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Who we are

Advancing knowledge for improved health, health equity and well-being across the globe.

We bring together investigators from diverse disciplinary backgrounds who develop new quantitative, qualitative and interdisciplinary methods for the study of the determinants of health, and of the impact of public health and clinical interventions on the health and well-being of populations worldwide.

By assembling interdisciplinary and intersectoral expertise and by breaking down silos, we co-create platforms to promote novel research and education within global health and medical communities.

Departments

Epidemiology, Biostatistics and Occupational Health
Equity, Ethics and Policy
Global and Public Health

Programs

M.Sc. and Ph.D. in Epidemiology
M.Sc. and Ph.D. in Biostatistics
M.Sc. (Applied) and Ph.D. in Occupational Health
M.Sc. in Public Health

Master's specialization in Bioethics

Dear readers,

Thank you for taking the time to read about McGill University's School of Population and Global Health.

While the promise of better health is greater today than any other time in human history, we continue to face longstanding challenges to health and well-being with millions around the world suffering the consequences of continued social and economic disparities.

Our vision for a School of Population and Global Health was to bring together research and training programs from epidemiology, biostatistics, occupational health, biomedical ethics and health and social policy with the goal of finding solutions to these 21st-century challenges.

In the pages that follow you will find stories of some of the outstanding researchers and students at the School who are playing leading roles in these efforts to tackle health-related challenges that span from local to global, and stretch across sectors and public-private divides.

As we enter our third century at McGill, we are excited to build on the accomplishments of our storied past and to take innovative approaches to address the changing needs in health care, the health professions, and communities around the globe. I am excited by the role that the School of Population and Global Health has to play.



DAVID EIDELMAN

Vice-Principal (Health Affairs)

Dean, Faculty of Medicine and Health Sciences

A brief history

While McGill University had a professor of public health as early as the end of the 19th century, it was not until the arrival of Dr. J. Corbett McDonald in 1964 that a formal Department of Epidemiology and Health was created. Close to half a century later, health researchers, educators and practitioners at McGill have pioneered innovative training and research programs to generate critical knowledge of public health challenges being faced around the globe.



1983

Institute of Occupational Health and Safety becomes the School of Occupational Health 1996

School of Occupational Health merges with the Department of Epidemiology and Medical Statistics to create the Department of Epidemiology, Biostatistics and Occupational Health

Biomedical Ethics Unit created, offering a Master's Specialization in Bioethics

1964

Department of Epidemiology and Health created offering graduate degrees in Epidemiology and Medical Statistics 1974

Institute of Occupational Health and Safety created, offering a Diploma in Occupational Hygiene

Department of Community Health of the Montreal General Hospital is created, housing the clinical public health faculty members of the Department of Epidemiology and Health

Royal College of Physicians and Surgeons of Canada accredits the medical specialty training program in Public Health and Preventive Medicine at McGill 2005

Global Health Programs is established as a connection point for international health work being done across McGill University

2006

Institute for Health and Social Policy is created

2007

Masters and Ph.D. degree programs in biostatistics offered

2011

Global Health programs hosts the first Global Health Night

The M.Sc. in Public Health is established

2014

Global is Local conference, hosted at McGill

Executive Task Force Committee formed to examine the feasibility of a School of Population and Global Health

2015

Summer Institutes in Global Health offer first courses

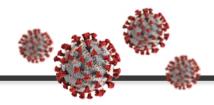


2019

Appointment of the Inaugural Director of the School of Population and Global Health

2020

In the context of the pandemic, the School of Population and Global Health becomes the secretariat for the Canadian COVID-19 Immunity Task Force



2016

The proposal for a McGill School of Population and Global Health is approved by the Senate

2018

International Advisory Board for the School created

Establishment of the Ruth and Victor Cooper-Dzau lecture for Global Health Leadership 2021

Pandemic and Emergency Response Lab launched to accelerate knowledge and know-how to address COVID-19 and other health emergencies

First five-year strategic and operational plan for the School

McGill's Board of Governors approves two new departments: Equity, Ethics and Policy; and Global and Public Health

2022

Senate approves the creation of an inter-faculty undergraduate program in Population and Global Health

We are here



christina

wolfson



Living well

A large, national, longterm study looks at how Canadians are aging

JASMINE STUART

hristina Wolfson's research looks at the epidemiology of neurodegenerative disorders, such as dementia, multiple sclerosis and Parkinson's disease; and at the health of older veterans. Focusing on

the study of neurological disorders in the population, she seeks to identify the burden of these diseases, evaluating risk factors that influence the disease course.

Wolfson is a professor, jointly appointed to the departments of Epidemiology, Biostatistics

and Occupational Health, and Medicine. She is also the principal investigator of the Canadian Longitudinal Study on Aging, a large, national, long-term study on how Canadians are aging.

Launched in 2010, the Canadian Longitudinal Study on Aging



(CLSA) is Canada's largest study of aging, following more than 50,000 individuals who were between the ages of 45 and 85 at recruitment for 20 years.

To understand why some people age in a healthy fashion while others do not, the research teams across Canadian institutions collect information on the changing medical, psychological, social and economic aspects of people's lives. The factors studied are used to understand what impacts the health of Canadians, how health is maintained and what contributes to the development of disease and disability as people age.

Once every three years, participants are interviewed in their homes and visit a data collection centre for a comprehensive assessment, including questionnaires, and cognitive and physical assessments. Blood and urine samples are also collected.

During follow-up data collections, the team collects the same information that was collected at baseline, along with any new measures that are introduced at each wave. In 2020, with the onset of the coronavirus pandemic, the CLSA launched three sub-studies to examine the impact of COVID-19 on middle-aged and older adults in Canada.

Between 2010 and 2015, the CLSA recruited and collected information from more than 50,000 individuals. With two additional waves of data collection completed in 2015–2018 and 2018–2021. The third wave of data collection launched in 2021 and will continue until 2024.

Wolfson leads the Neurological Conditions and the Veterans

Health initiatives. She is also the director of the study's Data Curation Centre and was the inaugural chair of the CLSA Interim Data and Sample Access Committee.

Researchers looking at the health of Canadians can use the data produced by the study, including the questionnaires used since data collection began in 2011 and the detailed protocol for the baseline phase. The team has also created the DataPreview Portal, giving researchers a tool to view the data collected and the variables currently available.

Since the first data release in 2015, more than 400 research teams in Canada and around the world have accessed the research platform and have generated more than 150 peer-reviewed publications.

PROFILE

jura augustinavicius



Climate change and mental health

The impacts on the planet and its people

JOANNA KUFEDJIAN

McGill researcher explores interventions to help people cope with uncertainty and fear

he climate and ecological crisis we are currently facing is the greatest threat of our time. Warmer temperatures over time are changing weather patterns and disrupting the usual balance of nature. This poses many risks to all forms of life on Earth, especially human beings.

