a part of being a physician or that missing family commitments is a sign you are committed to your patients. Creating a health-promoting working and learning environment means we strive to create a new reality that says not only should your work and learning place not deteriorate your health, it should be designed to sustain and strengthen it for you and your family.

The CFMS is excited to have the opportunity to work with RDoC and the CMA to create a health-promoting culture across the physician career continuum. As we disrupt the status quo we will create a healthcare system that not only better serves patients but also addresses the epidemic of physician and learner burnout that plagues our dedicated workforce. Our student affairs portfolio is leading this conversation across the country by engaging stakeholders, providing professional development to our members to take up the conversation and directly through our flagship National Wellness Program. Through our efforts in advocacy, awareness, programming, resilience and personal development we are working to disrupt the status quo and innovate to create a new health promoting culture. This is the CFMS: as tomorrow’s physician, leading for health today. Ultimately, we need leaders from all sectors of healthcare including government, regulators, allied health professionals to join in these efforts. We need to work together strategically, and I hope all of you will join the conversation and our movement. ■

Creating a health-promoting working and learning environment ... it should be designed to sustain and strengthen it for you and your family.”

IFMSA Americas Regional Meeting in Quito, Ecuador

Fatemeh Bakhtiari

CFMS Western Regional Representative
University of Manitoba, Class of 2021

THINK GLOBALLY, ACT locally. These were the first words that I heard early in the morning at the first presidents meeting by the International Federation of Medical Students' Associations (IFMSA) president Batool Al-Wahdani. I had just arrived in Quito, Ecuador at around 2:00 AM that day for my first ever IFMSA meeting and I was tired, nervous and yet very, very excited! As the CFMS Western Regional Director and attaché to the Global Health portfolio, I had the privilege of representing Canadian medical students (alongside Wendy Wang) at the 2019 IFMSA Americas Regional Meeting in Quito, Ecuador this past January.

That first presentation that I heard was on the history of the IFMSA and its impact on medical students around the world. We learned about the many initiatives and advocacy work that the IFMSA is currently doing. One such initiative that came out of the August General Meeting 2018 in Montreal was the Gender Watch initiative. The Gender Watch is a tool that affirms IFMSA's commitment to representation and equality; it evaluates the distribution and contribution of different genders during IFMSA events and meetings. It was both daunting and inspiring to see my fellow colleagues explore the systemic oppression,



struggles and marginalization of the communities that they will inevitably serve and advocating towards instilling a more pronounced culture of accountability to their future patients.

As the week progressed, I had the opportunity to meet many incredible and like-minded medical students from all over the Americas Region. I learned about the issues that each National Medical Organization (NMO) faced. I had the opportunity to witness the immense power and passion that medical students from across the Americas region showcased. I watched as each NMO president shared the issues pertinent to their country and the advocacy work they were currently doing to better their healthcare system for their future patients. I watched as these medical students from different

backgrounds and countries came together to collaborate, share their knowledge and skill, and learn from one another. I chatted extensively with the president of the Venezuelan NMO about the very complex crisis that their country is currently facing and learned about the advocacy work that the Venezuelan medical students are a part of. The intersections of political, social, economic and migratory environments colliding and having such a momentous effect on people's health brings into perspective the reach that healthcare providers can have and advocate for to better their patients' lives. At the president's meetings, we explored ideas and ways that we could support our neighbours and friends in the Venezuelan NMO in their endeavour of fighting for a better country and standing up for what they believe in.

As the week went on and the meetings came to a close, the motto "think globally, act locally" became clearer to me. I came to understand it as a philosophy to look beyond our perspective when advocating yet always understanding the context of the situation; something we should all keep in mind as we continue our advocating endeavours! ■





IFMSA General Assembly (August 2018) CFMS delegation report

Asha Behdinan
CFMS National Officer of Human Rights & Peace
University of Toronto, Class of 2019

Michelle Quaye (editing)
CFMS Director of Global Health
Western University, Class of 2020

IN SUMMER OF 2018, THE Canadian Federation of Medical Students (CFMS) sent 14 delegates to the International Federation of Medical Students' Associations (IFMSA) General Meeting held in Montreal, Canada from August 2nd to 8th, also known as the IFMSA August Meeting 2018 (AM2018).

The IFMSA represents and engages with over 1.3 million medical students from 119 countries. The CFMS is one of the 127 national member organizations that make up the IFMSA. The IFMSA general assemblies are held twice a year in March and August. These meetings hope to inspire the next generation of future physicians to become leaders and advocates through exchange of ideas, networking and learning from the various programming sessions, such as:

- President and Standing Committee Sessions: The standing committee and president sessions ran in parallel every morning, each attended by one to two of our CFMS delegates. During these sessions, the current issues of the IFMSA were discussed and proposals for changes (such as policy statements, memoranda of understanding with external organizations, and new member organization proposals) were made. The CFMS delegates for each of the sessions were as follows:
 - Presidents Sessions: Asha Behdinan & Henry Annan
 - Standing Committee on Public Health (SCOPH): Vivian Tan,

- George Kitching, Orianna Mak, Adriana Zhong, Marissa Ley
- Standing Committee on Reproductive Health including HIV/AIDS (SCORA): Jelisa Bradley
 - Standing Committee on Medical Education (SCOME): Loran Morrison, Archie Zhang
 - Standing Committee on Rights & Peace (SCORP): Farnaz Javadian, Mergim Binakaj
 - Standing Committee on Professional Exchanges (SCOPE): Hillary Pearson
 - Standing Committee on Research Exchanges (SCORE): Hillary Pearson, Sally Song
 - Regional Meetings: During the regional meetings, all delegates from the national member organizations (NMO) of the region met to discuss pertinent issues for the region. The CFMS belongs to Americas Region, which includes NMOs from both North and South America.
 - Training Sessions: The training sessions provided delegates with skills and knowledge to bring back to their NMOs. In addition, they were platforms for sharing skills and knowledge with delegates from other countries. Some of the sessions attended by the CFMS delegates are highlighted throughout this report.
 - Plenary Sessions: The plenary is the highest decision-making body in the IFMSA. During these sessions, all proposals related to membership,

governance, by-laws, finances, reports, operations, and policies are debated and voted upon. Some of the various debates and outcomes of the plenary sessions are highlighted throughout this report.

REFLECTIONS

"It was an incredible experience to have had the chance to meet medical students from all over the world in an environment in which we freely discussed issues pertaining to and concerning medical students. It was tremendously interesting to hear about other students' experiences in their home countries and their contributions to discussions."

"I enjoyed the social events at the August meeting overall. I had a fun time with my delegation and with people from other counties, and I danced in front of a group of people on stage for the first time."

"I will hold onto the meaningful conversations I had and the perspectives I gained. It is rare to be able to have the opportunity to work with individuals pursuing the same passions as you from multi-faceted backgrounds, and I am grateful to have had this experience through the IFMSA August Meeting. I enjoyed meeting new people from within Canada and internationally and learning more about the similari-

ties and differences in medical education in various countries.”

“There was a sense of connectedness and reassurance in knowing that there is an international community providing support for each other in taking on initiatives to improve the health and well-being of all individuals. I look forward to keeping in touch with the amazing individuals I have met from across Canada and the globe, and to implementing what I have learned from this experience in the remainder of my studies and in my future medical career.”

“One of the highlights of the SCOPH sessions was the SCOPH fair, where we had an opportunity to learn about public health activities different medical student associations were organizing around the world. These ranged from anti-microbial resistance awareness to teddy bear hospitals. I was inspired by all the project ideas that could be brought back home.”

“The overwhelming feeling of the International Federation of Medical Student Associations August Meeting in Montreal was one of optimism. It seemed to infuse the air, perhaps from the moment Celine Dion gave a video address to delegates on opening night. Optimism and excitement for the learning to come during the five days of the meeting, but also for what we could accomplish as medical students representing medical student associations from around the world.”

“The energy and momentum we've captured has been phenomenal. I am constantly inspired by how passionate IFMSA students are and how lively the energy is when we work together. It is truly a relationship I've never experienced before, and I'd be ecstatic to enter the IFMSA world again someday.”

“I think the best part was hearing about their politics and how their

countries ran and the different issues affecting their countries. You really start to realize how limited your own media is, as most of all of our news simply only revolved around Canada and States.”

PRESIDENT'S SESSIONS REPORT

During these sessions all representatives from NMOs (referred to as NMO Presidents) come together to discuss the documents that will be tabled during the plenary session; the plenary is the highest decision-making body in IFMSA. Many different types of documents are voted upon including policy statements, program proposals, committee reports, financial reports, bylaw changes, and candidatures. Additionally, the management of the organization is discussed at these meetings (e.g. strategic directions, financial sustainability, urgent issues).

Selected Topics in Depth

- Food and Drinks Fair
 - The food and drink evening on the 2nd night of the meeting saw over 100 delegations bringing traditional foods to share with delegates. This was a great opportunity to form relationships with the other delegations in attendance, and so we did! In addition, an activities' fair arranged mid-meeting allowed each country's delegation to highlight the initiatives they have put on in their country. This year, CFMS brought food and drinks from all across the country and had an impressive display of national pride
- Non-medical students as IFMSA Executive Board Representatives
 - An issue that was very pressing during this General Assembly was the role of non-medical students in the IFMSA Board. While CFMS did not endorse a particular side for this issue, in partnership with IFMSA-Quebec and ASMA-Australia, CFMS put forth, seconded, and helped draft statements imploring for proper consultation and discussion of this

issue. The outcome of these efforts was that a new focus group was created to look into the role of non-medical students in NMOs and the attitude towards their involvement. We are excited to see the outcome of this task force at the next General Assembly in Slovenia 2019.

- Policy Papers
 - CFMS put forth ample input towards the policy paper discussion at this General Assembly. Upon working with AMSA-Australia, CFMS put forth and seconded amendments to several position papers, such as the inclusion of an “Americas” section in the Sustainable Development Goals paper, and a change in language from “victim” to “survivor” in the FGM paper.
- Plenary sessions
 - The plenary sessions run in a similar manner to other worldwide decision-making bodies such as the World Health Organization and its various sub committees. It is also an opportunity for countries to make formal, documented statements on issues pertinent to them. For example, at this plenary session we heard from the medical student societies of Syria, the U.S.A., and Iraq regarding political and social issues in their countries. Although each country faces different issues, it was really impactful that they all shared a common message of a desire for peace and unity in their region.
 - At this meeting, general delegates were invited to take part in the plenary sessions by acting as the main representative for CFMS. It was very inspiring to see the support behind this endeavour, and how the rest of the team supported these individuals in researching the contentious issues being put forth and helping the representatives in reaching a decision that would most accurately reflect the collective opinion of our membership. ■



Perspectives from Ontario – a year at a glance

Rishi Sharma

CFMS Ontario Regional Director

McMaster University, Class of 2020

Debbie Brace

CFMS Ontario Regional Director

McMaster University, Class of 2020

T HAS BEEN A PLEASURE representing the Ontario medical schools: McMaster, NOSM, Ottawa, Queens, Toronto and Western. We have had the privilege to meet students from all schools and foster strong relationships between the CFMS and medical students.

We began the year by attending the Ontario Medical Students Weekend (OMSW), an annual event that gathers first-year medical students from the various medical schools. The theme of this year's OMSW was "Legacies of Leadership" and was hosted by the University of Ottawa in collaboration with the Ontario Medical Students Association (OMSA). There were several amazing speakers, including Brigadier General Andrew Downes who spoke about leadership and the importance of it. Students were also able to attend a variety of workshops to work on clinical skills such as suturing, casting and IV insertion. Additionally, students had the pleasure of attending the CFMS booth at the Medical Expo where they had the opportunity to learn about the CFMS and all the amazing work we do and what we offer to students. Also, as part of our CFMS booth this year, we had students that visited our booth share with us their thoughts on our National Day of Action topic "Seniors Care and Ageing". We asked students to share with us what that topic meant to them and why personally they were passionate about this topic. We then collated all their responses onto a vision board that was brought to Parliament Hill on Day of Action.

In addition to meeting first-year students at OMSW, we have also made the effort to meet with the medical student societies from each medical school in Ontario. Recognizing that we both are students from McMaster University, it was important for us to ensure we got the collective sentiment of all medical students in Ontario. We have had the privilege of meeting student leaders across Ontario and learning about local issues affecting students at each school and how the CFMS can help advocate for change regarding those concerns. These meetings have been very beneficial and have allowed us to build strong relationships with the fabulous student leaders in Ontario who do meaningful work at the local level.

Ontario is unique in that we also have a provincial student association, OMSA, with whom we have a strong working relationship. As Ontario Regional Directors, we have worked closely with OMSA in addressing concerns at the provincial level and advocating for medical students. We have collaborated on various issues that affect medical students such as the issue of unmatched Canadian Medical Graduates (uCMGs). New this year in Ontario will be the unblending of the R2 iteration of CaRMS Match. Traditionally, IMG and CMG positions that went unfilled after the R1 iteration would be combined and available to all unmatched students to apply to. This year, the government in Ontario has decided to keep these positions separate, so CMGs will be applying for vacant CMG positions. We are interested in seeing how this change will affect the uCMG issue this year.



Lastly, with the Spring General Meeting (SGM) being held at Niagara Falls, Ontario this year, we have both been actively involved in organizing SGM and ensuring attendees have a wonderful experience in Niagara, the home to the Niagara Regional Campus of McMaster University. We are excited for everyone to arrive in Niagara and hope that everyone enjoys the many attractions in Niagara Falls. In addition, we look forward to meeting many of the new medical student leaders and first-time delegates.

As we look forward to the rest of 2019, we know there is still a lot more work to do and room for a lot more collaboration. We are committed to working closely with OMSA, medical student societies, as well as medical students across Ontario to help make the medical student experience in Ontario positive, successful and enjoyable. We will strive to ensure that the CFMS continue to advocate for students in Ontario and provide a strong voice for Ontario medical students at the CFMS. ■

Stakeholder perspectives on seniors care and aging

Linda Lam

CFMS National Officer of Political Action
University of Manitoba, Class of 2020

Yipeng Ge

CFMS Director of Government Affairs
University of Ottawa, Class of 2020

Introduction

ON FEBRUARY 4TH, 2019, over 75 medical students from across Canada gathered on Parliament Hill in Ottawa to meet with policymakers to advocate for dignified seniors care and healthy aging. The demographics of Canada are quickly changing, and it is critical to be proactive in the care, services, and policies that are designed for seniors and healthy aging.

Our Process

In preparation for the 2019 CFMS National Day of Action, community leaders and health experts in the area of *Seniors Care and Aging* across the country were engaged by medical students to participate in a consultation process. The purpose of this process was to learn and

receive insight from those that see and understand first-hand the gaps impacting seniors, and how we, as medical trainees, can add our voice as allies to a growing conversation.

Medical students connected with stakeholders in several ways, including in-person meetings, phone calls, and communication through email. A qualitative analysis using an inductive approach was utilized to identify emerging themes from the stakeholders. The knowledge and advice from the consultation process ultimately guided the research committee in the development of the CFMS policy recommendations to federal parliamentarians.

Our Major Findings

Five major themes were identified, reflecting the values that underpin the various concepts discussed by

stakeholders, which are inter-related in many ways: 1) Wellness, 2) Quality of Life and Dignity, 3) Choice, 4) Innovation, and 5) Support.

Wellness

Our stakeholders emphasized that the focus of seniors' care should be on preservation and health promotion throughout the lifespan as an important way to achieve wellness in the late stages of life. To achieve this, attention to the social determinants of health are critical in the development of policy. In addition, comprehensive community health resources including oral care, and appropriate primary care with interdisciplinary teams and universal pharmacare are important aspects to addressing care, especially for those living with complex health issues.

Quality of Life and Dignity

Stakeholders reminded us that even on a policy level, we need to treat the person and not the disease. Caring for an individual takes into consideration the desires of a person for a good quality of life and dignified aging. Stakeholders call for us to reimagine traditional health care delivery that prioritizes people and not the convenience of the system. While home care has been championed as a model of care to support aging in the community, we need to modify these systems to account for the unique socio-economic barriers of each individual. As a society we need to address stigma and ageism, and address social isolation in the community and in long-term care homes with opportunities for meaningful interactions.