Higher temperatures increase heat-related illnesses. Wildfires start more easily and spread more rapidly when conditions are hotter.

Changes in temperature are causing more severe and frequent storms, leading to flooding and landslides that destroy homes and communities

Droughts are more common and more severe and deserts are expanding, reducing land for growing food. Many people now face the threat of not having enough water on a regular basis.

Jura Augustinavicius, an assistant professor in the School of Population and Global Health, has been passionate about addressing the impacts of the climate crisis for years. To merge her work in mental health with this crucial topic, she noticed how climate change was exacerbating mental health and well-being needs—a turning point allowing her to bridge two areas of interest.

Augustinavicius and her team focused their work on developing, adapting, and evaluating mental health and psychosocial support programs in low resource and humanitarian settings globally.

Interested in how crises caused by climate change are affecting



mental health, she found that climate change and related disasters are linked to higher levels of distress, mental health symptoms and mental disorders. Extreme heat and rising temperatures has been associated with increased mental health related hospital admissions and suicide rates. And the trauma and losses from hurricane and wildfire related disasters, such as losing a home or loved one and being disconnected from family, friends and community, can contribute to a range of mental health problems, including post-traumatic stress, depression and anxiety.

"By understanding the impact of climate change on mental health, we can propose concrete measures to mitigate adverse outcomes and help people cope in challenging times," says Augustinavicius.

Using both quantitative and qualitative methods, the team seeks to understand the needs

of a population and to define the proper tools for measuring mental health and well-being indicators. In identifying interventions for development, adaptation and evaluation, the team collaborates with the communities that will use them; examining and adjusting the implementation of these interventions on a case-by-case basis through ongoing analyses.

In evaluating the delivery and impact of interventions, Augustinavicius considers the multitude of social and environmental factors that contribute to mental health and well-being.

Augustinavicius wants to see her work contribute to promoting and supporting mental health and well-being, and to reducing the impact of climate change on people by helping them adapt to a changing world. Ultimately, she hopes that it can contribute to advocacy and action toward slowing climate change itself. •







New research looks at *child marriages* violating statutory rape laws in many U.S. states

SHIRLEY CARDENAS

Marital exemptions to statutory rape laws provide legal loopholes for sexual acts with children, otherwise considered crimes

n many U.S. states, children can legally marry at an earlier age than they can consent to sex, leading to situations where sex between spouses may be a criminal act. Some states exempt sex between married spouses from their definition of statutory rape, which may create perverse incentives for child marriage, according to researchers from McGill University.

Their findings, published in the *Journal of Adolescent Health*, show that child marriages violated statutory rape laws in 14 states.

Child marriage, defined by the United Nations as marriage before the age of 18, is widely considered a violation of human rights that harms health and educational opportunities of children – particularly young girls. Until recently, almost nothing was known about

child marriage in the United States. This study highlights the blurred legal boundary between child marriage and sexual violence.

Comparing data from marriage certificates and statutory rape laws across the U.S., the researchers found that the proportion of child marriages that met the definition of a sex crime varied from 1% to over 50%. In 33 states, some or all statutory rape laws exempted sex

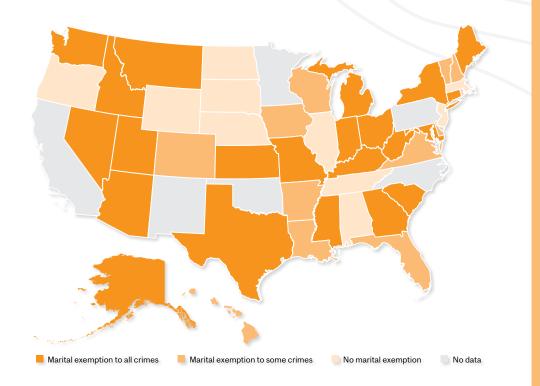
between married couples from the definition of crimes. In these states, the proportion of child marriages that would have been crimes, absent these exemptions, varied from less than 1% to over 80%.

"Our study exposes the inconsistency between laws that permit children to marry and laws that criminalize sex with children across the U.S. The research shows that some child marriages are indistinguishable from sex crimes," says senior author Alissa Koski, an Assistant Professor in the Department of Epidemiology, Biostatistics and Occupational Health at McGill University. "It's unclear why they were certified as marriages rather than prosecuted," she adds.

Marital exemptions to statutory rape laws

"We were surprised by the enormous variation between states' statutory rape laws and how they overlapped with child marriages. We were also alarmed to find some extremely young children were married over the period that we studied. For instance, four 12-year-olds have been legally married in Louisiana since 2000," says lead author Kaya Van Roost, a PhD student under the supervision of Alissa Koski.

The research shows that some states have more restrictive laws while others were more lenient. In Idaho, sex before age 18 was prohibited for all unmarried persons until 2010. In these states, many child marriages met the definition of sex crimes. On the flip side,



laws in Michigan prohibit sex with someone less than 16 years old, unless the individuals are married. In these states, fewer child marriages met the definition of crimes since most of the marriages involve 16- or 17-year-olds.

"The simultaneous legality of child marriage and marital exemptions to statutory rape laws provide legal loopholes for sexual acts with children that would otherwise be considered crimes," says Koski.

The findings suggest that marital exemptions to statutory rape should be reexamined and that the minimum legal age for marriage should be raised to avoid inconsistencies with statutory rape laws, say the researchers.





anadians who use prescription medications have a team of allies at the School of Population and Global Health to ensure the drugs they take are safe to use. Led by Samy Suissa and Robert Platt, the Canadian Network for Observational Drug Effect Studies (CNODES) answers important questions about drug safety and efficacy across Canada.

Suissa is a Distinguished James McGill Professor, jointly appointed to the Departments of Epidemiology, Biostatistics, and Occupational Health and Medicine. His Co-Principal Investigator is Platt, a professor in the Departments of Epidemiology, Biostatistics, and Occupational Health and of Pediatrics, and the Albert Boehringer I Chair in Pharmacoepidemiology.

A rapid response

Established in 2011, CNODES conducts studies to make sure prescription drugs are safe and effective when used in practice, and highlight potential safety problems as early as possible. The program's co-ordinating centre is based at McGill and the team collaborates with academic research teams in almost every Canadian province.

At the core of CNODES' work are the statistical tools it has developed and implemented. The program analyzes data from administrative records of doctor visits and prescription drug orders. The network uses Canadian and international healthcare record databases to provide rapid responses to queries from Health Canada and other organizations when questions arise, often the result of newly reported side effects.



"We've done studies on close to 40 drug safety queries in the past decade," says Platt. "The most important ones have shown that the drug was, in fact, safe, and the observed side effect which led to the query was not caused by the drug."

He emphasizes the importance of evaluating these potential drug safety signals and determining if they are real or not. If they are real, it allows the necessary stakeholders to take action. If they are not real, the information can reassure the public and physicians that it's ok to take a drug.

International collaboration

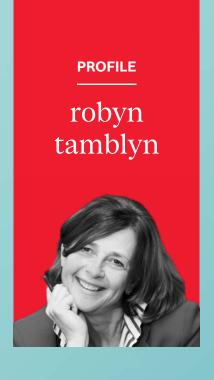
Thanks to collaborations with data holders in the U.S. and the U.K., CNODES' network includes over 100 scientists and access to data on over 100 million people. "We often study relatively rare side effects, so we need to look at millions of people to have sufficient data to produce meaningful results," says Platt.

Over and above their work with CNODES, Platt and several colleagues have active research programs. "My research program focuses on the statistical tools used for drug safety research, and we've developed and explored the computational side of building best practices for data analyses," he says.

Platt also conducts research in perinatal epidemiology, in particular how medications and treatments given during pregnancy can affect both the mother and child later in life.

The future is faster

Looking ahead, Platt thinks the increase in both quantity and speed of data acquisition will make the methodological research they do increasingly important. "We will be able to answer questions faster as the data becomes better and more accessible, helped in part by the advance of machine learning tools to manipulate the data and get the best possible answers from it." •





There's an app for that!

Empowering patients through computerized care transition

ELENA PARIAL

nen a patient is discharged from the hospital, the doctor working that specific shift hands them prescriptions and sends the patient on their way. The patient's hospital experience is isolated from their regular caregivers-pharmacists, general practitioners, family doctors

and care nurses. The risk of patient harm rises considerably due to the decentralized model of care normalized by the medical community.

Armed with the knowledge that 20% of patients do not fill their hospital discharge prescriptions, Robyn Tamblyn, professor in the Department of Epidemiology, Biostatistics and Occupational

Health, is improving the safety and quality of health care for patients who transfer their care upon being discharged from a hospital.

"In my earliest study, I looked at how drugs are prescribed and how that impacted quality of patient care," explains Tamblyn, "I was expecting to find slight gaps. I did not expect to find the many



opportunities there were to make detrimental errors along the way. The pathway to reduce harm was not designed or thought through."

This is how Tamblyn became involved with computerization and centralizing medical records. With funding from the Canadian Institutes of Health Research (CIHR) and the McGill University Health Centre (MUHC), her team created clinical software that allowed health information to be shared between health providers in hospitals, community physicians and community pharmacies.

"Medication reconciliation is an accreditation requirement for hospitals, so connecting databases between all these entities to deliver optimal patient care was in everyone's best interests," says Tamblyn.

She and her team got to work on a mobile application to improve medication adherence following hospital discharge named Smart About Meds (SAM). The software launch was a success, but again, she noticed a major gap. Though the risk of patient harm was reduced, the follow through of patient care still suffered. Here's why.

When a patient took a prescription to the pharmacy to fill it, the patient would be asked various questions about drugs they were currently on, or drugs that were previously administered, for example. The patient, the least qualified party in the equation, was now expected to be the source of critical information.

"For all the work we are doing to improve patient care, patients somehow ended up at the bottom of the care pyramid," she explained. "We need to flip that pyramid and make this approach patient-centered. We need to empower patients with a tool that tracks their prescription medication-from side-effects to how drugs interact with each other."

Tamblyn's pursuit to improve the safety and quality of health care is now targeted to the patient. Her team is working on developing a mobile application that will be empowering patients to be informed about prescription drugs they have been given. They can share this information with their care team if they wish.

The app will be loaded with features that will provide personalized drug efficacy estimates based on previously administered drugs, anticipated side effects and reminders for refills. A pilot project of this app hit the Apple and Google app stores in the summer of 2022.



cott Weichenthal's research looks at our everyday exposure to particulates and examines the health impacts of environmental exposures, including outdoor air pollution and urban heat. Current regulations treat all airborne particles as though they are equally harmful, but Weichenthal, an associate professor in the Department of Epidemiology, Biostatistics and Occupational Health, suspects that this isn't the case.

"Certain particulates are likely more harmful to our health. We need to identify those more harmful sources of particulate air pollution so that they can be targeted in future regulatory interventions," he says.

"Everyone is exposed to them and can benefit from reductions in harmful pollutants in our environment."

To do this, he develops models to predict urban air pollution and for estimating population exposures to environmental pollutants, akin to maps of pollutant concentrations. He also applies these models in epidemiological studies of short-term events like emergency room visits for cardiorespiratory outcomes, and long-term health impacts such as cancer incidence and cardiovascular mortality.

Recently, Weichenthal and his PhD student Jill Korsiak found connections between long-term exposure to forest fires and cancer risk. The findings, published in Lancet Planetary Health, suggest an increased incidence of lung and brain tumours in populations most exposed to forest fires.

"Forest fires tend to occur in the same locations each year. In these regions, they are a source of chronic exposure to environmental pollutants, many of which are carcinogens," says Weichenthal, "we felt that it was important to examine forest fires and how they may contribute to cancer incidence in Canada."

The team used historical data from across Canada to connect forest fires and long-term health by looking as far back as the 1980s, and linked it to the large population-based Canadian Census Health and Environment Cohort.

The results showed that people living within 50 kilometres of wildfires over the past 10 years had a 10 per cent higher incidence of brain tumours and a 4.9 per cent higher incidence of lung cancer, compared to people living farther away.

With his new results available, Weichenthal hopes that the information will be used to support decision-making in the prevention and response efforts to forest fires.

"Preventing the harmful impacts of environmental exposures is much more efficient than treating cases resulting from these exposures", says Weichenthal. "Even small reductions in population-level exposures can have large public health benefits." •



round the world, pollution contributes to millions of premature deaths.

Many populations do not have adequate access to safe water and sanitation or decent housing, and are vulnerable to infectious disease and natural disasters.

Jill Baumgartner, a professor in the Department of Epidemiology, Biostatistics and Occupational Health, assesses the health impacts of environmental exposures. In a recent article, published in Scientific Reports, Baumgartner and her team looked at exposure to household air pollution from wood and coal stove use and its effect on cognition.

The study looked at 401 older adults in peri-urban northern China to understand the effects of exposure to household air pollution and cognition using scores from the Montreal Cognitive Assessment (MoCA). This CIHR-funded study was established to identify environmental and nutritional risk factors for chronic disease.

"We consistently found worse cognition among adults with higher exposure to air pollution and who had been using wood or coal stoves for more years," explains Baumgartner. "This is an especially worrying result for countries like China, with aging populations and high levels of air pollution."

Air pollution from wood and coal fueled stoves is one of the world's most common environ-



mental exposures, and especially affects the poor. The team's findings complement existing studies, showing a link between adult cognition and urban and traffic air pollution. This provides new evidence that the use of solid fuel stoves may also lead to worse cognition, which can be symptomatic of dementia.