Choice

When designing both physical infrastructure and policies for healthy aging, considerations for accessibility and equity can go a long way to preserving choice as a privilege that we can continue to enjoy as we age. The concept of 8-to-80 cities (cities designed for 8-year-olds but also accessible for 80-year-olds) promotes accessible spaces for all. Honest and truthful discussions about end-of-life care along with accessible palliative care programs offers choices for individuals in their last stage of life. Universal pharmacare, coupled with adequate medication reviews, and deprescribing medications are important aspects of allowing individuals the choice to decide ‘what matters most’ in their lives.

Innovation

Innovation is the support of creativity, new ideas, and new methods. Our consultations revealed conflicting thoughts around the idea of technology. While

technology can be used to support independence, as well as greater connectivity through the integration of health care management, we must be careful not to solely quantify individuals. Another aspect of innovation is funding and promoting research to better understand the effectiveness of current programs for seniors, as well as coordinate research for complex topics such as dementia.

Support

This theme consolidates stakeholders' insight on how we can support those that care for us as we age. This includes promoting the profession of personal support workers and recognizing and properly supporting unpaid caregivers. It is also important to realize the gendered work of care, and a gendered lens should be used to understand the burden and impact of seniors' care at home and within the system.

Conclusion

Seniors Care and Aging provides an opportunity for us to rethink accessibility in our systems and use innovation to redesign a society that promotes wellness, quality of life, dignity, and choice throughout the lifespan, resulting in healthier senior years and supported caregivers. Through our consultation process, several recommendations were made by stakeholders to different groups. To medical students and physicians, we are encouraged to share personal stories to promote change, to become comfortable with and initiate discussions on end-of-life and advanced care planning with patients, and to integrate social services in a clinical setting for patients. Recommendations were also made to each level of government - federal, provincial, municipal. ■

Visit www.cfms.org to read the full “2019 National Day of Action Consultation Process Review and Summary”



CHOICE HOTELS CANADA

TRAVELLING JUST GOT EASIER!

CFMS has paired up with Choice Hotels® to save you up to 20%!

OPTIONS TO BOOK

- Download the Choice Hotels mobile app and enter your Client ID# when booking.
- Visit ChoiceHotels.com and select “Special Rate/Corp ID” (special rate section) and enter your Client ID#. Preferred rates will be highlighted at participating hotels.
- Call 800.4CHOICE (800.424.6423) and quote your Client ID# to access preferred rates.

CHOICE CLIENT ID# 00063566

You must make your reservation by telephone or online prior to visiting the hotel.







©2019 Choice Hotels Canada Inc. All Rights Reserved.

EXCITING FULL TIME, PART TIME + LOCUM FAMILY MEDICINE OPPORTUNITIES



Start a Lucrative and Rewarding Career Today!

- Practice Team Based Full Scope Medicine with a Great Group of Established Doctors
- Provide Primary Care and GP Specialist Services to 31 Remote First Nations Communities

Contact recruitment@slfnha.com today for more information or call 807-737-6117

Siouxlookoutareadocs.com



TEDMED: Reflecting on finding clarity through chaos

Wendy Wang

CFMS Western Regional Representative
University of Calgary, Class of 2021

IT WAS THE LAST SPEAKER OF the series. With the end of Steve Pantilat's presentation about palliative care, the room fell silent and tears could be seen in the audience's eyes. A standing ovation closed the last day of TEDMED in Palm Springs – and this was only one of many standing ovations in three days.

TEDMED is the independent health and medicine edition of the renowned TED conference. Created by TED's founder, TEDMED is an annual event that acts as a platform for interdisciplinary collaboration and learning for all things healthcare related – from science and industry, to the arts and philosophy.

Last year, with the generosity of Joule, I was one of the Canadian student delegates at Palm Springs from November 14-16. I remember first day, walking into the venue grounds wondering what a first-year medical student like myself can contribute to the conversation. I was going to listen to Carl June – a pioneer in the field in immunology – and the Surgeon General of the United States speak that day.

Wonder. That is one word that I will describe my reaction to the three days that I was there. From food sustainability, to trans-health advocacy – the conference brought together great minds from the spectrum of discipline that intersect with healthcare. One of the most memorable speakers was Yoko Sen, a sound alchemist whose area of expertise lies in transforming the soundscapes in the hospital. From altering the keys on alarms, to creating a motion-detection device for bed-bound patients to create music – I was not only inspired, but humbled. In medical school we are emphasized about the importance of patient centered care, and the provider-patient relationship. But this one aspect of the patient experience – how they



physically perceive the place they are cared for in the hospital – was something I admittedly often overlook in my own understanding of the illness experience.

This insight into the other determinants of the patient experiences got me reflecting on how I can better foster collaboration in my daily life, and interact with the other areas that intersect with healthcare. As medical students, it could be easy to be with the same group of students every day, at least, that is the case for me many days. With classes, small group assignments, and shadowing commitments, it can become easy to be physically siloed in the medical school environment, and limits the time we can dedicate to build bridges between healthcare and other disciplines. It is under these circumstances that creativity with our time becomes more important than ever. This experience has been a major catalyst for

introspection, for me to look at how we can integrate these diverse fields in the everyday context of medical students in my own school.

In sum, amidst the chaos of ideas I experienced through the three-day event, I found clarity. TEDMED was 3 full days of inspiration. Some of the most inspiring innovators, researchers, and academics congregated at TEDMED. The event allowed me to draw unique connections between disciplines, and become inspired by some of the most audacious ideas in medicine. It was also a tremendously international platform, which allowed me to gain a deeper understanding of the common problems and unique challenges faced by Canada and other countries. It has advanced me on a personal level by giving me greater confidence in engaging the local population in innovative solutions. ■



The financial implications of gendered caregiving

Chantal Phillips

CFMS Day Of Action Research Committee, Member
University of Toronto, Class of 2022

Maham Bushra

CFMS Committee on Health Policy, Member
University of Toronto, Class of 2021

Linda Lam

CFMS Day Of Action Research Committee, National Officer of Political Action
University of Manitoba, Class of 2020

3.8 MILLION. THIS IS the number of Canadians currently providing unpaid care to seniors in Canada.¹ In addition to being cherished spouses, children, and friends, these individuals commit a tremendous amount of capital to preserve the independence and dignity of their loved ones in their homes. The vast majority of care needs for individuals living with chronic health concerns are typically addressed by unpaid caregivers, translating to approximately \$25 billion of economic value per year.^{2,3} This equates to about 10% of the national health expenditure in 2018.⁴

When deciding to provide care for a loved one, caregivers often consider taking time away from work, incur additional financial costs associated with care, and feel the downstream consequences to their pensions and financial security.⁵ This experience of caregiver burden from a financial perspective tends to be gendered. Females represent 57% of the unpaid caregivers in Canada and provide approximately 11 more hours of care per week than their male counterparts.⁶ In the short term, women are more likely to reduce their work hours, resign from their jobs, or go into early retirement in order to provide care to a loved one.⁷ If this care exceeds a certain threshold of hours per week, caregivers may choose to prioritize their domestic

responsibilities over their careers. This sense of personal responsibility and familial commitment contributes to healthy aging in the care-receiver, but it might predispose the caregiver to social and economic disadvantage.⁸

Although the presence of women in the labor force has increased substantially over the last 50 years, the dilemma between domestic responsibilities and occupational aspirations still remains a challenge.^{9,10} Selecting unpaid caregiving over career-based pursuits compromises lifelong economic productivity and earnings, which ultimately reduces future social security and pension payments.^{11,12} In addition, since women have a longer life expectancy than men and their husbands are often the sole income providers, it is unsurprising that female seniors are more likely to age in poverty than men.¹³

Recommendations and Solutions

Policy makers have the power to implement solutions that allow caregivers to fulfill their caregiving duties without compromising financial stability. With an aging population and a greater dependence on unpaid caregivers, family leave policies and pro-family employment policies in the workplace are necessary. For instance, men must be encouraged and allowed to take family leave without suffering financial or professional

consequences, so that all genders can have an equitable share of caregiving responsibilities. Currently, through the family caregiver benefit, caregivers can receive financial assistance of up to \$562 a week for 15 weeks.¹⁴ However, this stipend is insufficient to financially support the unpaid caregivers of those living with long-term health conditions. One suggestion to further enhance the economic stability of caregiving households is to improve quality and access to homecare. Adequate homecare would allow caregivers to successfully maintain employment and personal well-being. Home care service workers must be trained and funded to provide assistance with instrumental activities of daily living so that seniors can live autonomously. Most importantly, home care funding and the family caregiver benefit must be modified to account for socioeconomic barriers and meet the personalized health needs of each individual.

Medical trainees and physicians can also play a role in implementing change within their realms of influence. In order to address gendered caregiving and seniors care and aging in Canada, medical students from across the nation met with parliamentarians in Ottawa for the CFMS National Day of Action on Seniors Care and Aging on February 4th, 2019.¹⁵ One of the CFMS policy recommendations to all members of parliament is to commit targeted funding

and develop a National Seniors Strategy for the 2019 federal election, including support for caregivers. In clinical practice, medical trainees and physicians should also be encouraged to support caregivers through attentiveness to their wellbeing, connecting them to social workers, and increasing awareness of available community resources. Through these recommendations that ought to be commitments, we hope that tangible steps will be taken to change the landscape of seniors care and healthy aging in Canada. ■

References

- Turner & Findlay (2012). Informal caregiving for seniors. Statistics Canada. <https://www150.statcan.gc.ca/n1/pub/82-003-x/2012003/article/11694-eng.pdf>
- Fast, J., Niehaus, L., Eales, J., & Keating, N. (2002). A profile of Canadian chronic care providers: A report submitted to Human Resources and Development Canada. Edmonton: Department of Human Ecology, University of Alberta.
- Hollander, M. J., Liu, G., & Chappell, N. L. (2009). Who cares and how much? The imputed economic contribution to the Canadian healthcare system of middle-aged and older unpaid caregivers providing care to the elderly. *Healthcare Quarterly*, 12(2), 42-49.
- Canadian Institute for Health Information (2018). How much will we spend on health in 2018? <https://www.cihi.ca/en/health-spending/2018/national-health-expenditure-trends/how-much-does-canada-spend-on-health-care>
- Duncan, K. A., Shooshtari, S., Roger, K., Fast, J., & Han, J. (2016). Care-Related Out-of-Pocket Expenditures in Canada. *Journal of Financial Counseling and Planning*, 27(2), 277.
- Young, R. F., & Kahana, E. (1989). Specifying caregiver outcomes: Gender and relationship aspects of caregiving strain. *The Gerontologist*, 29(5), 660-66.
- Jacobs, J. C., Laporte, A., Van Houtven, C. H., & Coyte, P. C. (2014). Caregiving intensity and retirement status in Canada. *Social science & medicine*, 102, 74-82.
- Wakabayashi, C., & Donato, K. M. (2006). Does caregiving increase poverty among women in later life? Evidence from the Health and Retirement Survey. *Journal of Health and Social Behavior*, 47(3), 258-274.
- Beaudry, P., & Lemieux, T. (1999). Evolution of the female labour force participation rate in Canada, 1976-1994: a cohort analysis. *Applied Research Branch, Human Resources Development Canada*.
- Brayfield, A. A. (1992). Employment resources and housework in Canada. *Journal of Marriage and the Family*, 19-30.
- Gazso, A. (2005). The poverty of unattached senior women and the Canadian retirement income system: A matter of blame or contradiction. *J. Soc. & Soc. Welfare*, 32, 41.
- Alford-Cooper, F. (1993). Women as family caregivers: An American social problem. *Journal of Women & Aging*, 5(1), 43-57.
- Plouffe, L. A. (2003). Addressing social and gender inequalities in health among seniors in Canada. *Cadernos de saude publica*, 19(3), 855-860.
- Social Development Canada (2019, January 02). Caregiving benefits and leave: What caregiving benefits offer. Retrieved from <https://www.canada.ca/en/services/benefits/ei/caregiving.html>
- Canadian Federation of Medical Students (2019). Day of Action on Seniors Care and Aging. Retrieved from <https://www.cfms.org/what-we-do/advocacy/day-of-action.html>

What's your next move?

Dr. Tu and Pediatric Emergency Staff
Simulation session at Surrey Memorial Hospital

Practice with British Columbia's fastest growing health authority

Physician Opportunities

physicians.fraserhealth.ca

Toll-Free: 1-866-837-7099



IFMSA August meeting - SCORA sessions report

Jelisa Bradley
Dalhousie University, Class of 2021

Michelle Quaye (editing)
CFMS Director of Global Health
Western University, Class of 2020

THE IFMSA STANDING Committee on Reproductive and Sexual Health including HIV/AIDS (SCORA) has a number of goals include raising awareness on topics related to HIV/AIDS, reducing stigma and discrimination against those living with HIV/AIDS, promoting positive and healthy sexuality, promoting inclusive and informative sexual education, and supporting policies and actions concerning sexual, reproductive, and public health, and human rights. The main focus of the AM18 SCORA sessions concerned comprehensive sexual education, maternal health and access to safe abortion, sexuality and gender identity, gender-based violence, and HIV and other STIs.

At the IFMSA August Meeting held in 2018 in Montreal, Quebec, sessions began with an introduction to the existing objectives and policies adopted by SCORA on these topics. We were then divided into small working groups to complete activities to develop our advocacy skills, identify our stakeholders, and discuss projects that our members have been working on. National Member Organizations (NMOs) who had experience and success with projects on particular topics (e.g. Gender-Based Violence) were paired with NMOs who did not have ongoing projects in these topics and whose communities could benefit by learning from successful NMOs. NMOs worked together to identify community

needs and design events or campaigns that could be implemented to address these needs. For example, IFMSA-Quebec presented a social event they hosted where volunteers circulated and dropped ping-pong balls into beverages to educate students and raise awareness about the use of “date rape drugs” on university campuses. Other NMOs who recognized this as an issue on their own campuses expressed interest in hosting similar events in their communities.

A major policy adopted by the IFMSA during the AM18 addressed a topic that was heavily discussed during SCORA sessions: female genital mutilation/cutting (FGM/C). Committee members were educated about the practice of FGM/C, including its various types and the reasons it is practiced. Small groups discussed the physical, psychological, and social implications of FGM/C on the girls and women who have received the procedure. The influence of cultural and social norms was considered, and the trend toward the “medicalization” of the procedure was heavily discussed. During plenary the IFMSA adopted a policy condemning the practice of FGM/C as a violation of human rights, stating that there are no valid medical reasons for the practice. This policy also calls for an increase in the education of medical students and the medical community on this practice and its consequences and criticizes the involvement of medical professionals in the practice.

Other SCORA sessions included an activity fair, joint sessions with other standing committees (SCORA-SCORP: Sex Worker’s Rights, SCORA-SCOPE-SCORE: Culture Shock & Sexuality/Gender Identity), and presentations on other topics of sexual and reproductive health (paternal post-partum depression, obstetrical violence, stigma surrounding menstruation). We also had regional sessions, where CFMS and IFMSA-Quebec collaborated with other NMOs from the Americas to tackle regional and local issues. These sessions were particularly enlightening, as the issues facing North, Central, and South America vary widely, and we can learn a lot about the challenges faced in each region. Overall, sexual and reproductive health and rights remains a topic of importance to medical students across Canada as well as across the world, and CFMS continues to strive to become more involved in future SCORA initiates. ■

Following the August Meeting, the CFMS Reproductive and Sexual Health portfolio, under the Global Health portfolio, has made significant efforts to become more involved with SCORA. This includes the early stages of development of a SCORA Exchange, as well as plans for a robust marketing strategy of this year's SCORA exchanges. This is in addition to the numerous national initiatives that are carried out under the portfolio of the CFMS National Officer of Reproductive and Sexual Health.

The cost of care: Perspectives from global health research

Bojana Radan

Western University, Class of 2021

NAIROBI, KENYA. THIS IS where I ended up spending my summer of 2018 doing an independent research project on coding and documenting of road traffic accidents and injuries. Western University was brought onto the project as a research expert for a multi-stakeholder Kenyan coalition trying to address the growing concern of road traffic accidents and deaths in the country. I came onto this project relatively randomly as a new medical student and a recent master's graduate from the Munk School of Global Affairs at the University of Toronto. I did a lot of global research and policy analysis in my master's and was looking forward to continuing these skills during medical school. Fast forward 8 months, a failed grant, awaiting ethics approval and a relatively decent understanding of where our project would take us; I boarded a plane to my very first trip to Africa.



Lake Nakuru, Kenya – Seeing the flamingos.

To summarize my summer in five words: doing research internationally takes resilience. The need and ability to consistently adapt to changing pieces in the project, new locations, hit dead ends and then brainstorm other avenues for progress - all takes a dedication to the



City Center, Kisumu City. Kisumu City is on Lake Victoria, a major fresh water reservoir in East Africa, with a very prominent fishing industry.

project, and the ability to problem solve. I started the project in Nairobi, Kenya, and ended up finishing it in Kisumu City, Western Kenya, 500km from Nairobi.

Throughout my time in Kenya, I had the privilege to meet and interview multiple physicians working in different hospital settings all throughout Kenya. One interaction that really stuck with me was with an orthopedic resident when I was in Kisumu City, the main referral hospital in Western Kenya. This hospital has a catchment area of about 2 million people, who are mostly rural, and mostly low-income.

The women we were attending to was just admitted unconscious to the hospital from a hit and run with a head injury, dislocated shoulder and broken femur and tibia. In Kenya, although they have a "National Health Plan," which covers emergency visits and supportive care, any further care is out of patient's own pockets. This woman was low-income and hence did not have



the means to cover her needed surgery. Therefore, she would be given supportive care (bracing for her injuries) and would lay in that bed for the next 10-12 weeks until her wounds callused over. I could not even imagine what this patient would be going through for the next 3 months, being unable to move and yet needing to lie still to heal.

After they provided care, I got to speak to the orthopedic resident who was asking me questions about the Canadian healthcare system:

"How long would a patient wait like this in Canada to have surgery?"

"Oh! Well, they would have it Immediately, especially if it was a car accident since it would be prioritized as a trauma."

"Hmmmm, and who pays for it?"

"The government."

"Okay, and how do you deal with open fractures?"



Sunset at Maasai Mara, Kenya. Going on safari was one of the highlights of my summer.

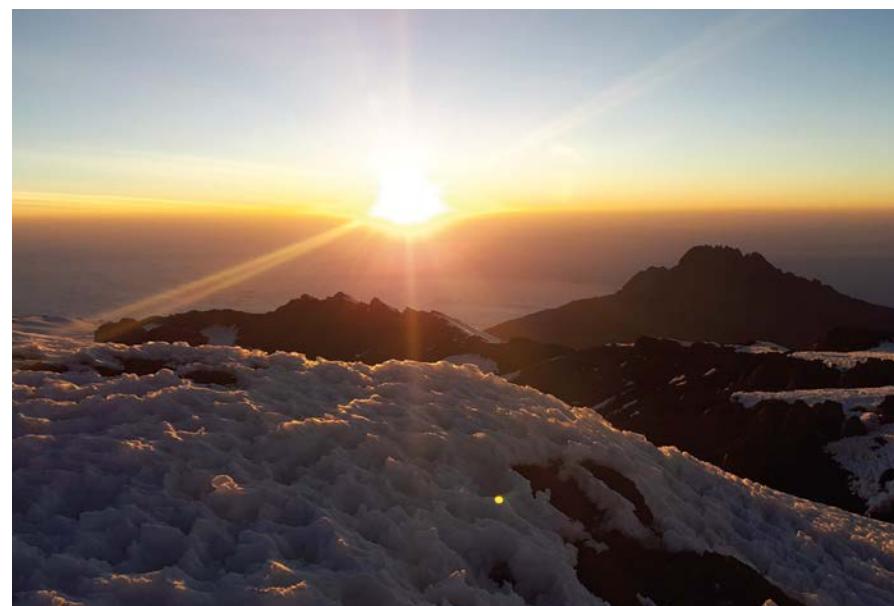
"(This one I had no idea, still haven't gotten to the MSK unit.)"

"Well, how long does a typical patient stay in hospital?"

This was the interesting question since I told him that our hospitals are like machines when it comes to care. We try to get patients in and out as effectively as

possible, since our beds are so expensive. In London Health Sciences, for example, I've heard physicians say that the cost of one in-patient bed for one day is around 1000 dollars. I told this to the physician, and he stopped. "For \$1000", he said, "we can fix this woman's shoulder, tibia, and femur and she could go home by the end of the week without any permanent disability." I was stunned. It was so hard to believe that these physicians had the experience, education, and understanding of all the needed technology and yet had their hands tied to provide care, because the hospital didn't have 1000 dollars to operate on this woman. So instead of a 7 day stay, it would be an 84.

Even now as I prep for my clerkship year, I think back to this conversation and how privileged I am to be in a healthcare system that can provide the best care to their patients. My project in Kenya is continuing strong and I am excited to go back to this beautiful country and continue learning among amazing physicians. To conclude, although global health research can be frustrating, the ability for providers to be resilient and put the provision of care above all else is why I care so much about this field, and am excited to work in it one day as a physician. ■



Summit of Mount Kilimanjaro, Tanzania. In my last week in Africa, I decided to summit Kilimanjaro, the Roof of Africa, and the highest walkable mountain in the world. This was sunrise on the summit.

Behind the curtain: Reflections on experiential learning in refugee health

Nguyet DM Nguyen

Memorial University of Newfoundland, Class of 2021

Luke Duffley

Memorial University of Newfoundland, Class of 2021

Dr. Christine Aubrey-Bassler

Memorial University of Newfoundland

THE MUN MED GATEWAY program was created in 2005 to facilitate access to healthcare for refugees arriving in St. John's, Newfoundland while providing medical students the opportunity to engage in a service-learning program. Gateway operates through partnerships with the Association for New Canadians (ANC) and Eastern Health to deliver primary health care services and community integration initiatives, with emphasis shifting towards a model of care aimed at engaging students with patients holistically. Each year, the program is maintained by several dedicated individuals, including two student coordinators working with a head coordinator. Together, they facilitate clinic sessions and initiatives beyond the clinic such as cooking nights, young adult groups, and language skills sessions.

When we applied to be the student coordinators for Gateway in June, we were eager to get involved with a program that had been well established for over 10 years. A program with a structure, a plan of action, operating like a well rehearsed performance, and we were two new actors joining the cast. We had simply auditioned like many others. We had ideas of what to add, assuming that many elements of the show were solidified, and planned to let our creative freedom shape the way forward with the help of several supporting actors. That

was how the first month progressed. We were oriented to new surroundings, networked within the organization and the ANC, and built a capacity for independence grounded in the knowledge and guidance of our coordinator, the director of the performance. We had the enthusiasm, the resources, and the right people to take this program to new and exciting places.

Then, early in September we learned that our director would be leaving the show.

Questions, concerns, previous excitement, and fear of the unknown road ahead morphed into a confused, sinking, rock-in-the-gut feeling of apprehension towards the future. The year had only begun a few weeks before, and we were still learning our lines!

A few months later, it is clear that we only truly understood the extent of coordination behind this program because circumstances required us to step up. For the clinic, there were logistical questions we could not have thought to ask, administrative tasks that we could not have accounted for, and unforeseen situations that we could never have imagined. We also had planned to expand the non-clinical components of Gateway in a certain time frame, but could not fully fathom the extent of partnership needed for these programs to take off until we began the process. Before long, a whole semester had gone by.

Although the clinic sessions often ran

smoothly, we had been running as fast we could only to stay in the same place with the other initiatives. Working with limited resources at a time of transition posed challenges that turned out to be an opportunity to re-evaluate and draw on our current supports in order to thrive. This perhaps helped us better appreciate how newcomers may also use the same process, albeit to much greater extent, to mount the barriers they face in a completely new environment.

Simultaneously, we became aware of our initial lack of comfort in working with this special patient population, which instills a sense of humility, curiosity and urge to educate ourselves more in culturally competent care as future physicians. We also grew tremendously into better team players, maintaining an impression of ease in adapting to changes, which facilitated a positive working atmosphere. Our classmates and colleagues could benefit from exposure to similar experiences, in order to gain insights which cannot be taught or tested in MCQ format exams. These lessons are perhaps part of a hidden curriculum, one that few students get to experience, but so valuable that it should be mandatory.

As medical trainees, we cannot control when we may find ourselves at the bedside of a patient who comes from a faraway place. A performer spends countless hours perfecting a character, as they realize that on opening night



there are limited opportunities to get things right. In the same way, medical students should be constantly preparing an evolving set of communication skills for future patient interactions, as they

too have limited opportunities to deliver to the ‘audience’. Any particular encounter might end up being our only chance to make a positive first impression on a person entering our healthcare system.

As such, it is imperative that we seek out opportunities to prepare ourselves to become physicians who are able to deliver culturally-competent care when the time arrives. ■

Finding our common humanity: Experiences from Homeless Connect Toronto 2018

Asia van Buuren

University of Toronto, Class of 2021

Chloe Brown

University of Toronto, Class of 2021

Stephanie Schwindt

University of Toronto, Class of 2021

Wid Yaseen

University of Toronto, Class of 2021

132 EYE EXAMS, 387 housing supports, 75 dental screenings. On first glance, you may think these are stats from an interdisciplinary healthcare clinic; in fact, they were services provided at the 6th annual Homeless Connect Toronto event (www.hctoronto.org). Homeless Connect Toronto (HCT) is a charitable organization that organizes a ‘one stop shop’ event each year, providing individuals who are experiencing or at-risk of homelessness with access to a variety of free services. This year’s event opened its doors to 1005 participants, 85 service providers, and 304 volunteers. As members of the Toronto Political Advocacy Committee (TPAC) – a medical student group dedicated to health-based advocacy in Toronto – we had the privilege of volunteering at this impactful event.

The event model isn’t new – it exists across North America and was introduced in Toronto to fulfill an unmet need. For Melody Li, the Executive Director and Founder of HCT, a key inspiration for

homeless connect toronto: services



the event is the connectedness it fosters within our community. Beyond the tangible resources that the event provides guests, HCT serves as a reminder of our shared humanity: “*Part of what we do is creating a tangible service, and the other part of what we do is creating that safe environment for the people in the community and our volunteers to remember what it means to co-exist,*” Melody noted. As student advocates, we were interested to learn more about why homelessness

impacts so many, even though the breadth of this issue happening in our community often feels overwhelming. “*The problem is that people don’t know what to do about the problem of homelessness even though they have an emotional reaction,*” Melody explained. HCT provided an opportunity for us alongside other volunteers to gain an understanding of the heterogeneity of Toronto’s homeless community and how we can work together to offer support.

The majority of guests attending the

event are new to homelessness or are at-risk of homelessness. As an organization, one of HCT's goals is to engage in prevention strategies and capture individuals at the earliest stages of their journey. The on-site services are meant to form meaningful connections with the homeless community. *"Figuring out what resources they can tap into. These are all things that they can do on site, and oftentimes it would take a lot of time to access all these resources on different days,"* says Melody. Hundreds lined up hours before the event to access services, and many arrived with a plan for which services to prioritize, given the limited time and quantity. To help bring people to and from the event, HCT even organized shuttle buses from various shelters and drop-ins in the city. Conversations throughout the day revealed the barriers this community faces with accessing services across the city, whether it's being unable to access public transit or navigating the healthcare system.

Given that the organization is entirely led by volunteers, there are many ways students and community members can support HCT. Whether you are interested in being on the planning team for the annual event or supporting guests on event day, there is a huge need for people to step in. As Melody said, *"We really see ourselves as a place where people who may not know a lot about homelessness can start, and from there build on their knowledge, experience, and passion for this area of work. We encourage you to get involved at the event. It's one day, low commitment, and great opportunity to get engaged and be part of the conversation."* The organization is always open to forming new partnerships, exploring different services they can offer, and learning about ways to connect with communities in other underserved areas of the city.

Homelessness is a continuum. Homeless Connect Toronto is a reminder that homelessness is not a shrinking problem. According to the 2018 Street Needs

Assessment in Toronto, there are nearly 9000 individuals actively sleeping on the streets, in shelters, respite, or provincial institutions in one night, and this does not capture those who are precariously housed or at risk of homelessness. While HCT is doing tremendous work, it is clear that only a fraction of the people experiencing homelessness in our city are served each year. HCT draws attention to the importance of providing low barrier resources to this community, and for us, serves as a reminder of our collective responsibility to address the systemic nature of homelessness. As medical students and TPAC members, we believe in the importance of personally connecting with communities in our advocacy initiatives and supporting the work of established organizations such as HCT. We hope that other student groups will join us at future Homeless Connect events in Toronto and Edmonton! ■



You are the future of women's health.
Let the SOGC be your partner in practice.

<ul style="list-style-type: none">  Save on CME events and ALARM courses  Network and join committees  Find speaking and international volunteering opportunities 	<ul style="list-style-type: none">  Qualify for grants and awards  Access all SOGC publications, including pre- and published Clinical Practice Guidelines
<p>It's quick and easy to join. Register at sogc.org/membership</p>	
	



MUN Medicine's Opioid Awareness & Support Team (OAST)

Matthew Downer

Memorial University of Newfoundland, Class of 2021

EARLY IN 2017, A GROUP OF students at Memorial University of Newfoundland (MUN) Faculty of Medicine became interested in learning more about the growing threat of opioids in communities across Newfoundland and Labrador. After a few weeks of brainstorming, we decided to create a new group at MUN Medicine, the Opioid Awareness and Support Team (OAST), the first of its kind devoted solely to a public health issue in our province. OAST is a new student group committed to spreading awareness and understanding about opioid issues in NL, and aims to provide medical students with experiential learning opportunities to gain a deeper understanding of these issues in our local context. After completing some initial consultation, our focus has been on three main avenues: our campus community and student body at MUN, our medical community at the MUN Faculty of Medicine, and our wider community in St. John's and across NL.

Around the time of OAST's inception, the MUN Faculty of Medicine was approached about the growing concern of opioids on campus. In turn, OAST collaborated with Campus Enforcement and the Residence Coordinators to develop ways to raise awareness about these issues among the general student body. As a result, OAST designed and implemented an opioid overdose response workshop to train the MUN Residence Assistants (aka "RAs") on recognizing and responding to a suspected opioid overdose on campus. Further, we distributed over 3300 opioid overdose knowledge cards on campus through various orientation events and other avenues.

Our team also felt that providing medical students deeper knowledge about

the opioids crisis here at home could make a lasting difference moving forward. Within our own team and within the pre-clerkship student body, OAST hoped to provide students with a better understanding of opioid-use disorder (OUD) and teach specific issues related to opioids in NL. This included a series of harm reduction workshops for medical students in partnership with the Safe Works Access Program (SWAP), a local harm reduction organization, to teach students about what harm reduction services are available in the community and how harm reduction can work in practice. Our main education initiative this year was our first OAST Opioids Education Day – a full-day educational event devoted to opioid issues in NL and training medical students for encountering patients with OUD in future practice. The training day began with a panel discussion titled "The Landscape of the Opioids Crisis in Newfoundland and Labrador" that included local physician leaders, community stakeholders, and public health representatives. This was followed by lectures on OUD screening/diagnosis/treatment, a rights-based perspective on treating persons living with addictions, motivational interviewing, emergency opioid overdose response, and a talk by a person living with OUD. Based on preliminary feedback, we succeeded in educating our peers on what we believe to be an important topic and we hope to make a lasting difference in how future physicians treat persons living with opioid addiction in our province for years to come.

Our final avenue involved a community engagement approach where we partnered with community organizations in the province for multiple projects. The aim was both to provide these incredible organizations with whatever type

of service our student body could assist with, and further give students meaningful experiential learning opportunities related to this public health issue. To date, OAST has partnered with SWAP, the local Her Majesty's (H.M.) Penitentiary, and Choices For Youth (CFY). Through SWAP, we have provided the harm reduction workshops and provided student volunteers to SWAP at their facility to create safe works packages to be sent to folks in the community. With the H.M. Penitentiary, OAST students have volunteered at their annual job fair for inmates and engaged folks about addictions services available in the province. With CFY, a community organization that serves vulnerable youth in the province, OAST students are providing educational sessions and deconstructing myths surrounding opioid treatment for both CFY staff and youth in their programming. For all of us at OAST, engaging with folks in the community on these initiatives has been the highlight of our year – and we are extremely grateful for all they have taught us.