"Our findings suggest that higher exposure to a wood or biomass stove in your home may lead to worse cognitive impairment and dementia," reports Baumgartner.

Reducing exposure through the promotion of less-pollut-

ing stoves and fuels may be a population-wide intervention strategy to lessen the burden of cognitive impairment.

"Reducing inequalities in energy and pollution is fundamental to improving health, enhancing resilience and achieving the United Nations' Sustainable Development Goals," notes Baumgartner.

Baumgartner and her team hope that their results will encourage policy makers to develop solutions that can benefit people living in rapidly changing urban environments, paving the way for a more sustainable future.







christopher barringtonleigh



Finding a happy trend in the 2022 World Happiness Report

JASMINE STUART

his year marks the tenth year that the World Happiness Report has captured how people in more than 150 countries around the world evaluate their own lives.

"Data considered in the report offers a snapshot of how people around the world evaluate their own happiness and some of the latest insights from the science of well-being," explains Lara B. Aknin, a professor at Simon Fraser University and an editor of this year's report. "This information is incredibly powerful for understanding the human condition and how to help people, communities and countries work toward happier lives."

The report, published by the United Nations' Sustainable Development Solutions Network, is edited by leading experts from the London School of Economics, Oxford University, University of British Columbia and Simon Fraser University, the Korea Development Institute, as well as, Sustainable Development Solutions Network president, professor Jeffrey Sachs of Columbia University.

Ten years of reports have looked at what promotes happiness in the lives of people worldwide, and have consistently confirmed that communities with high levels of trust are happier and more resilient in the face of a wide range of crises.

Every year, the report compiles data from the Gallup World Poll (GWP) and other surveys from the previous three years in its analysis. The 2022 report notes that the biggest gain in happiness is taking place in Serbia, Bulgaria and Romania, with the largest drops being in Lebanon, Venezuela and Afghanistan. Canada ranked 15th overall, down from ninth in 2021.

Christopher Barrington-Leigh, an associate professor with the Institute for Health and Social Policy at the Bieler School of Environment at McGill University, penned a chapter for the report, assessing the trends in conceptions of progress and well-being. Having served as a reviewer for chapters on previous years' reports, he was invited to participate in the 2022 report.

Barrington-Leigh and his team found that the prominence of happiness and its related concepts are on the rise — in books, in research, in government and private constructions of progress indicators, and in central government policy initiatives.

Work he had previously done on indicators of progress in 2017 served as the starting point for his chapter in the report. Using various and diverse sources of information, Barrington-Leigh was able to quantify how much attention is being placed on "happiness" across sources. His chapter looks at understanding these conditions in an empirically accountable way.

The analysis Barrington-Leigh adds to this year's report sets off the document's discussion about how far we have come. By understanding where we are in terms of society's focus and how discourse on the subject has progressed, we can better understand the innovative approaches that are reported on in subsequent chapters.

Using tools like Google's
Ngram Viewer, Barrington-Leigh
looked at the rate in which the
terms "happiness," "life satisfaction" and "subjective well-being"
are used in published documents,
finding a steady increase since
2015, which is also in line with a
steady decrease in the use of the
term "gross domestic product."

A team of McGill undergraduate and graduate students helped to compile an original database of indicators that people have constructed to capture the idea of progress or well-being. The indicator systems come from around the world and are gener-

ally initiated by governments, by organizations, and by academics.

What they found is that the people and organizations that are responsible for progress and policy are using these terms in their documents at an increasing rate. In fact, Barrington-Leigh's chapter reports that "in the last quarter century, the words "happiness" and "income" have undergone opposite trajectories, respectively doubling and halving their use in printed books."

"We can see that the use of happiness and other technical terms by the policy and academic communities is going up," says Barrington-Leigh.

"Knowing that they are using this language tells us that these concepts are being considered in their decision-making."

"The economics of happiness and the 2022 World Happiness Report make it clear that humans are highly social beings and these connections are linked to our well-being," says Barrington-Leigh.

"We are hardwired to feel good about our existence when we have close relationships and trust in our family, neighbours, communities and institutions."

Knowing this, Barrington-Leigh, wants leaders and researchers to use the report to map these lessons to our policy.

"Happily, in the last few years, there has been a serious uptake by governments of the idea that policy decisions can be made to improve human lives, not just according to our guess about what is good for people, but according to the data from the actual experienced feelings of people living those lives."

PROFILE

jonassébastien beaudry



The Disabled Contract

Exploring fundamental questions about disability injustice

MAUREEN McCARTHY



onas-Sébastien Beaudry is challenging our beliefs about what it means to have a disability. While many people feel that they understand the idea, Beaudry is digging much deeper to ask fundamental questions such as 'what is disability?' and 'what does the state owe people with disabilities?'

Beaudry, jointly appointed to McGill's Institute for Health and Social Policy and the Faculty of Law, describes his work as positioned at the intersection of law and philosophy, analyzing concepts that are used in law and policy through different philosophical lenses.

Beaudry is interested in asking fundamental questions and started his examination in disability injustice with the building blocks of our political and social beliefs and reasons. Using the methods of analytic philosophy, the meticulous conceptual analysis of arguments and reasons, he tests the coherence of existing arguments, understanding the norms and values at play, and challenging potential gaps.

In his recent book, *The Disabled Contract*, published by Cambridge University Press, Beaudry examines how the social contract tradition has difficulty accommodating severe intellectual disability.

"In that book, I explore how certain highly prized values in our culture—such as equality, reciprocity, and rationality—may exclude some people with severe disabilities. In my ongoing research, I look at how certain normative concepts, like systemic injustice, rights, dignity and autonomy, are interpreted and applied by legislators and judges," explains Beaudry.

Identifying obstacles to understanding disability

In his research, Beaudry looked at the construction of concepts like "disability" or "people with disabilities" in different contexts by actors trying to act justly and equitably. This analysis is rooted in the understanding that ableism—discrimination or prejudice against individuals with disabilities—is real.

"Most people inhabit a culture that embraces various ableist assumptions, which are deeply embedded in ideas about success, work, productivity, self-respect, valuable social roles, autonomy, independence, dignity and dignified embodiment," explains Beaudry.

"Detecting and changing these problematic assumptions is challenging, in part because these ideas are often part and parcel of the foundational building blocks of our social, medical, legal and political institutions."

Defining disability as a social and cultural issue

Beaudry explains that a conceptual change can have deep, wide-ranging and significant concrete repercussions. "In the case of disability, defining disability as a social issue, such as ableist oppression, calls for very different political answers than if we define it as a medical tragedy," he says.

Over the last 50 years, the so-called "social model of disability" has resulted in a major shift in disability studies, as well as in political and social spheres. "Ableism and harmful dogmas about "normalcy", "health", "productivity" and "social participation" are unlikely to disappear," Beaudry explains. "My role as a researcher interested in disability justice is to examine how these ideas evolve, endure and hide in plain sight."

Ableism is a set of beliefs in the "superiority" of non-disabled people, in their greater merit or deservingness of being socially included, and in the idea that being disabled necessarily makes one "worse off".







From McGill to the world

The Summer Institutes in Global Health offer accessible learning on global health topics

KRISTIN HENDRICKS

very summer, hundreds of clinicians, public health practitioners and students gather to attend the Summer Institutes in Global Health. Attendees learn from leading researchers at McGill University and around the world about the latest trends in topics such as diagnostics, TB research, antimicrobial resistance, digital health, humanitarian action and global health rehabilitation.

The Institutes offer a series of short courses for professionals working in the field, or for students looking to supplement their curriculum. Programming is focused on universally applicable new knowledge, and providing opportunities to network with fellow global health professionals from around the world. The nature of the Insti-

tutes allows for unique interactions among a diverse group of participants, including industry leaders, NGO practitioners, academics, researchers and advocates, allowing for the exchange of ideas and perspectives from across the globe.

The Summer Institutes were first held in the summer of 2015 to bring the research and clinical strengths of McGill University and the Research Institute of the McGill University Health Centre to the world. To encourage participation from across the world, the Institute offers scholarships to cover registration fees for those living and working or studying in low- or middle-income countries.

"Offering short courses in accessible formats, with worldclass instructors, makes it possible to get information into the hands of those making decisions in communities around the world," says Charles Larson, adjunct professor and interim director for McGill Global Health programs.

"With information comes agency, and with agency communities can own their health decisions and lobby their leaders for effective public health interventions."

The COVID-19 pandemic saw the Institutes courses go online in 2021, opening the classroom up to a larger cohort, reaching more communities. In 2021, 57% of students attending were from low- or middle-income countries. Courses for the 2022 program will be offered in hybrid (concurrent online and in-person) and online-only formats; course material will be recorded to accommodate learners from all time zones.









Summer 2022 Courses

Institute in Global Health Rehabilitation

Global Considerations of Disability for Rehabilitation Providers

Institute in Infectious Diseases and Global Health

Advanced TB Diagnostics Advances in the Biology and Management of COVID-19 Digital Health Global Health Diagnostics Qualitative Methods in Global Infectious Diseases Research Quality of TB Care Strategies to End the HIV and AIDS Epidemics TB Research Methods

Institute in Peace, Health and Sustainability with the Pegasus Institute

Decolonizing Humanitarian Action: Challenges and Dilemmas Environment and Human Health Peace through Health

Health Systems Strengthening and Global Governance

Meet our global health scholars

STÉPHANIE LAROCHE-PIERRE

The McGill Global Health Scholars for undergraduate students facilitates hands-on involvement in global health research projects. Scholars join a research team working internationally or in Northern Canada over the summer term. They work under the mentorship and supervision of a McGill faculty member or a partner institution, participating either remotely or on-site. During the academic year, Global Health Scholars benefit from a variety of training and networking opportunities organized by Global Health Programs.













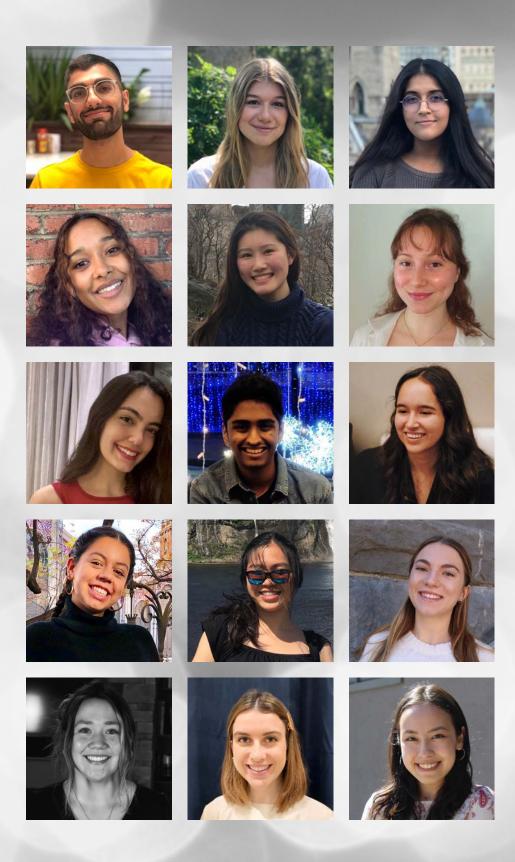












Meet them





COVID-19 Immunity Task Force

Helping to inform Canada's response to the pandemic

TOD HOFFMAN

The better we *understand* this virus, its spread, and its impact on different people, the better we can fight it, and eventually defeat it.

- Prime Minister Justin Trudeau, April 23, 2020

etermining the extent of SARS-CoV-2 infection in Canada and understanding the nature of immunity have been essential in ensuring an effective public health response to the pandemic. To help address these needs, the Government of Canada

created the COVID-19 Immunity Task Force (CITF) in April 2020.

The Task Force created a framework to collect expertise from across Canada and make the information accessible to decision-makers and the general public. They identified priorities and funded national research efforts to

elucidate the nature of, and trends in, immunity as a result of SARS-CoV-2 infection and vaccination.

David Naylor, former president of the University of Toronto, and Catherine Hankins, a professor in the Department of Epidemiology, Biostatistics and Occupational Health at McGill

University's School of Population and Global Health serve as co-chairs. The secretariat is housed at the School and led by Tim Evans, who serves as its Executive Director.

Entering its third year of operation, the Task Force has fueled over 110 research projects led by experts across disciplines to provide well-rounded and thorough information on the virus, as it relates to infectious diseases, virology, immunology, epidemiology and public health policy. Together, there are over 100 unique lead investigators from over 45 universities, research institutes and hospitals across Canada.

The studies provide invaluable information regarding the extent of the pandemic across Canada, and how antibodies from either vaccination or the virus can peak and wane over time. Insight on the trends in seroprevalence, that is the level of a pathogen in a population, as measured in blood serum, in both the general population and vulnerable groups, has allowed us to understand how it has uniquely impacted seniors, people living in communities at higher risk and those who suffer from preexisting conditions that may weaken their immune systems.

Knowledge translation to provide policymakers, researchers and the public with accurate, meaningful information about COVID-19 is a major priority at the Task Force. And for the public, the team has developed clear, accessible information about its research findings to increase awareness of the risk and benefits of vaccines, and to dispel myths about COVID-19.

Beyond the pandemic, the Task Force aims to draw on its experience to strengthen public health surveillance and research capacity across the country such that Canada is better prepared for the next health emergency. •

Highlights from CITFfunded researchers

Seroprevalence assessments revealed very low levels of infection-acquired immunity following the first pandemic wave in June 2020, pointing to the strength of Canada's public health response and the vulnerability of Canadians to a second wave of infection in the fall.