A little over year ago, we set out to create a new organization that improved the level of understanding and awareness of the growing opioids crisis in Newfoundland and Labrador. Over the course of the past year, we hope we have made a difference and contributed to creating a larger conversation about opioids in NL. If anyone wishes to contact OAST about similar work they may be doing in their communities, or wishes to create a similar group in their own school – we would be thrilled to connect with you!

Contact us at:

MUNOAST@gmail.com ■

The Stem Cell Club – Working together across Canada to support stem cell donor recruitment

Michael Shao University of British Columbia, Class of 2020	Dylan Coupal University of Saskatchewan, Class of 2021	Neha Sharma Western University, Class of 2021
Valeriya O. Zaborska University of British Columbia, Class of 2021	Monty Singh University of Manitoba, Class of 2020	Raman-Deep Sambhi Western University, Class of 2021
Xiu Qing (Jenny) Wang University of British Columbia, Class of 2021	Alexander Sharp University of Manitoba, Class of 2021	Michael Cameron Western University, Class of 2021
Alyssa Zucchetti University of British Columbia, Class of 2020	Matthew Stecy University of Manitoba, Class of 2022	Charlie Choi Western University, Class of 2021
Maegan Stuart University of British Columbia, Class of 2020	Ari Cuperfain University of Toronto, Class of 2019	Cristina Andronic University of Ottawa, Class of 2021
Sarah Donnelly University of British Columbia, Class of 2020	Sze Wah Samuel Chan University of Toronto, Class of 2020	Esther Lee University of Ottawa, Class of 2021
Alli Jussila University of British Columbia, Class of 2022	Daniel Ng University of Toronto, Class of 2021	Gabrielle Haidar University of Ottawa, Class of 2021
Maryam Yaqoob University of Calgary, Class of 2020	Yizhuo Gao University of Toronto, Class of 2022	Rana Kandel University of Ottawa, Class of 2021
Kristin Milloy University of Calgary, Class of 2020	Michael Xie McMaster University, Class of 2019	Warren Fingrut University of British Columbia, PGY4 Hematology
Alicia Thatcher University of Saskatchewan, Class of 2019	Ali Eshaghpour McMaster University, Class of 2021	
Samantha Bird University of Saskatchewan, Class of 2020	Kianna Chauvin Western University, Class of 2021	

THE STEM CELL CLUB IS A student-run non-profit organization that works to recruit Canadians as stem cell/bone marrow donors.¹ We are a community partner of Canadian Blood Services, and we are accredited through them to run our own stem cell donor-recruitment drives. At these drives, we guide potential donors to provide informed consent and a tissue sample (cheek swab) – this information is then inputted onto Canada's stem cell donor database, the OneMatch Stem Cell and Marrow Registry. Transplant physicians

use this database to find matches for their patients who need a stem cell transplant and who cannot find a genetic match in their family. Since 2011, we have recruited over 13,000 potential stem cell donors (representing 2.9% of all donors on Canada's current donor database). Our recruitment strategy focuses on the most-needed donors according to the literature: males and individuals from a diversity of ethnic backgrounds.²⁻⁴

We have reported on our initiative in the past four issues of the CFMS

Annual Review. In 2015, we outlined our initiative's successful launch at the University of British Columbia's medical school, and our subsequent expansion to all of its distributed sites.⁵ In 2016, we reported our successful expansion to five medical campuses across Ontario.⁶ In 2017, we reported on the launch of stem cell club chapters at two additional Ontario campuses, as well as at University of Saskatchewan and University of Manitoba.⁷ In 2018, we reported achieving a recruitment milestone with over 10,000 donors recruited.⁸



In the present review, we are pleased to report three main updates. First, we held our first ever national campaign in September 2018, in honour of World Marrow Donor Day. The campaign included drives at seven university campuses in four provinces across Canada over a two-week period. We recruited 350 donors, and the campaign was covered by Global News Regina.⁹

Second, Stem Cell Club members from across Canada collaborated to develop a whiteboard video on stem cell donation. The video answers questions including what is stem cell transplantation; how does the matching process work; how are stem cells donated; and how can I register as a stem cell donor. It is published to stemcellclub.ca and to Canadian Blood Services' YouTube Channel.

Third, this past year, we launched a Stem Cell Club chapter at University of Calgary. The team held their first drive in December 2018, recruiting 93 donors (of whom 99% were males, and 60% self-reported as non-Caucasian).

Our initiative provides medical students with experiential learning opportunities, allowing them to develop across CanMEDS roles. We empower students to become leaders in Canadian healthcare and health advocates for patients in need of stem cell transplants. We hone student communication skills to recruit registrants without compromising informed consent,

and to sensitively and professionally redirect ineligible donors to help in other ways. Through targeted recruitment of the most-needed donors, we guide students to be stewards of limited healthcare resources. We develop students' quality control skillsets by instructing them to use our checklists and to maintain good documentation practices. At our drives, students act as scholars, teaching other students about stem cell science and the principles of stem cell donation. Medical students at each chapter of our club work collaboratively with each other and with students from other disciplines across their university to recruit donors. Through tracking outcomes at every drive we run, we emphasize continuous quality improvement.

We invite medical students across Canada to partner with us at schools with existing chapters, and to establish new Stem Cell Club chapters where applicable (including at UAlberta, NOSM, Dalhousie, and Memorial). We offer our support, guidance, and mentorship to any individuals or groups of students interested in starting up their own stem cell clubs. We will share our evidence-based training modules, experience running drives, and other useful resources. We will connect you directly with Canadian Blood Services and Héma-Québec, and work to accredit your group to run stem cell drives independently. We can, together, dramatically increase

the number of individuals we recruit to become stem cell donors, and save lives of patients who cannot find a match today. Interested students can email Dr. Warren Fingrut at warren.fingrut@bccancer.bc.ca to discuss the next steps. ■

References

1. Fingrut W, Parmar S, Cuperfain A, Rikhraj K, Charman E, Ptak E, et al. The Stem Cell Club: A Model for Unrelated Stem Cell Donor Recruitment. *Transfusion* 2017; 57 (12): 2928–2936. doi 10.1111/trf.14327
2. Fingrut W, Rikhraj K, Allan D. Targeted Recruitment of Male Donors for Allogeneic Hematopoietic Cell Transplantation: A Review of the Evidence. *Vox Sanguinis*: in press. doi:10.1111/vox.12632
3. Kollman C, Howe C, Anasetti C, Antin JH, Davies SM, Filipovich AH et al. Donor characteristics as risk factors in recipients after transplantation of bone marrow from unrelated donors: the effect of donor age. *Blood*. 2001 Oct 1;98:2043-2051.
4. Beatty PG, Mori M, Milford E. Impact of racial genetic polymorphism on the probability of finding an HLA-matched donor. *Transplantation*. 1995 Oct 27;60:778-78
5. Fingrut W and Wang X. The UBC Stem Cell Club: strengthening Canada's stem cell donor database. *CFMS Annual Review* 2015, 2015; 23.
6. Cuperfain A, Tigert A, Welsh C, Aziz J, Kantor N, Benzaquen M, et al. The Stem Cell Club: Expansion to Medical Schools across Ontario. *CFMS Annual Review* 2016, 2016, 20.
7. Parmar S, Rikhraj K, Hartsook S, Afford M, Longmuir C, Brar R, et al. The Stem Cell Club – Spearheading Stem Cell Donor Recruitment at Medical Schools Across Canada. *2017 CFMS Annual Review*, 39.
8. Wang X, Shao M, Parmar S, Rikhraj K, Zucchet A, Stuart M, et al. The Stem Cell Club – Over 10,000 Stem Cell Donors Recruited at Campuses across Canada. *2018 CFMS Annual Review*, 32.
9. Global Regina. Sept 14 2018. Retrieved from: <https://twitter.com/GlobalRegina/status/1040615182551142400>

A snapshot of rural Saskatchewan

Jessica Froehlich

University of Saskatchewan, Class of 2022

I HAVE ALWAYS KNOWN THAT I want to practice rural medicine in some capacity. These tiny communities make up such an important part of Saskatchewan's backbone. They are rich in history, culture, and, in my experience, full of very loving people who make delicious food! Last summer I had the opportunity to teach science to school children in Stony Rapids on Treaty 8 territory, and this experience broadened my understanding of rural and remote health in Saskatchewan. It was here that I found out I was accepted into the College of Medicine, and members of the community came together to celebrate my news and make me feel special while I was far away from my family. After an experience like this I was very excited to hear that the Saskatchewan Medical Association would be taking medical students and residents to Buffalo Narrows and Île à la Crosse through their Roadmap Program.

The program is meant to expose medical students and residents to health care practice in rural Saskatchewan. Regardless of where students are hoping to practice, they will at some point be working with and treating patients from these communities. Understanding a small piece of what that might be like, both the advantages and the challenges, may help future doctors navigate the health care system in a way that works for the context of their patients' lives. Programs such as this do important work in showing students that rural medicine is a place of innovation, valued teamwork, and vibrant community engagement.

We first flew to Buffalo Narrows and were given an excellent tour of the health centre. We were informed of the services provided, such as acute care,

addictions services, mental health, and sexual health. We also discussed services that patients have to travel out of the community to access, such as dialysis or giving birth, and how this can be a great barrier for them and their families in a time of stress or grief.

We then drove to Île à la Crosse and were welcomed at St. Joseph's Hospital and Health Centre.

The doctors and community members had warm bannock and moose meat waiting for us, and this was the quickest way to my heart. Food is love! We practiced medical tasks such as casting and nerve blocks. As well, the doctors had created an incredible medical escape room for us to test and diagnose our 'patient' and consult other doctors on their care.

Île à la Crosse is the second oldest community in Saskatchewan and is rich with history. On Treaty 6 territory, it is strong in Metis roots and culture. We had the privilege of partaking in

cultural activities such as beading, jiggling, making bannock, and filleting fish to fry (though I spent most of my time eating it hot out of the fire). I cannot express enough how grateful I am to have been welcomed into this community and treated so kindly.

There were many pieces from this single day that reaffirmed why I want to pursue medicine. As we all know, medical school involves long hours and the course work can be overwhelming at times. It is easy for those things to cloud the realities of the career that we have chosen to pursue. Having the opportunity to step away from my textbooks and reflect on the amazing work being done by rural health practitioners was a breath of fresh air. The breadth of work they do, and the depth of their competency, is inspiring and exciting.

My only regret is that we couldn't have stayed longer. ■





How a week at camp will make me a better physician

Laura Sheriff

University of Ottawa, Class of 2021

IN THE SUMMER AFTER MY first year of medical school, I was fortunate enough to spend a week volunteering at an overnight camp in Muskoka, Ontario for kids affected by childhood cancer. Camp Oochigeas is a privately funded, volunteer-based organization with the slogan, “Where kids with cancer can just be kids.” Some campers may be on active treatment, and others may be in remission for years, but what ultimately unites campers is the shared experience of cancer. This camp provides recreational and engaging summer programs in a medically safe and supervised environment. The “MedShed” is comprised of a team of oncologists and oncology nurses, who are responsible for the medically relevant aspect of camper care. Although my time at camp consisted solely of recreational camp counsellor duties such as swimming, arts & crafts, morning wake-ups and evening bedtimes, I could not have anticipated how much I would learn in just one week that will help make me a better learner and physician moving forward in my medical career.

1. Ask instead of assume

It is important as a clinician not to assume what the consequences or effects of a condition are on a patient’s quality of life. One camper, who I was told on the first day of camp was medically blind, consistently surprised and amazed me with her fearlessness when overcoming obstacles. This camper was able to single-handedly kayak across a lake, by using surrounding voices as a guide. Instead of assuming what patients can or cannot do, build honest rapport with them and ask open-ended questions. Listen with genuine curiosity and empathy.

2. Aim high

Visual, auditory, and physical impairments, fatigue, nausea, and pain – these are some of the consequences of treatment with which campers live. But that doesn’t stop them from waking up at sunrise each morning to jump in the lake or sing at the top of their lungs at a camp bonfire. Camp Oochigeas is a place where a camper with a wheelchair can successfully make it to the top of the ropes course. This idea that success is measured relative to standards that we define for ourselves is important to keep in mind for both patient care and one’s personal wellbeing. The next time I feel overwhelmed due to an upcoming exam, extra-curricular obligations, a research deadline, clinical roles, or making time for personal interests, I will remind myself to focus on realistic strategies to achieve these goals.

3. Lean on each other

At camp, we work in teams of counsellors assigned to a cabin of campers. We divide up tasks to ensure there will be a clear leader at each part of the day, such as wakeup, mealtime, or bedtime routines. Of course, I had worked in collaborative environments prior, but the lengths my colleagues and I went to support one another was truly unique in this space. We would offer to take over as the leader when we noticed another counsellor seemed exhausted from a previous ordeal, and we would gladly lose sleep by lending a hand in the middle of the night when a camper woke one of us up in the middle of the night because they felt homesick. We are all there to provide a memorable summer experience for our campers, and this can only be done through mutual support of each other.

This skill of collaboration and feeling of camaraderie extends to healthcare professionals, and is an environment I want to emulate with my medical colleagues in order to provide the best patient care.

4. Keep an open mind

A common situation that arises at camp involves working with a camper who is hesitant to engage in a novel situation, such as swimming lessons, a new sport, or socializing with unfamiliar faces. As a medical student, I tend to stay in familiar surroundings in terms of the clinical experiences or extracurricular activities I seek out. However, as I continue to progress on my journey of choosing a medical specialty, I must remind myself that it is important to try new experiences too, and to approach unfamiliar circumstances with the same open-mindedness I encourage my campers to have.

5. Learn from the bad, look forward to the good

At the end of each camp day, we are encouraged to play a game with our campers before they go to sleep where we share what our favourite and least favourite moment of the day was, as well as what we are most looking forward to the next day. Self-improvement stems from periods of reflection, in order to encourage ourselves to overcome negative experiences and maintain a positive outlook. This type of introspection will be a useful tool when faced with obstacles throughout clerkship, residency and beyond. ■

On failure

Yipeng Ge

CFMS Director of Government Affairs
University of Ottawa, Class of 2020

WE DO NOT NEARLY highlight our failures as much as our successes. And why should we? In medicine, we are taught to strive for clinical competence while remembering to balance all the roles that we ought to embody so fully: being a medical expert, professional, communicator, collaborator, scholar, leader, and health advocate. And unofficially, the role of being a person: maintaining ones own sense of self and humanity as one progresses through medical education, training, and then to independent practice. It is certainly no small feat.

I recently had the joy to chatting with prospective medical students preparing for their medical school interviews. Schools search subjectively for strong candidates that reflect a diverse, capable, and compassionate cohort that will be the physicians of tomorrow—no pressure here on finding a process that works and delivers, right? Candidates are asked to bring their truest selves with all their

experiences and accomplishments under their belt. However, there is no explicit category in the ‘autobiographical sketch’ that asks for one’s greatest failures or all the missed opportunities. As difficult as the questions around our own weaknesses and failures must be, I can’t overstate how important these reflections are.

A few years back, a friend introduced me to the concept of a ‘resume of failures’ that, just as a traditional resumes document all the achievements and opportunities that have brought us to where we are today, makes clear on black ink on paper (or pixels on a screen) all the missed opportunities, the rejections, and failed attempts. “What an extraordinary concept”, I had thought, for among all of the opportunities that I have taken on, there were a multitude of rejections hidden in my memories only for myself to recall. Fail quickly and hard, only to pick yourself up each and every time to learn and grow from the experience, and recognize that more opportunities than we know lie ahead.