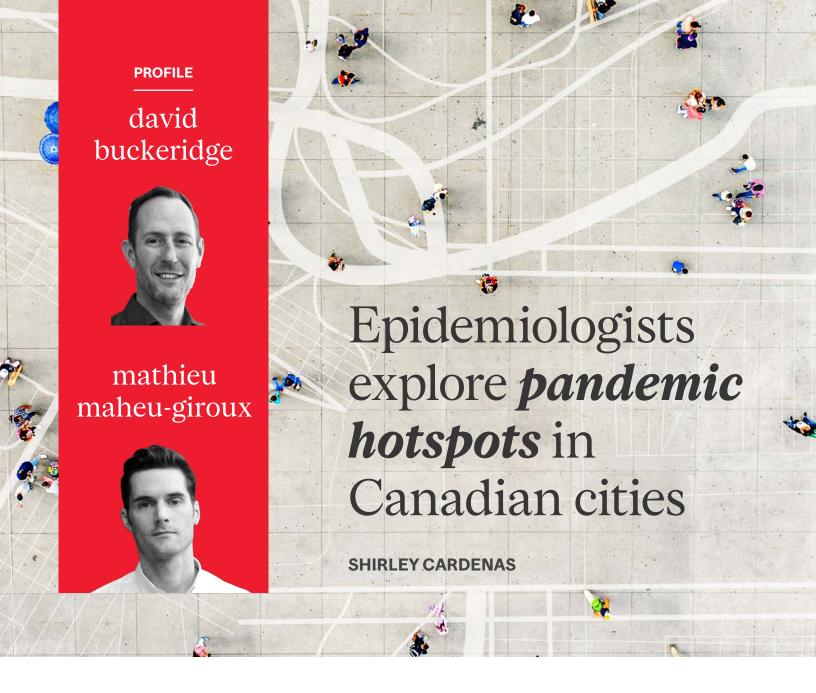
Research revealed that longer intervals between vaccine doses have prolonged the protective effects of immune antibodies and supported Canada's first dose fast vaccine rollout strategy.



Vaccine effectiveness studies in long-term care residents revealed waning immunity, prompting recommendations to provide boosters in September 2021 to older Canadians well ahead of the Omicron wave in December 2021.

Efforts to monitor adverse events following immunization in diverse populations, such as pregnant women, have confirmed the safety of vaccines.

Seroprevalence assessments drawing on Canada's blood banks during the Omicron wave in 2022 suggest that more than 10 million Canadians have been infected in recent months, ushering in a new policy era of managing hybrid immunity.



he COVID-19 pandemic has impacted all of us in significant ways. We have all been affected by the closure of schools and businesses, and the challenges that come with remote work and following public health guidelines that change almost daily.

The global consequences have been steep: six million dead and counting; missed goodbyes; health systems under enormous strain; closed borders; and empty shelves. In many countries, including Canada and the U.S., these effects have a stark divide between the haves and havenots, with lower income and racialized communities suffering more infections and more losses.

Research from David Buckeridge and Mathieu Maheu-Giroux, professors from the Department of Epidemiology, Biostatistics and Occupational Health, shows how hotspots of COVID-19 infections across Canadian cities are linked

to occupation, income, housing and markers for structural racism.

To better understand the factors contributing to the concentration of infections in specific regions, a team of researchers from across Canada analyzed provincial surveillance data from January 2020 to February 2021. The study, which looked at infections in 16 urban centres in Quebec, Ontario, British Columbia and Manitoba, is published in the Canadian Medical Association Journal.

Patterns of COVID-19 transmission within cities

"In each of the cities we examined, 50% of cases were concentrated in areas that accounted for less than 21% to 35% of the population. In these regions the factors associated with case concentration varied slightly depending on local contexts," says McGill University Professor Mathieu Maheu-Giroux, a Canada Research Chair in Population Health Modeling.

"Across all provinces, cases were geographically concentrated along social determinants of health. These include neighbourhoods with high-density housing, more essential workers, residents with lower income or educational attainment, and a higher proportion of visible minorities or recent immigrants," says lead author Yiqing Xia, a PhD student in Epidemiology.

The research team found that the most common social determinant of health across all cities was visible minority status. These findings are consistent with other studies from Canada as well as Sweden, the United States and other countries showing higher rates of COVID-19 in vulnerable communities or diverse neighbourhoods.

During the study period, there were 63,266 COVID-19 cases in British Columbia, 15,089 in Manitoba, 239,160 in Ontario and 224,377 in Quebec recorded in the 16 metropolitan areas. They accounted for 81%, 57%, 83% and 80% of all confirmed cases in each province, respectively.



COVID-19 hotspots in Ouebec

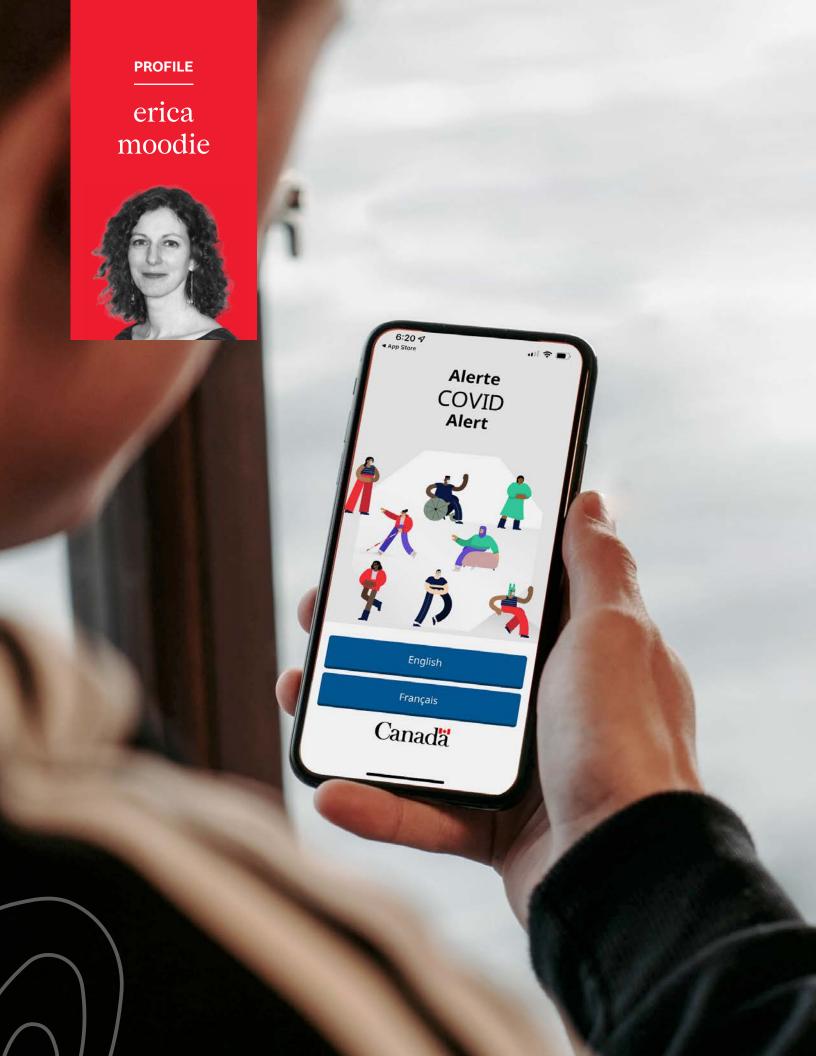
"What is striking in our analyses, is that we observe similar patterns in all the Quebec cities examined: cases are concentrated along social determinants of health in Gatineau, Quebec City, Sherbrooke, Saguenay and Trois-Rivières," says Mathieu Maheu-Giroux.

"In Montreal, the local Direction régionale de santé publique at times prioritized some interventions like testing and vaccines in specific areas of the city that experienced high COVID-19 transmission. There is a need to scale-up these initiatives to make our pandemic response more efficient," he adds.

Focusing on populations at greater risk of infection

"Understanding the factors associated with geographic patterns of transmission within cities can help identify the populations and, specifically, the contexts with the greatest risks," says Dr. Sharmistha Mishra of St. Michael's Hospital and Unity Health Toronto. "Geographic analyses can enable better allocation of resources, tailoring of policies and implementation of context-specific strategies to more effectively and efficiently curb local transmission," she says.

To effectively reach and meet the prevention and care needs of communities at disproportionate risk of COVID, the research team would like to see public health supports for hotspots across the country, like vaccination rollouts and testing in specific areas. "Prioritizing specific neighbourhoods that are most at risk of transmission offers a clear path forward in the public health response to COVID-19's resurgence," Buckeridge and Maheu-Giroux conclude. •



Flattening the curve

Understanding the impact of Canada's COVID-19 tracing app

TOD HOFFMAN

s the COVID-19 pandemic swept across Canada, contact tracing became a critical tool in identifying exposure to an infected person with the hope of limiting community transmission. To aid in contact tracing, the Canadian government turned its attention to using our phones to show with whom we were in close proximity, whether we knew them or not, via an app.

Individuals who downloaded the app received an alert when they were in proximity to other users who had tested positive for SARS-CoV-2 infection and uploaded a "key" to share that information. The app was downloaded onto more than six million devices across the country.

Erica Moodie, a Canada Research Chair and professor in the Department of Epidemiology, Biostatistics and Occupational Health, wanted to understand whether the Canadian COVID-19 alert app succeeded in reducing infection and death during the pandemic.

Moodie's research focuses on the development of statistical methods to learn about tailored treatment strategies—in other words, how to take into account patient characteristics such as age, disease severity and so on, to recommend the best treatment for a patient at a given point in time. Moodie's work on the COVID Alert app was, therefore, a pivot from her usual research focus, allowing her to channel her statistical background into an important current question in public health research.

Using a complex modeling formula, Moodie and her colleagues were able to estimate that the app averted between 6,284 and 10,894 infections across the six Canadian provinces where its usage was highest between March and July 2021.

"We modelled our analysis on a similar one conducted in the U.K. to evaluate their notification app," says Moodie.

"Because of the high privacy considerations in the Canadian COVID Alert app, we did not have access to data as detailed or granular as the U.K. researchers; thus, for some parts of the analysis, we had to rely on a range of realistic estimates drawn from the literature."

Published in the Canadian Journal of Public Health, the research revealed both the potential and limitations of this technology for protecting people from infectious disease; and, that it must be supported as part of a multi-pronged approach that includes extensive testing so that accurate data are maintained on who is infectious.

The team also found that to be truly effective, the app must be widely adopted. For that to happen, people must be convinced that their privacy will be guarded.

Confident in the evidence that the use of exposure notification in the mitigation and management of infectious disease epidemics, Moodie is turning her attention to using mobility data to predict the number of COVID-19 cases as another tool in the fight to end the pandemic.





PROFILE

nicole basta



COVID-19 vaccines

McGill researchers ensure public access to accurate, reliable information to reduce vaccine hesitancy

TOD HOFFMAN

s the COVID-19 pandemic shut down the world, our lives as we knew them changed completely. There was fear and uncertainty about how to protect our livelihoods, our communities and ourselves. With infections rising and health care systems at

their breaking points, the world hoped that finding a vaccine would mean a return to normalcy.

What we have seen since is the ability of the scientific community to provide an answer at record speed. Initially hailed as a remarkable scientific achievement, COVID-19 vaccines were met with

skepticism and wild conspiracy theories that undermined public confidence. The challenge of quickly overcoming vaccine hesitancy became the next challenge in fighting the pandemic.

Referring to the vaccines as "one of the most powerful public health tools ever developed," Dr. Nicole Basta, associate professor in the Department of Epidemiology, Biostatistics and Occupational Health and Canada Research Chair (Tier 2) in Infectious Disease Prevention, devised the COVID-19 Vaccine Development and Approval Tracker to increase awareness, acceptance and uptake of vaccines.

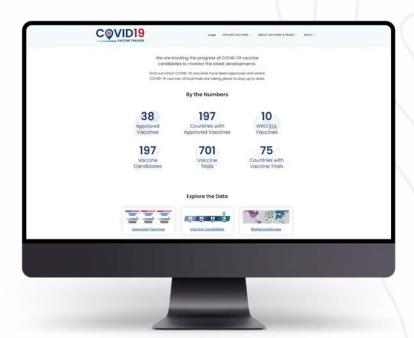
The Tracker is monitoring the progress of vaccine development-more than 35 vaccines have been approved and more than 195 candidates are currently undergoing clinical trials around the world.

"Our goal is to synthesize key information about COVID-19 vaccine development and about how vaccines work to help people make well-informed decisions about getting vaccinated and protecting themselves, their families and communities," says Basta.

The tool, available at covid19. trackvaccines.org, is intended to provide anyone with free access to information about COVID-19 vaccines that have been approved or are in development, the trials that have been designed to test their safety and efficacy, and the global landscape of vaccine development, testing and use.

Since it launched, the site has had more than 19 million page views from more than 6.5 million unique visits originating from more than 200 countries. These numbers speak to an incredible thirst for knowledge about COVID-19 vaccines, the influence that academic research can have, and the contribution it can make to global efforts to reduce the risk of COVID-19.

Researchers, journalists, policymakers as well as interested members of the public, all seeking



reliable and accurate information about vaccines, have accessed the website as a reliable resource.