Now, almost 6 months into clinical rotations and working with health care teams providing care in various settings, I find myself making many mistakes and missteps, experiencing failures and disappointments. This is where I learn the most and honestly, is what I was looking forward to in clerkship. My friends were bewildered that I was excited to be criticized, to be wrong in front of a preceptor, to make a mistake; to fail. And boy, was it still a difficult reality to face. Many don’t find themselves in medical school and training having had very significant academic failures, I think. However, to be able to have the balanced environment of being challenged as a learner but also supported to fail, and fail quickly and often, is far and few between. It is these exact environments that we all ought to strive for, holding our clinical preceptors/supervisors accountable for providing good feedback and holding ourselves accountable for understanding what good feedback is and how to incorporate it into our own practices. ■



Protect thyself: The wilderness of clerkship

Perneet Sekhon

University of British Columbia, Class of 2020

THE HOSPITAL environment can be described in many words when you take a moment to observe. Chaotic. Hectic. Overwhelming. These are a few to say the least. Everyone is working on a task, be it the unit clerk processing orders or nurses gathering equipment to start an IV. Even the electrician is in the corner fixing the faulty lights on the ward. And then there's the medical student, standing there with a handful of admission papers and a confused look on their face.

Working in the busy hospital environment can be challenging during clerkship. There's a lot that you need to learn in a very short amount of time. Aside from the learning medicine part, which is challenging enough, you need to learn the practicalities of healthcare delivery too. This varies from being able to use an EMR system, locating patient charts, to understanding dictation protocols. Furthermore, as you are rotating through the different fields of medicine, you quickly realize things are run very differently. Team dynamics and the expectations of you change. Nonetheless, it's sufficient to say that medical students need to be adaptable. You need to protect thyself. Here are a few important pearls that can help you:

1. **Your safety.** Don't forget it. Each year there are several workplace injuries, needle stick injuries being the most common. Don't put yourself at risk of blood-borne infections like HIV, Hepatitis B and Hepatitis C. These can be life changing and have serious effects on your health. Therefore, start to develop a mindset of work safety. When there are sharps around you, be alert. The following are two common

scenario's where medical students have incurred needle stick injuries:

- a. Suturing. Often you are tired or pressured to work fast and mistakes are made. You lose concentration and in an instant, you poke yourself. Therefore, make your safety a priority and if you feel like you're in an unsafe position, let staff know.
- b. Recapping Needles. Try to avoid recapping needles by hand. If you must recap a needle be very careful by using tongs or a one-hand scoop method.

Other common workplace injuries include exposure to bodily fluids – eye contact being the most common. It's understandable that the hospital is a busy environment and mistakes happen. But reduce the chances of potential harms to yourself by taking appropriate precautions. Wear PPE. Follow contact precautions. It's easy to lose sight of this when you feel pressured to work efficiently. However, no one will fault you for taking an extra minute or two to put on PPE. Finally, know what to do in the event of a workplace accident. This can save you a lot of stress.

2. **Work life balance.** This can't be stressed enough. Physician burn out is a real thing. Survey tools have been developed that measure and prove its existence. You can experience depression, moral distress and oftentimes patient care is worsened. In clerkship you will find the majority of your time is spent in the hospital so it's easy to forget to do the things that you enjoy. Oftentimes we are worried about exams, electives and CaRMS. That said, it can't be

emphasized enough to do the things that make you happy. Exercise if that's your way of coping with stress. Art, music, dance. Spend time with your friends. Play video games. Make your health a priority. Protect yourself from burnout. And if you're feeling overwhelmed with stress, take a step back and reassess your situation. Ask for help if you need it.

3. **Positive attitude.** Easier said than done. But keep this in mind when you're in the hospital and working away in the late hours. Certain rotations will be more demanding than others. These rotations will be high volume and fast paced. As such it's easier to make mistakes. As medical students, we are often portrayed as perfectionists and can't fathom the idea of making mistakes. But it happens. Have a positive attitude if this does occur. It may be a medication error or you accidentally mess up a procedure. You're doing your best and you're a learner. That said, learn from your mistakes!

4. **Eat and Sleep.** A balanced diet is important. Don't skip breakfast. Snack throughout the day when you can. It improves your mood and makes your time in the hospital much more enjoyable. And try to get enough sleep before your next shift. Keep a consistent sleep schedule the best you can. It's not always easy to adhere to the above but at least have it in mind as goal to strive for.

Hopefully, the above pearls can help you during your clerkship journey. Stay safe and protect thyself. The wilderness of clerkship is challenging but at the same time rewarding. Best of luck. ■

Let's Create the Future of Health Care Together – Embracing Health Care Technology and Developing an Innovation Mindset in Medical Education

Philip Edgcumbe

University of British Columbia, MD/PhD Candidate

IN THE LAST CENTURY THE world we live in has transitioned from a local and linear world to a global and exponential world. Exponential change and exponential technology has disrupted our way of life and transformed entire industries. Health care is on the edge of experiencing a disruptive and transformative change as well. The medical school must embrace this technological change, teach medical students how to use these new technologies for better patient care, and encourage medical students to be physician-innovators who will be part of creating a health care system that works well for all Canadians.

Setting the Stage – Future Health Care

Dr. Topol, the author of *The Patient Will See You Now* and a practicing cardiologist, wrote that he realized that medicine had changed forever when he got an email in 2015 from one of his patients that said the following. "Hey Doc, I felt my heart racing so I took an EKG and discovered I'm in A Fib. My EKG recording is attached. What do I do now?" The patient had collected all of this information using his \$200 Bluetooth-enabled EKG device that attached to the back of his phone.

The implications of this new kind of personalized and patient-centric diagnostic technology and e-mail or virtual communication between patient and doctor are far-reaching. In the scenario that Dr. Topol described the patient skipped all of the steps that he would

normally have had to take if he had felt his heart racing and had been a patient in the Canadian health care system today. Those steps include: A visit to his family doctor, a referral and visit to a cardiologist, another visit to the outpatient lab to pick-up a Holter monitor, a month-long wait for the results of the Holter monitor test, another visit with the cardiologist, and a trip to the pharmacy to pick up some medication. The many steps required in the present-day health care system for diagnosis and treating disease are an inconvenience to patients and can even have a negative impact on their health. For example, a delay in the diagnosis and treatment of atrial fibrillation puts the patient at risk of developing a stroke.

A Call to Action

In order to better serve Canadians we need to train the physicians of the future to be better equipped to use innovative technologies in their practice like the patient-owned EKG device described above. This will help us to replicate the experience of Dr. Topol's tech-savvy patient across our entire health care system. Some tangible steps we could take would be to:

1. Include classes in the medical school curriculum that teach students how to deliver effective health care via virtual visits and how to manage the vast amount of data that is now being generated by patients.
2. Encourage medical students to become physician-innovators.

"Health care is on the edge of experiencing a disruptive and transformative change ... creating a health care system that works well for all Canadians."

Teaching Students to Deliver 21st Century Medicine

The evidence across Canada for introducing telehealth services is quite compelling. For example, a survey of 210 study participants about the introduction of telehealth services into First Nations communities in the province of British Columbia showed that of the patients that had switched to telehealth, 77% reported been able to see their doctor more regularly and 82% indicated that they were able to attend more appointments since telehealth became available in their community.¹ We need to train medical students to use these kind of platforms for delivering health care.

Additionally, we must equip medical students with the skills to manage the vast amount of data and "data exhaust"



that will be generated via the health diagnostic sensors that will be built into the lives of our future patients. In short, physicians need the tools to manage and act on the data that will be generated by the digitization of our health status and the smart health care sensor technologies in the future. In the near future most patients will have had their genome sequenced, hip implants will automatically detect infections, smart toilets will alert the person using the toilet that they should schedule a colonoscopy due to a concerning biomarker identified in that person's stool, and the Apple smart watch heart rate sensor will diagnose diabetes.² We could follow the example of the newly created Carle Illinois College of Medicine Medical School (<https://medicine.illinois.edu/>) at the University of Illinois which has developed an "engineering-infused medical curriculum".

The Best Way to Predict the Future is to Create It

We should help to create the health care system of the future by encouraging medical students to become physician-innovators. We already have examples of physicians that have created change and innovation at scale. One example is Dr. Jack Pacey, a Canadian surgeon who invented the Glidoscope, a video-guided laryngoscope for airway insertions. He got the inspiration for the idea as he watched his anesthetist colleague struggle for half an hour to place a tube into the patient's airway and trachea. At that moment, Dr. Pacey realized that if the anesthetist could see what he was doing, it would be much easier. The rest is history. The Glidoscope transformed how difficult airways are managed in anesthesia. To encourage more physicians to become inventors like Dr. Pacey, we should equip our medical resident

trainees with the time and skills to build prototype devices, platforms and policies that could address some of the bottlenecks that exist in today's health care system.

A Call to Action

This article serves as a call to action to modernize our medical education to keep up with the modernization of health care technology. Better health care education will be a fundamental in creating a health care system that works for all Canadians and that we can be proud of. ■

References

1. Holyk, T., Pawlovich, J., Ross, C., & Hooper, A. (2017). The role of telehealth in improving continuity of care: The Carrier Sekani Family Services primary care model. *British Columbia Medical Journal*, 59(9), 459-464.
2. Ballinger, Brandon, Johnson Hsieh, Avesh Singh, Nimit Sohoni, Jack Wang, Geoffrey H. Tison, Gregory M. Marcus et al. "DeepHeart: Semi-Supervised Sequence Learning for Cardiovascular Risk Prediction." arXiv preprint arXiv:1802.02511 (2018).



Bluewater Health, Sarnia & Petrolia, Ontario

Bluewater Health is recruiting for the following positions to provide services to the residents of Sarnia-Lambton both in the community and at the hospital:

- Anaesthesiologist
- Emergency Physician
- Hospitalist
- Infectious Disease (Part Time)
- Neurologist
- Otolaryngologist
- Physiatrist
- Plastic Surgeon
- Psychiatrist
- Rheumatologist

Bluewater Health operates 320 beds at hospitals in Petrolia and Sarnia. We are award winning, Accredited with Exemplary Standing. We offer an array of specialized acute, complex continuing care, allied health and ambulatory care services including:

- A broad range of diagnostic services including CT and MRI
- Closed Critical Care Unit
- District Stroke Centre
- Schedule 1 Psychiatric Unit
- Affiliation with Western University's Distributed Education Network
- Full spectrum of specialists available 24/7 (neurosurgery & interventional cardiology not available)

We are committed to improving the patient experience using engagement, Lean, and innovation.

Situated on the shores of Lake Huron at the Michigan border, Sarnia offers excellent quality of life, sports, arts and culture, education, state of the art health care, and beautiful natural environment.

To apply, please send CV and references to: **Dr. Mike Haddad**, Chief of Professional Staff Bluewater Health
medical_affairs@bluewaterhealth.ca 519-464-4400 ext. 4534

CFMS Awards 2019

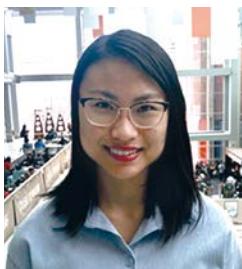
CFMS - MD Financial Management Leadership Award Winners



Derek Fehr

University of Alberta

Derek is a 3rd year student at the University of Alberta, involved in many initiatives addressing health disparities for sexual and gender minorities. He is the President of his school's SGA and is a founder and board member of the Edmonton Men's Health Collective, a grassroots non-profit focusing on gay, bi, trans and queer men's health. Derek has also been successfully working with his Faculty to implement over 6 hours of new LGBTQ focused content into the U of A's MD program curriculum.



Linda Lam

University of Manitoba

Linda is a 2nd year medical student at University of Manitoba. Her approach to leadership is developing a shared vision and creating space for each member to contribute fully. She is the co-chair of a 21-member student executive council that directs the Winnipeg Interprofessional Student-run Health Clinic to provide after-hours healthcare to the Point Douglas Community. Also she volunteers as an organizer with 13 Fires to promote racial inclusion in Winnipeg by hosting monthly conversation series. She is an active member on the Student Advocacy Committee, developing an advocacy campaign on youth mental health that set the stage for 25 medical students to speak with MLAs about health policy and programming.



Olivia Monton

University of Alberta

Olivia Monton is a second-year medical student at McGill University. She is also the founder and president of a Montreal-based foundation, called Live for the Cause. Through her foundation, Olivia aims to encourage Montrealers to deepen their understanding and appreciation of philanthropy through participation in initiatives that strengthen the local community and help support those in need. Olivia's philanthropic achievements have been recognized by her country: she was recently awarded The Senate of Canada 150 Medal by the Honourable Judith Seidman and is the recipient of the Governor General of Canada's Sovereign's Medal for Volunteers.



Andrew Dawson

Queens University

Andrew Dawson is a 3rd year medical student from Queen's University and the current Chair of the Ontario Medical Students Association. He has worked diligently with his incredible team to advocate for medical student wellness, rising tuition costs, and the unmatched medical graduate at both local and provincial levels. He frequently visits local schools to deliver presentations on concussion safety & prevention and First Aid. He is also the student lead on Health City Kingston, an event that will bring MPPs from the four primary political parties together in Kingston to discuss their respective parties healthcare platforms.



Mai Malkin

Western University

Mai Malkin is a 3rd year student at Western University. She has been a part of Schulich's Hippocratic Council for the past 3 years, acting as their Social Director and then VP Community Relations for the past two years. She has been working to achieve a balanced student life that includes extra-curricular, educational opportunities and active community involvement.



CFMS - MD Financial Management Leadership Award Winners (continued)



Michael Curran

Memorial University of Newfoundland

Michael Curran is a 4th year medical student at Memorial University who has recently matched to family medicine residency in the northern community of Goose Bay, Labrador. Michael became involved in healthcare leadership as a nurse, lobbying for and developing a home chemotherapy program in the rural setting that he worked. His more recent involvements include serving on his local PTMA Board, co-founding the Choosing Wisely Interest Group at Memorial, helping to develop a recorded lecture program at Memorial, and has served in various capacities on his local Medsoc.



Erik Yip-Liang

University of Saskatchewan

Erik Yip-Liang is a second year medical student at the University of Saskatchewan. He is President of the Health Sciences Students' Association of Saskatchewan, Co-President of the SMSS Diagnostic Interest Group, Medical Student Liaison for the Big Brothers Big Sisters program in Saskatoon, researcher and advocate for the SMSS Provincial Lobby Day team, and finally, award recipient and volunteer at SWITCH (a student-led health clinic in Saskatoon's core neighbourhood). In his spare time Erik likes sleep.



Frank Battaglia

University of Ottawa

Frank Battaglia is a 2nd year medical student at the University of Ottawa. He is the VP Executive for the Aesculapian Society, and the Executive for both the Surgery Interest Group and Emergency Medicine Interest Group. His involvements at school include developing a Pre-Clerkship Procedural Curriculum, being Chair of the Conference Hosting Funding Committee, and being a CHEO Buddy Volunteer at the in-patient oncology ward. Frank enjoys cooking, weightlifting, traveling, LEGO, and is excited for his future in medicine!



Jenna Smith-Forrester

University of British Columbia

Jenna Smith-Forrester is a 3rd yr medical student in UBC's Northern Medical Program. She has a passion for quality improvement, education, leadership and advocacy, and has facilitated dozens of interprofessional workshops, a scholarship program, a practicum program and an international campaign; collectively training thousands of UBC students. Jenna recently organized and hosted an international conference exploring how technological advances, systems-level thinking, and collaborative approaches were improving accessibility and equity of health service delivery. She works with her local, provincial and national Quality Improvement networks to engage and support her fellow colleagues.



Sarah Mavin

Northern Ontario School of Medicine

Sarah is a second-year student at the Northern Ontario School of Medicine. She is most known for her leadership in co-founding Reach-Accès-Zhibbi, an Interprofessional Student-Led Clinic centred in Sudbury, Ontario, that emphasizes social accountability in medical education and interprofessional experiences early in training. She has also been a leader in bringing Choosing Wisely Canada to the NOSM East campus.



CFMS - MD Financial Management Leadership Award Winners (continued)



Stephanie Gill

University of Calgary

Stephanie Gill's accomplishments include co-president of the Students for Health Innovation and Education (SHINE) medical student club for the class of 2019. She was responsible for overseeing SHINE projects including Youth Health and Wellness curriculum in low socioeconomic areas in Calgary, prison health research project and indigenous youth wellness and mental health workshops. She also was a founder and chair of the planning committee for the Addiction Symposium at the University of Calgary two years in a row.



Sujen Saravanabavan

University of Toronto

Sujen is a 3rd yr medical student at U of T with a passion for social justice. He is pursuing a Masters in Systems Leadership Innovation and served as VP External where he founded the Toronto Political Advocacy Committee. His involvements include working with an MPP to conduct a bill analysis, consulting for the Canadian Paediatric Society and policy work for the City of Toronto.



Yaeesh Sardiwall

Dalhousie University

Yaeesh is 3rd year medical student at Dalhousie, who gained an appreciation of the warm art of medicine through experiences in marginalized communities in Canada and South Africa. He has demonstrated a holistic leadership framework through community engagements in First Nation's communities and interdisciplinary collaboration for several projects at the medical school including spearheading Choosing Wisely Canada locally and nationally. His warm demeanor, positive attitude and nuanced perspective on the various roles of an effective physician have resonated with his colleagues.



Bushra Khan

McMaster University

Bushra is a 3rd year medical student at McMaster and has served as the Ontario Medical Students' Association's (OMSA) Director of Communications for the past two years, focusing on contract negotiations, learner harassment and physician wellness. She has worked with Choosing Wisely Canada to instigate UGME curricular change in resource stewardship and patient safety. For the majority of clerkship, Bushra was a frontline healthcare provider to inner-city patients in Hamilton, Toronto, Ottawa and Vancouver's Downtown Eastside and worked with organizations including OHIP For All and Canadian Doctors for Pharmacare to advocate for improved access to resources for the patients she served.



Aimee Bouka

Université de Sherbrooke

Aimee is a 3rd year medical student at Université de Sherbrooke in Moncton. She is the faculty's first GAAC representative, global health liaison and global health advocate. She developed the advocacy, global health and medical education's portfolios on Moncton campus and did it while also being a dedicated mother to her 3 young children. More recently she secured new opportunities for junior medical students to participate in clinical observerships in indigenous health and inner city health. She hopes to continue fostering social accountability in future physicians.



CFMS - MD Financial Management Travel Award Winners (Spring General Meeting)

Western Regional Winners



Sarah Kent
University of Alberta



Joshua Nash
University of Calgary

Quebec/Ontario Winners



**Milani
Sivapragasm**
McGill University



Emily Yung
McGill University



David Wiercigroch
University of Toronto

Atlantic Regional Winner



Jane Brodie
Memorial University of
Newfoundland

Wildcard Winners



**Samuel
Bradbrook**
University of Alberta



Qasim Hussain
University of
Saskatchewan



CFMS - MD Financial Management Travel Award Winners (Annual General Meeting)

Western Regional Winners



Julia Sawatzky
University of Alberta



Gayathri Wewala
University of Alberta

Quebec/Ontario Winners



Adrina Zhong
Western University



Avrilynn Ding
Queens University



**Tina Binesh
Marvasti**
University of Toronto

Atlantic Regional Winner



Ryan Kelly
Memorial University of
Newfoundland

Wildcard Winners



Denisa Rusu
Western University



Aden Mah
University of
Saskatchewan

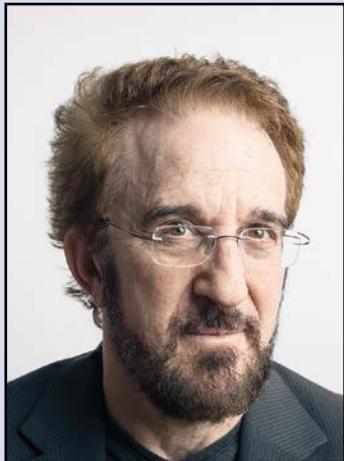




Dr. Brian Goldman: Disruptive innovation

Connor Brenna

University of Toronto, Class of 2021



DR. BRIAN GOLDMAN IS A STAFF EMERGENCY physician at Sinai Health System in Toronto, and the host of *White Coat, Black Art*, an award-winning show on CBC Radio One about the patient experience in the culture of modern medicine. He is the author of three bestselling books. His latest, *The Power of Kindness: Why Empathy is Essential in Everyday Life*, was published in 2018.

What does disruptive innovation mean to you?

Clayton Christensen, the person who first coined the term 'disruptive innovation', defines it as innovation that creates a new market value network & eventually disrupts existing markets, typically by displacing established market leaders & alliances. In medicine, that often means altering the status-quo system by moving away from the traditional system or provider to a new one. As Christensen says, the new way of providing health care is often more simple, convenient, accessible, and affordable than was the old way.

Disruptive technology is a subset of disruptive innovation that focuses on mainly on the technological aspects of health care. The development of laparoscopic surgery is a classic example of disruptive technology. Before laparoscopic surgery, open procedures were the norm. When the laparoscope was first introduced, it was criticized by experts in the open technique as unnecessarily risky. In time, however, those risks became manageable. Then, the advantages of minimally-invasive surgery became clear. Tiny incisions meant faster healing and faster recovery. They also made same day surgery commonplace, freeing up beds and increasing dramatically the number of operations that could be performed. All of these benefits gave skilled laparoscopic surgeons a distinct advantage over practitioners of the open technique. After that, it didn't take long for the laparoscopic technique to become the dominant way of performing surgery.

How did disruptive innovation come to be on your radar? For many people, it still is a foreign concept.

Disruptive innovation came to my attention initially through my work as host of the CBC Radio program White Coat, Black Art. In 2008, we had done stories on the millions of Canadians who (at the time) couldn't find a family

doctor. Then, I heard about Ontario's first primary care clinic led by nurse practitioners Marilyn Butcher and Roberta Heale. At their clinic, patients were attached to NPs instead of physicians. NPs have an enhanced scope of practice that enables them to order tests, make referrals and prescribe medications. When a patient's needs fall outside their scope of practice, they refer the patient to a family physician on staff who assesses and treats the patient and then refers the patient back to the NP. Around that time, I first read about disruptive innovation, and realized that the nurse practitioner-led clinic was a perfect example. By recruiting patients who could not find a family doctor, the clinic was taking the first step at disrupting the market for primary care. To date, NPs have not taken over the market. But these are early days, and the potential to do so is there.

There are lots of other examples.

Why do you believe that disruptive innovation is important in medicine?

It's not that I believe that disruptive innovation is important in medicine, it's that I believe that disruptive innovation is inevitable in medicine. Anyone who believes that the status quo in health care is the way things will always be must think that a stethoscope is more useful than an bedside ultrasound! Disruptive innovation or the potential for disruptive innovation is all around us. Those who can spot the trends quickly and accurately will be able to thrive in a changing environment. They will also be more likely to stay gainfully employed in medicine. That is something none of us can afford to take for granted.

Can you share with us some of the disruptive innovations in medicine today?

Cataract surgery is another technological example of a disruptive

innovation. Back in 1966, an ophthalmologist named Charles Kelman did the first phacoemulsification cataract surgery. The procedure, which took four hours and was complicated by endophthalmitis, was not ready for prime time. By 1984, 90 percent of cataract operations were done using the time-honoured method of extracapsular cataract extraction (ECCE). Just five years later, in 1989, a foldable intraocular lens enabled surgeons to make smaller incisions. That made phacoemulsification a viable option. By 1995, ECCE was nearly obsolete. By 2017, refinements in microsurgery, instruments, fluidics and chamber stability meant that a procedure that took four hours in 1966 could be done in less than 5 minutes some fifty years later. In India and Nepal, there are ophthalmologists who can do 100 procedures per day using operating room materials that cost around \$20 per patient.

The drug finasteride is another example of disruptive innovation. Benign prostate hyperplasia (BPH) is one of the top ten most prominent and most costly diseases in men over 50 years of age. Its impact is expected to grow as the population ages. In 1992, finasteride was approved as the first drug for with potential to delay and even avert transurethral resection of the prostate (TURP). Urologists raised objections about the medication. In a disruptive stroke of genius, the manufacturer Merck marketed finasteride at family doctors instead. In the U.S., payers were skeptical of the company's therapeutic claims. Merck offered to pay for any TURP if surgery was not averted through the use of finasteride. Within five years, U.S. Medicare data showed a 50 per cent decrease in TURPs.

There are lots of current examples of innovations in healthcare that have the potential to be disruptive. In his book *The Innovator's Prescription: A Disruptive Solution for Health Care*, Clayton Christensen writes that disruptive innovations in medicine involve the



transfer of skills from highly trained but expensive personnel to more affordable providers—often aided by technology. As mentioned, nurse practitioners doing primary care have the potential to be disruptive innovators. So do paramedics who provide some aspects of primary care and even palliative care.

Christensen also argues that any innovation that shifts care from hospitals to clinics, offices, pharmacies and patient homes has the potential to be disruptive. Pharmacists who counsel patients and provide flu shots are an example of that.

Technology and apps that provide some aspects of specialist care have the potential to be extremely disruptive. In 2010, the World Health Organization estimated that the prevalence of visually impaired people across the planet was 285 million people. There aren't enough ophthalmologists where they are needed, particularly in places such as Africa. PeekTM is a mobile phone app with clip-on hardware that attaches to a smartphone. It can check acuity and diagnose glaucoma, cataracts, macular degeneration, and diabetic retinopathy. The cost is £300 as compared to £96,000 on state-of-the-art eye clinic equipment. PeekTM has been shown to generate images sufficient for remote blinded observers to make a correct diagnosis.

The device was made for developing countries that lack ophthalmologists. The potential for disruption may come from using the same app in the developed world, where patients are living long enough to develop eye problems related to Type 2 diabetes and hypertension. Ophthalmologists say it's becoming increasingly necessary to closely monitor patients with chronic

co-morbidities that affect vision. However, there is an acute lack of ophthalmologists to routinely monitor the eye health of such patients. An app such as PeekTM will enable a shift in eye screening from ophthalmologists to family physicians, nurses, pharmacists, patients and even family members.

Some of the most disruptive innovations are likely to come from using artificial intelligence (AI) to interpret retinal images, diagnostic imaging and biopsies. Optical coherence tomography is a non-invasive scan in which an image is generated by bouncing light off the retina. A recent study pitted AI versus an ophthalmologist looking at 200,000 scans of patients with acute macular degeneration and diabetic macular degeneration. The AI device had similar accuracy to a well-trained ophthalmologist and could make referral recommendations within 30 seconds and with 95 per cent accuracy.

When AI interpretation of diagnostic imaging rivals that of physicians, the system will need fewer radiologists. When NPs, physician assistants and paramedics provide primary care, the system will need fewer family physicians. The more point-of-care and home-based lab testing is done, the less the need for standalone testing laboratories.

It's inevitable that we will see the emergence of new health professionals and the phasing out of ones that are more established and more expensive.

What can medical students do to prepare for an era of disruptive innovation?

The first thing medical students need to do is recognize that disruptive

innovation is as inevitable in healthcare as in other domains. You need to recognize the markets of patients and family members not well-served by the status quo, and anticipate the technologies and emerging health professionals who may be able to serve those patients and family members better. For example, in our current healthcare system, there are growing numbers of patients with multiple chronic medical co-morbidities. Physicians are trained and acculturated to enjoy providing acute medical care, not chronic. As a result, there are large numbers of patients whose medical needs are not well met. Find the optimal way to look after these patients, and you will have found a way to thrive in a disrupted system.

Do you have any ideas for what medical schools can do to prepare their students for an era of disruptive innovation?

They can teach the basics of disruptive innovation. They can help medical students recognize patients who are not well served in the existing system. They can bring innovators to the classroom to teach medical students how to innovate. Finally, they can also hold hackathons to give students practice at identifying niches for innovation as well as pairing students with experts in technology. ■

*If you enjoyed this interview, we strongly recommend you read Dr. Goldman's latest book *The Power of Kindness: Why Empathy is Essential in Everyday Life* (2018).*

In the shadows, in the way

Moira Haggarty Edwards

Northern Ontario School of Medicine, Class of 2019

AFFECTIONATELY DEDICATED
to my many outstanding physician
mentors.

Setting, a busy academic hospital fronted
with aseptic steel and glass.

*A fourth-year medical student enters
through the ER doors to start her shift,
distracted briefly by the patients laying on
stretchers in the hallway, before scurrying
ahead to find her preceptor.*

Hi Dr. Dee? I'm the med student working with you today –
Yes, a pleasure to meet you too!
My objectives for today? Well, I'm working on my focused assessments and I'd like to see more –

Beep beep

– oh yup go ahead

{I guess I'll just get started seeing the first patient, this chart looks interesting...}

Hi Dr. Dee, can I tell you about the patient I saw?
Cool, so it's a 38-year-old female with acute pain of her groin for the past –

Beep beep

Oh... an urgent Medivac? Go ahead! Oh, do you mind putting it on speaker so that I can –
{Dang sounds urgent! I wish I could hear them. Oh well, there will be more teaching moments...}
Anyway, I actually wouldn't mind sitting down for a minute to drink my coffee.
Hey, I swear I put it here...}

Hi – Karen right? Have you seen a Tim's cup?

Oh, you did, but you thought I was done, so you threw it out? No, no, it's ok, no problem!

{Just my luck! Oh well, I bet it was cold anyway.}

Oh, Dr. Dee, ya so I think this woman needs a pelvic exam. Could you join me? Great.

Mrs. Robin, just let your knees fall out to the side. You're going to feel some pressure...

And now I'm opening the speculum, ah, there's the anterior lip.

Dr. Dee, I have a good view of the cervix. Oh sorry, you can't get a good look? Because of the hair?

{Wait, what? Hair?! Did he really just say that? In front of the patient!!}

Oh wait, is he talking about her pubic hair? Or my frizzy mop?
I don't even know. But, wow, this is so awkward.}

Um, ya, I agree, positive exam. So we'll just wait on those labs and ultrasound to come back?

Lunch? YES! I mean, sure. Is it that time already?

{Thank goodness! I was starting to feel lightheaded.}

Hi Dr. Dee, I'm back from lunch. Oh Mrs. Robin's going to the OR? Right now? Ya I'd love to scrub in!

{Note to self, text Kelly that I won't make it to spin class today ... again...}
Ok I'll head to the OR now and wait for the case to start!

{Wow I didn't realize I had to pee so badly! ... Ahhhh.....}

I'm so thirsty too, man, so dehydrated these days. I'll just refill my water bottle and -- Wait, better not... don't want to have a full bladder in a long OR case!}

{Oh, there's the Surgeon! She must be walking to the OR, I'll run and catch up; maybe I can ask her about the new laparoscopic technique!}

Hi, Dr. Smith? I – never mind...

{OMG! She was just going to the bathroom! Not the OR!}

This is so, so, so embarrassing. Am I the only med student who nearly follows their staff into the bathroom?}

{Man, it's been twenty-five minutes, I'm surprised it's taking this long to get the room prepped for an urgent procedure. Maybe I'll see what's up.}

Wait, what? You've already started?

{They think I'm a complete idiot....}

– yup of course, I'll scrub in now!

{Back of hands, web of fingers, ok good.

Now DON'T TOUCH ANYTHING.

Is that nurse watching me from the OR? Am I doing this wrong??}

Hi, uhm, Jodie, could I get a size 6.5 gloves? Oh, you already have 7.5 out? That's ok!

{Where should I stand? Hmm, ok, over here seems out of the way.}

Oh you need to stand here? No problem
{I'll stand on this side where's there more room.}

Oh you need access to that? ... I guess I'll stand... way over here.

Oh ya, I can see no problem!



*{Nope can't see anything. Ok if I stand on my toes, lean my head sideways I can sort of see.}
 {How is it possible to always be in the way, no matter where I stand?}*

You want me to assist? Sure!
{Yessss! I love this!}
 You want me to hold the retractor? Ok!
{Gosh why does it keep slipping? Is it me? Or these 7.5 gloves?}
 That's her uterus? COOL!

—

Good morning Dr. Dee. Yes, I'm great thanks!
 What? A breech vaginal delivery came in last night? You forgot to call me?
{Nooooooooooo!}
 No it's ok! Seriously. I'm sure I'll see one another time!
{Guarantee I'm never gonna see another one.}
 Well I brought you a coffee – triple-triple, right? No problem!
 How did Mrs. Robin do overnight?
 That's great! I was worried about her for a while there.

{That I might have missed something important... So much that I don't know...}
 So, I was thinking today I'd work on my approach to chest pain --
{... Wait, is he drinking my coffee? Ya he totally is and he doesn't know it!}
Should I say something? What if it grosses him out? Or embarrasses him??
He's not even noticing that it's black! Should I drink his coffee now?}

Sorry, what was that? There's an abscess for me to drain? Ok!
{Triple-triple, this is pretty awesome!} ■

Rhythm of life

Shamira Pira
 McGill University, Class of 2018

THIS DARK NIGHT WHILE I sit and ponder,
 'Tis a different time I recall;
 Of innocence and naivety.
 I see someone else, not me at all.

From the moment I took my first breath,
 Right from the beginning of my days.
 I led a very privileged life.
 Enjoyed all of it, these were my ways.

Where laughter and joy once filled my soul,
 The monotony of beep, beep, beep
 Is the only company I have
 While my heart cries out and my eyes weep.

The light at the end of the tunnel
 Seems distant, unfulfilling and dim.
 Tired of swimming against currents,
 I stop and take the easier swim.

In quiet serenity I lay,
 Collecting memories, one by one.
 Reliving them each to the fullest,
 From my reality, I cannot run. ■

cpr / arachnoid aneurysm / courvoisier's law

Kacper Niburski
McGill University, Class of 2021

cpr

love is squishing the sunflowers interrupted in their morning bow words said underneath a blanket fort a tightness on the chest that the first dive knows when you are eight and you have to convince the girl illuminated by light that you can swim the whole lake turning over on your back when the water wears the creation of gods thinking is it the floor that is sinking or the ceiling that is climbing the waters splash now though soon they will still

arachnoid aneurysm

there used to be tall trees here that stood alone where these cluttered papers are now with my pencil touching a thought you had fifteen years ago you stroking the first stitch that is meant to keep the rest together both of us dreaming of long hair that you used to use to comb the night though morning bleeds in like scratching wounds and the webs must be cleaned away by things worse than bugs how are you i ask you do not reply

courvoisier's law

she was 37 and i was 26 and she was going to die and i was not and i think i am supposed to tell you something about it with meaning and emotion and hope against the lack of hope and yet all i have is this and she does not and both of these are too soon an end ■

The tight rope

Alexandra Morra
Queen's University, Class of 2021

HIGH ABOVE, SUSPENDED BY a razor thin wire, She sighs deeply, knowing what lies ahead. Smile, her inner monologue berates, A flawless visage for all to awe - Every lash weighted into submission,

Every inch of skin, powdered and blended, Every flaw carefully concealed. The crowd roars as she glides across, Mesmerized by the optical illusion, Of an effortless mastery.

The gravity of burden exponentiates, Its force inescapable, Shattering the perfectionist veneer, An imbalanced performer, In a balancing act. ■



Systems

Tharshika Thangarasa

University of Ottawa, Class of 2019

Rigid,

Man-made.
Well intentioned,
Necessary?

Part of me had always felt like an object being churned through a vast, predetermined network of rules and processes. I had been sculpted by this experience; my identity formed under the intense pressure of societal expectations. It is as though I had lay limp throughout, allowing life to exert its effects on me. I had longed to be liberated; to discover myself independently of having to satisfy the requirements of a system.

Take course X,
Excel.
Speak to person Y,
Show no trace of imperfection.

It almost crushed me. To be frank,

despite my distaste for something so controlling, I couldn't really think of a suitable alternative. Enforced regulations are needed for large groups of people to co-exist harmoniously. But this set-up felt like a breeding ground for mental illness and burnout. I had gotten this far through unwavering fixation on the rules. The thought of directing my focus elsewhere was disconcerting to say the least. However, this was simply not sustainable.

Let them exist,
To guide.
Understand you exist,
To serve.

Finally, I let go. Redirecting my gaze towards core values and focusing on self-improvement was not risking failure, but rather increasing the likelihood of a more meaningful success. The hierarchies and

stages would remain, but they would no longer dictate my decisions. I would pursue my passions and let accomplishments become a secondary outcome. With this new outlook, I found my liberation.

Systems
are not fixed,
But rather need to evolve,
To accommodate.

The key is to influence the development of the system, just as the system is able to exert effects on you. Advocate to ensure its fairness. Seek to identify and fix its shortcomings.

After all, a system is merely an attempt to reflect the value system of those who created it. ■

Swamp skin epidemic

Katelyn Larson

Memorial University of Newfoundland, Class of 2021

Kaylene Newsom

Illustrator

LITTLE FAWN POND.

"Our pond used to be the envy of all the frogs in the woods" Grandma frog reminisced to her 32 grandchildren.

"On a spring day, I would sit the whole day on one lily pad, eating more flies than I would ever need"

"C'mon grandma, we've heard this a thousand times" the grandchildren moaned together.

"I'd look up and croak with happiness to the mountains" she sighed.

Now the pond was home to very few flies, and the frogs ate mostly the snails that clung to the water side of the lily pads. Something had changed when the beavers built their dam upstream. The water got murkier and developed a characteristic odour.

The younger frogs began to hop away looking to catch a meal of snails when a beaver came swimming by. Its wake nearly toppled the lily pad they were gathered on! What could possibly make a beaver in such a hurry?



One of the smallest frogs (whose tadpole tail could still be seen if you looked close enough), noticed a light brown lump on top of the beaver's head. The lump was about the size and shape of a frog, but instead of healthy, green, slimy skin, the lump was rough and dry.

"I found your child" the beaver said sorrowfully to Grandma frog after poking its head out of the water. "They're still breathing but they were out of the pond for too long".

The small frogs gawked from nearby, speechless. They had heard of a sickness going around their pond but had never seen a member of their own family so limp and dry. It would be necessary now to slowly wet their skin and hope for them to regain energy.

The sick frog was fine for now but not all of the frogs were relieved. Their community was getting sicker as the days passed.

Big Buck Hospital. "We treat all species". The mammals and birds believed the slogan that was slapped across the entrance of the only medical centre in the



forest. To them, the care at the centre was near perfection. The lonely frog or snake who hopped or slithered in however, did not feel the same. They felt unwelcomed there and were constantly fearful of being stepped on by the larger animals.

Big Buck was the only medical centre in the forest and was run by the deer. One of the deer doctors had heard of a problem in the frog community. It seemed as if their skin was drying out and turning brown. This deer knew that some frog communities lived in ponds with poor water conditions and termed this new disease "Swamp Skin". This deer was very interested in this disease, as she had never seen anything like it before.

Many frogs experienced the "Swamp Skin" sickness, but it took one particularly bad case before the frogs were forced to make the trip to Big Buck. It was difficult to get to the hospital, so only the sickest frogs ever went.

"We need to get Ribb help soon! His skin is becoming drier by the day and nothing we do is helping!"

"How will we make it all the way to



the hospital? Ribb needs to be submerged in water at all times to stay alive!"

The frogs at Little Fawn Pond were brainstorming a way to get their sick friend across the forest while keeping his skin damp.

"Maybe a Pelican could carry Ribb in its beak?" suggested one of the young adult frogs.

"And how many Pelican's do you know?" the young frog's mom immediately dismissed the proposition.

"There's a moss in the forest, it holds water within its leaves. We could wrap Ribb in that and he might last the whole way" another frog thought aloud.

The community agreed that the moss would be the best idea, collected all they could, loaded Ribb onto a hollowed log and dragged him through the forest. The trek to the hospital took four days.

Upon reaching Big Buck Hospital, the three frogs and the sleigh (carrying their friend Ribb) dodged hooves, paws, and talons before reaching what seemed like a waiting area. A sign was posted "Please have fur or feather sample ready for identification".

"What do we do? How do we get help now? Are we in the wrong spot?"

They were very confused as to what would happen next. Who were they even supposed to ask to point them in the right direction? They obviously didn't have any fur they could provide for identification.

A bear cub was sitting patiently in the corner next to her dad. She seemed also to be waiting for some sort of treatment. "What is wrong with those frogs?" She asked her dad.



"I don't know Honey, it's best to just ignore them."

"But it seems like they need help"

"It's not our job to help them, there are workers here who can do that"

"ok..." the cub diverted her eyes from the frogs following her dad's advice.

About ten minutes passed. The frogs, now distraught, were uncomfortably gathered under a waiting room chair when the father bear left the waiting room to get a snack. The bear cub turned her gaze towards the confused frogs and introduced herself, "Hi, I'm Honey from Grizzly Mountain, where are you from?"

The bravest frog responded hesitantly "We're from Little Fawn Pond, our community has been getting quite sick and we came here for help"

"That sounds bad" replied Honey, "Is it your claws that are hurt? My claws are hurt. That's why I'm at the doctor's."

"No, our friend's skin, it's dry" the frog said starting to worry. "It took us four days to come all the way here"

"Four days! Little fawn pond isn't that far away! I could walk there in two hours!"

"Our legs are very small"

"Honey?" called a deer behind a desk.

"I have to go but I will ask my dad if I can carry you and your friends back home, meet me at the entrance sign!"

Meanwhile, word had begun to spread around the hospital that a sick frog was being pulled around in an unsanitary fashion. The deer doctor who was interested in this new frog disease heard the rumour and set out to find the frog.

The deer doctor, searching, trotted into the waiting room where the frogs sat, scanned the room very quickly, didn't notice any frogs and turned to leave. At that moment, one of the healthy frogs let out an accidental (and embarrassingly loud), "RIBBIT!"

The deer turned back and looked down. Next to her front left hoof sat three green frogs, all together about the size of her hoof. Beside them was a small piece of wood with something furry inside.

"The frogs! I found them!" cried the deer out of excitement. "Come with me!" She forgot about identifying them by a fur

sample and proceeded swiftly down a corridor. The deer quickly got tired of waiting for the frogs to catch up. Her strides were much longer than even the frogs fastest hopping. She found a basket, put all the frogs, including Ribb, inside and took off to the left.

The frogs were confused, scared, and hopeful that something was going to help Ribb, who at this point was looking very sick.

"Here is some ointment to rub on the skin and try to keep wet."

These were the instructions left with Ribb and he was released. It was not the best experience at the hospital, but it was the best any frog had ever received.

When leaving, they waited all day at the entrance sign for Honey the bear cub. She did not show up, so they started their long trek home. At least now Ribb was feeling a little better.

Back at Little Fawn Pond.

Ribb slowly recovered by applying the ointment. However, in other members of the frog community the sickness was getting worse. Three frogs became so sick that they could not stay moist, even when they were laying in the water.

"I will bring you all of the food you need, don't even think about moving!" Ribb, knowing how the sick frogs felt, catered to their needs. "I will figure this out and find a way to make you all better." He hoped frantically around the pond between his sick friends, racking his brain for an answer to why this was happening.

One Wednesday afternoon, two weeks since Ribb had returned from Bick Buck Hospital, a voice echoed around Little Fawn Pond. "Helloooo! Frogs? Friends? Where are you?". It was a loud, slightly terrifying, but familiar voice.

Honey, the bear cub stumbled into a clearing on the ponds edge. "Frog friends!"

The three frogs who had met Honey at the hospital recognized her instantly. At first, they were quite angry, "We waited for you all day at the hospital's entrance!" recalling when Honey did not keep her



promise to transport them home.

"My dad was so angry," Honey apologized. "He doesn't like me being friends with any species but bears. He won't even let me say the word frog in front of him now."

"But now I came to find you and help you with anything you need! My dad is off foraging and doesn't know I'm here."

The frogs' anger was replaced with gratitude, "So many of our community are sick now. Could you help to get us to the hospital?" the frogs asked kindly.

Honey did not hesitate. Within minutes the sick frogs were wrapped in wet moss, placed in a basket, dangling from Honey's mouth, and on their way to Big Buck Hospital.

Big Buck Hospital remained very intimidating to the frogs, but they were comforted knowing they had a large mammal on their side. When the frogs were unable to provide identification in the form of fur or feathers, they were moved to what seemed to be a forgotten waiting room. It took Honey six hours and conversations with five deer employees before someone noticed the sick frogs.

"Here is some ointment for the skin

and try to stay wet." Again, the only medical advice they received.

Honey brought them back to the pond. Within the time they had been gone, five more frogs were sick. Honey knew she had to enlist more animals to help out the frogs.

Back on Grizzly Mountain, she told the story of the sick frogs. "They can't even go to the hospital because they won't survive the trip on their own!"

"I've never seen something so sad! Please come help me and help the frogs!"

Eventually Honey convinced two of her friends on the basis of that they would get all the blueberries around the pond. Honey's dad was not happy with this new hobby of hers, but he could not stop her. She was determined to help the frogs.

Honey and her friends took many sick frogs to the hospital to get help and the frogs were very thankful for this help. However, they were no closer to figuring out how to stop this disease! They just kept getting worse.

On one particularly rainy day, four deer showed up at the pond looking for sick frogs.

"We have come to find out what is causing this swamp skin epidemic" one deer announced. "We will take little bits of everything that is in the pond."

And they did. The deer sampled everything: the water, the plants, the lily pads, the insects, the trees, the fish, and one sick frog, promising to cure the disease.

They took all of the pieces of the pond back to Big Buck where they would find the cause of swamp skin and the cure.

"It has to be the water, it's always the water"

"But it's only the frogs that are sick"

"Could it be the lily pads? The snails?"

The snail was a good clue, it had inside it a molecule that doesn't belong in snails; it is usually found in bark beetles.

The deer knew this molecule was toxic in frogs!

One deer explained why the frogs were sick. "The beavers cut down spruce trees and built a house in the pond. The bark from the spruce made the water murky and smelly. The snails grew plentifully but became toxic to the frogs. By eating the snails, the frogs became sick, their skin dried out and turned brown."

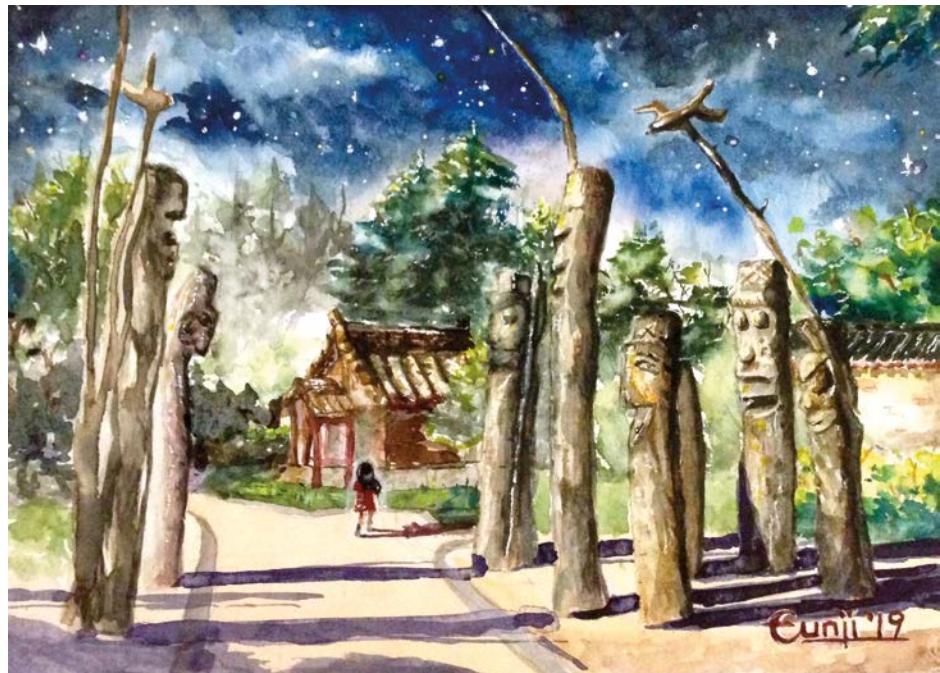
Satisfied with their work, the deer relaxed. Now they could simply tell the sick frogs to stop eating snails and they would be cured. However, the bears kept bringing more sick frogs to the hospital.

"Why won't they listen and stop eating snails?" the deer doctors complained amongst themselves. "It really is a simple cure."

The frogs knew why: they had no other choice. The flies were gone, and they had to eat. They knew that somehow, they would have to fix this problem themselves, within their small community at Little Fawn Pond.

Author's Comment

I believe that our cultural perceptions and much of our systematic discrimination is so well ingrained that it can be hard to see. By writing a story with simple characters and a relatively simple plot I can remove routine, making it easier to notice injustices. Every day, we forget to consider the barriers that many people have in accessing health care and in society in general. I think it is a good exercise to stretch our imagination using fiction, thus illuminating issues that are often passed by. This was my goal in writing this story: to create a plot with many analogies for what some people deal with when accessing health care. In this way, we may be able to understand a different perspective by removing some of the normalcy that prevents us from considering some situations.



▲ Past lives

Watercolour on paper, 5"x7", 2019

Flora Eunji Jung
University of Toronto, Class of 2021



Tradition ▲

Mixed media

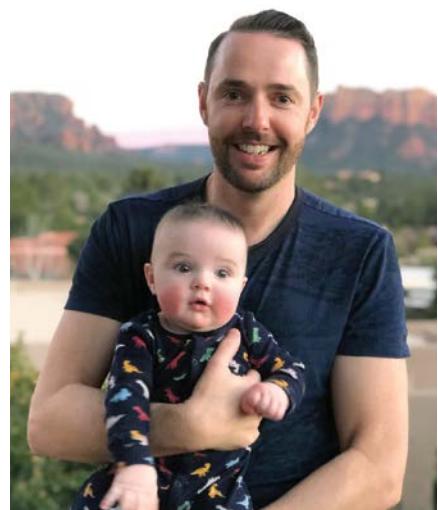
Sabrina Yeung
University of Toronto, Class of 2021



Samantha Naomi Aida Johnston (18 months)
Parents *Tyler Johnston*
(CFMS President 2009-2010) and
Dominique Johnston



Sarah Dora Durafourt
Born January 6th, 2019
Parents *Bryce Durafort*
(CFMS President 2014-2015) and
Emily Reynan



Lachlan Kur
Born July 1st, 2018
Parents *Jason Kur*
(CFMS President 2000-2001) and
his partner



Congratulations to
Lauren Griggs
(former CFMS VP Finance)
and her fiancé *Ryan Taylor*
on their engagement!



CFMS Annual
General Meeting
(2018)



CFMS Day
of Action
(2019)





CFMS executive and directors 2018-2019

EXECUTIVE



Stephanie Smith
President
president@cfms.org



Henry Annan
Past President and
Board Chair
pastpresident@cfms.org



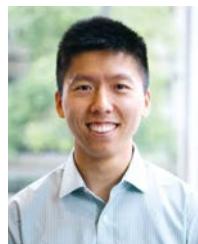
Victoria Januszkiewicz
VP Communications
communications@cfms.org



Odell Tan
VP Finance and
Board Chair
finance@cfms.org



Maylynn Ding
Director of Education
education@cfms.org



Yipeng Ge
Director of Government
Affairs and Advocacy
govtaffairs@cfms.org



Michelle Quaye
Director of Global
Health
globalhealth@cfms.org



Victor Do
Director of Student
Affairs
studentaffairs@cfms.org



Fatemah Bakhtiari
Western Regional
Director
western@cfms.org



Wendy Wang
Western Regional
Director
western@cfms.org



Debbie Brace
Ontario Regional
Director
ontario@cfms.org



Rishi Sharma
Ontario Regional
Director
ontario@cfms.org



Adel Arezki
Québec Regional
Director
quebec@cfms.org



Dax Bourcier
Atlantic Regional
Director
atlantic@cfms.org



Rosemary Conliffe
General Manager
office@cfms.org

NATIONAL OFFICERS

Misha Virdee	Wellness	wellness@cfms.org
Sarah Zahabi	Services	nos@cfms.org
Nathan Rider	Education	noe@cfms.org
Linda Lam	Political Advocacy	nopa@cfms.org
David Wiercigroch	Health Policy	nohp@cfms.org
Jack Weixi Luo	Information Technology (Jr.)	it@cfms.org
Jia Cheng (Jason) Yao	Information Technology (Jr.)	it@cfms.org
Simran Parmar	Blood Drive Chair	blood@cfms.org
Raechelle Gibson	Research (Sr.)	nor@cfms.org
Lia Huo	Research (Jr.)	nor@cfms.org
Dr. Jesse Kancir	Alumni Liason	alumni@cfms.org

NATIONAL OFFICERS OF GLOBAL HEALTH

Emily Fong	Partnerships (NOP)	nop@cfms.org
Charlotte Coleman	Exchange (Outgoing)	exchanges.outgoing@gmail.com
Hillary Pearson	Exchange (Incoming)	exchanges.incoming@gmail.com
Julia Sawatzky	Global Health Education (NOGHE)	noghe@cfms.org
Michaela Ryan	Reproductive and Sexual Health (NORSH)	norsh@cfms.org
Asha Behdinan	Human Rights and Peace (NORP)	norp@cfms.org
Josh Nash	Indigenous Health (NOIH)	noih@cfms.org

MEDICAL SOCIETY PRESIDENTS (CONTINUED)

Frank Battaglia	UofO	uottawareps@cfms.org
Léanne Roncière	McGill	mcgillreps@cfms.org
Samuel LeBlanc	L'UdeS	sherbrookerereps@cfms.org
Michael Mackley	Dal	dalhousiereps@cfms.org
Erin Marshall	MUN	memorialreps@cfms.org

CFMS REPRESENTATIVES

Jas Hans	UBC Sr.	ubcreps@cfms.org
Devon Mitchell	UBC Jr.	ubcreps@cfms.org
Victor Do	UofA Sr.	ualbertareps@cfms.org
Julie Le	UofA Jr.	ualbertareps@cfms.org
Emma Pillsworth	UofC Sr.	ucalgaryreps@cfms.org
Rory Killam	UofC Jr.	ucalgaryreps@cfms.org
Daniel Lee	UofS Sr.	usaskatchewanreps@cfms.org
Daisy Ko	UofS Jr.	usaskatchewanreps@cfms.org
Achieng Tago	UofM Sr.	umanitobareps@cfms.org
Fatemeh Bakhtiari	UofM Jr.	umanitobareps@cfms.org
Josee Malette	NOSM Sr.	nosmreps@cfms.org
Zach Turgeon	NOSM Jr.	nosmreps@cfms.org
Jamie Riggs	UWO Sr.	uworeps@cfms.org
Jielin Lu	UWO Jr.	uworeps@cfms.org
Debbie Brace	McMaster Sr.	mcmasterreps@cfms.org
Sophie Ngana	McMaster Jr.	mcmasterreps@cfms.org
Emily Chen	UofT Sr.	utorontoreps@cfms.org
David Lee	UofT Jr.	utorontoreps@cfms.org
Chris Rodrigues	Queen's Sr.	queensreps@cfms.org
Charles Paco	Queen's Jr.	queensreps@cfms.org
Adam Pietrobon	UofO Sr.	uottawareps@cfms.org
Mehr Jain	UofO Jr.	uottawareps@cfms.org
James Mattina	McGill	mcgillreps@cfms.org
Mathieu Doiron	L'UdeS	sherbrookerereps@cfms.org
Nick Cochkanoff	Dal	dalhousiereps@cfms.org
Paul Pitts	MUN Sr.	memorialreps@cfms.org
Ryan Wade	MUN Jr.	memorialreps@cfms.org

MEDICAL SOCIETY PRESIDENTS

John Liu	UBC	ubcreps@cfms.org
Eleanor Crawford	UofA	ualbertareps@cfms.org
Alex Corrigan	UofC	ucalgaryreps@cfms.org
Kate Morrison	UofS	usaskatchewanreps@cfms.org
Chris Briggs	UofM	umanitobareps@cfms.org
Sarah Cannell	NOSM	nosmreps@cfms.org
Theo Wigle	UWO	uworeps@cfms.org
Naomi Reaka	McMaster	mcmasterreps@cfms.org
Andy Zeng	UofT	utorontoreps@cfms.org
Rae Woodhouse	Queen's	queensreps@cfms.org

The Canadian Federation of Medical Students would like to thank our sponsors for their support of our Spring General Meeting in Halifax:



MD Financial
Management
CMA Companies
Gestion
financière MD
Sociétés de l'AMC



We would also like to thank our sponsors for their support of our Annual General Meeting in Montreal:



MD Financial
Management
CMA Companies

ASSOCIATION
MÉDICALE
CANADIENNE



CANADIAN
MEDICAL
ASSOCIATION



Börm
Bruckmeier
Publishing

www.media4u.com



Canadian Resident
Matching Service

Service canadien
de jumelage des résidents



Wolters Kluwer

Resident
Doctors
of Canada



Médecins
résidents
du Canada



Défense
nationale

National
Defence

THE COLLEGE OF
FAMILY PHYSICIANS
OF CANADA

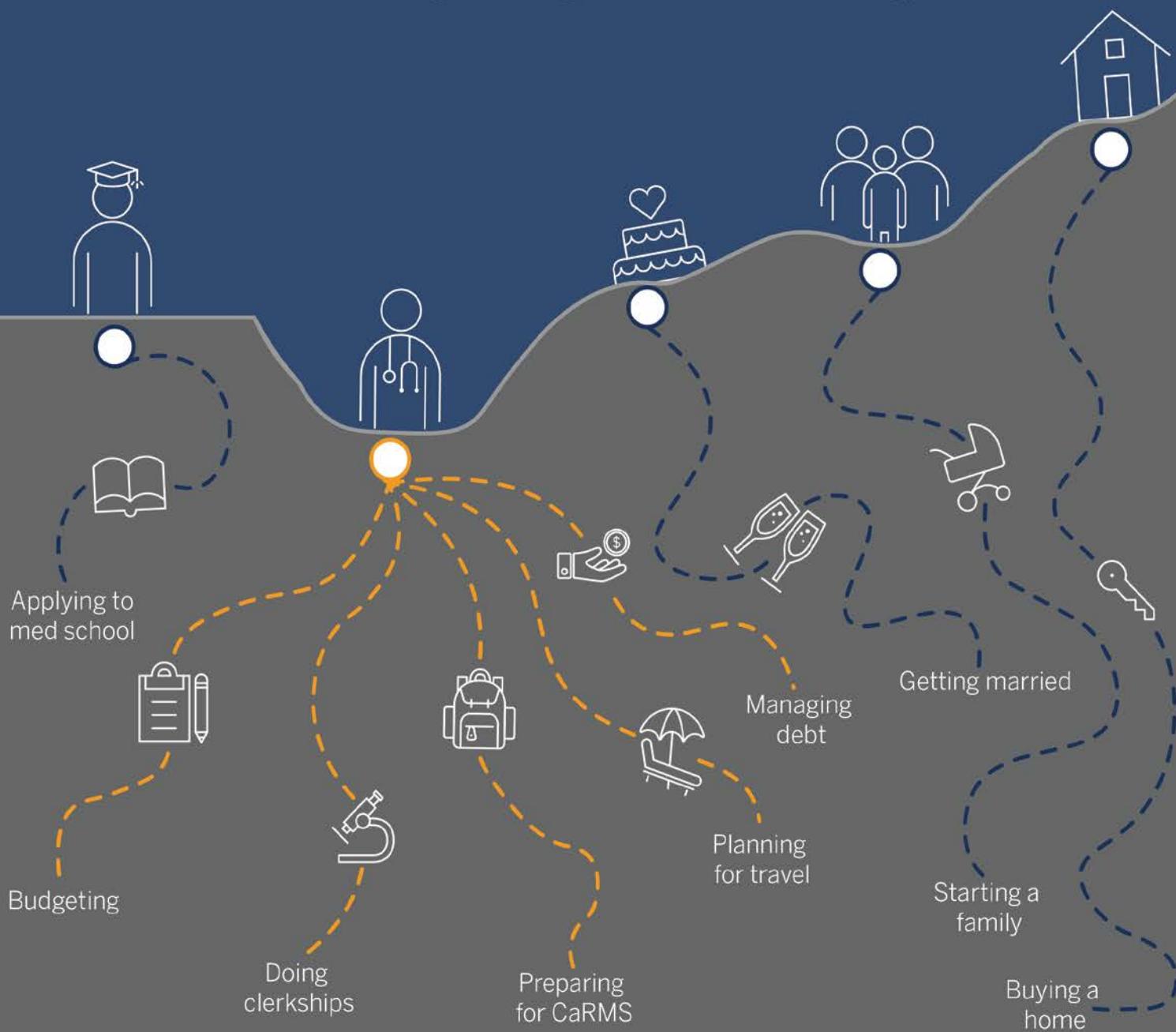


LE COLLÈGE DES
MÉDECINS DE FAMILLE
DU CANADA



These meetings would not be possible without the generous support of our sponsors.

You're going to be **okay**



You've got a long and exciting road ahead.

At MD, we've been helping medical students navigate their financial, personal and career goals for nearly 50 years.

Let's chat and plan for your milestones.



**MD Financial
Management**

MD Financial Management provides financial products and services, the MD Family of Funds and investment counselling services through the MD Group of Companies. For a detailed list of these companies, visit mdm.ca.

md.ca/milestones

Tools for Success in Medical School and Beyond

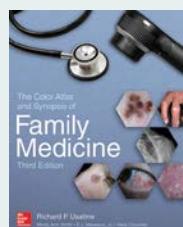
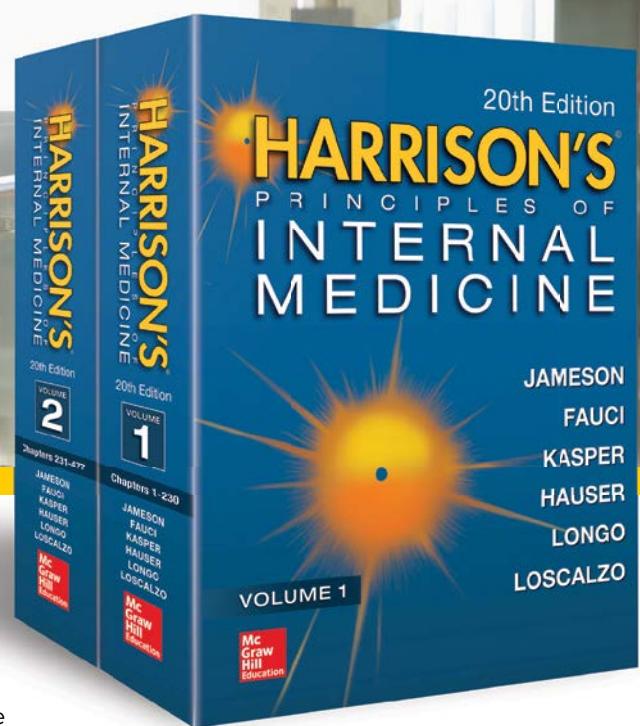


Harrison's Principles of Internal Medicine

Twentieth Edition (Vol.1 & Vol.2) 1259644030

*Introducing the Landmark Twentieth Edition
of the Global Icon of Internal Medicine*

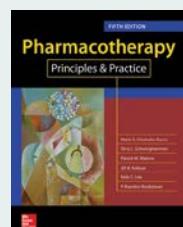
The definitive guide to internal medicine is more essential than ever with the latest in disease mechanisms, updated clinical trial results and recommended guidelines, state-of-the-art radiographic images, therapeutic approaches and specific treatments, hundreds of demonstrative full-color drawings, and practical clinical decision trees and algorithms



The Color Atlas and Synopsis of Family Medicine

Third Edition, 1259862046

The updated visual atlas of family medicine—enhanced by more than 2,000 illustrations

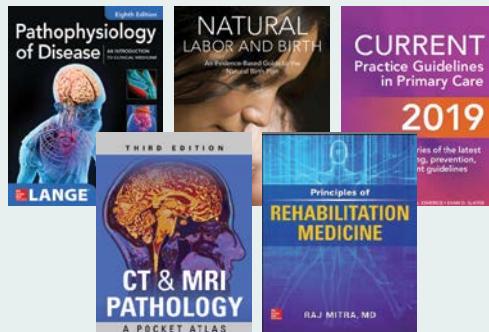


Pharmacotherapy Principles and Practice

Fifth Edition, 1260019446

The unique orientation to pharmacotherapy found in the classic *Pharmacotherapy: A Pathophysiologic Approach* distilled to a tightly focused full-color resource

Featured Titles



NEW! Coming this Fall

August 2019

CURRENT Medical Diagnosis and Treatment 2020
1260455289

October 2019

Tintinalli's Emergency Medicine: A Comprehensive Study Guide, 9th Edition
1260019934

Visit your local campus bookstore to learn more about these titles
and for our wide selection of medical resources.