The research team is co-led by Dr. Erica Moodie, Canada Research Chair and professor in the Department of Epidemiology, Biostatistics and Occupational Health, and includes a group of outstanding experts and trainees in epidemiology, clinical trials, biostatistics and public health, who came together to review and consolidate extremely complicated information in such a way as to make it relevant to as broad an audience as possible.

"We have made incredible progress over the past two years in developing vaccines, yet we still have a great deal of work to do to ensure that everyone has access to information about the vaccines and to ensure that everyone can be vaccinated," Basta explains.

Basta understands that people have concerns about being vaccinated: "We developed our tool to build public trust in vaccines from the very beginning of the development process and to answer

the many questions that people around the world had about the new vaccines. To date, more than 11 billion doses of the COVID-19 vaccine has been given, yet more than 2.5 billion people have yet to receive their first dose. We have to make every effort to ensure that everyone has access to these life-saving vaccines and providing information is part of that effort."

Moreover, the work of Dr. Basta and her colleagues does not end with the COVID-19 pandemic. They are working to create similar trackers for other infectious diseases, including Lassa Fever, Middle East Respiratory Syndrome (MERS), Rift Valley Fever, Nipah and Chikungunya.

"COVID-19 has demonstrated, yet again, how important vaccines are as part of a comprehensive public health strategy," Basta said. "We hope that the lessons learned about how to accelerate vaccine development, while rigorously assessing vaccine efficacy and safety, will be applied to other infectious diseases of global importance." •



Student initiative confronts *vaccine hesitancy* in Montreal's most diverse borough

ELIANA CHOW

ome to nearly 34,000 residents who speak 60 languages, Parc Extension is one of the brightest threads in Montreal's vibrant cultural tapestry. But in a neighbourhood where two out of three residents are immigrants or refugees, linguistic and cultural barriers play a significant role in perpetuating health inequities. When McGill student Tammy Bui observed low vaccination rates in communities like Parc Extension, she resolved to work toward a solution.

In partnership with several classmates for an assignment in her Foundations of Health Promotion course, Bui spearheaded the design of a social media campaign called WeCanVax to promote COVID-19 vaccine confidence in historically underserved or racialized communities throughout Canada.

Under the guidance of Dr.
Ananya Banerjee, an Assistant
Professor in the Department of
Epidemiology, Biostatistics and
Occupational Health, Bui and
Nehal Islam, a co-founder of the
initiative, applied for and received
a prestigious \$10,000 grant
from the Public Health Agency
of Canada's Vaccine Community Innovation Challenge. The
grant enabled them to implement

WeCanVax in Parc Extension, an immediate and real-world extension of their studies at McGill.

Bui and Islam hypothesized that the lower vaccination rates in Parc Extension stemmed from a lack of tailored information available to the community. After speaking with members of the borough and getting to know the residents, they recognized it wasn't the content itself, but the methods used to communicate those messages, that was causing a disconnect. "Government-issued posters about the pandemic were often alienating to minority populations," Bui explains, "either because of the language barrier or



by nature of those materials lacking multicultural representation."

The team focused their efforts on improving the types of messages found in Parc Extension, adopting a community art approach to emphasize how fighting the pandemic is a collaborative effort. With consent, they took photographs of various community members who had gotten the vaccine and gathered the stories behind why they wanted to be vaccinated. They then printed posters that featured testimonials in several languages, conveying information in a way that would resonate in more personal ways than the broad-level approaches they'd seen before.

"It makes a huge difference to see yourself and your neighbours represented in messaging like this," Islam explains. "Especially in a neighbourhood where so many languages are spoken, something as simple as creating posters in residents' native languages sends the message that we see them and that their health is important to us."

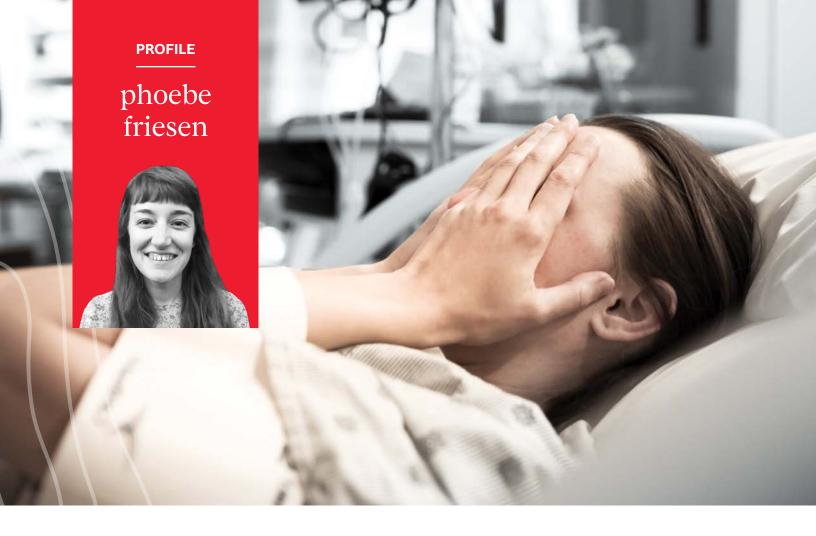
WeCanVax's use of storytelling hasn't stopped at posters. Inspired by photographer Brandon Stanton's popular Humans of New York, the team created a Humans of Parc Extension series on their website and social media platforms. The series prompts a deeper sense of communal responsibility around an often-controversial issue. "Through testimonials of wanting to protect family members or neighbours in public spaces, the humans of Parc Extension are mobilizing around their shared desire to uplift their communities," Bui describes.

According to Dr. Banerjee, vaccination rates in Parc Extension were 10% to 15% lower than in the rest of Montreal before the launch of WeCanVax. Just a few months later, the percentage of Parc Extension residents who have had at least one dose of the vaccine has reached 76.8%, exceeding Montreal's 74.6% vaccination rate. Yet WeCanVax is just one of many initiatives working together to increase vaccine

confidence in the area, and she credits the growing percentage to those collaborative efforts.

Dr. Banerjee is also quick to praise her students' work. "The way in which Tammy and Nehal interact with residents, whether in the conference room or on the street, demonstrates how they see themselves as facilitators rather than leaders," she says. "That's inspiring for me to see as a professor." She also describes how, though both Bui and Islam are the children of refugees and immigrants, they recognize the uniqueness of each family's experience.

"We're not here to tell Parc Extension what it needs," Bui says. "We're here to listen and provide resources to help them meet their goals." Islam agrees, adding, "At the end of the day, every person's story is different. It's up to us to engage and meet them in that story."



Birthing alone: Supporting mothers and avoiding transmission of COVID-19

JASMINE STUART

hen COVID-19 shut down schools and businesses across Canada and the United States, our daily lives came to a screeching halt. Those services that were deemed to be essential had to quickly rede-

sign their policies and procedures to ensure the effective delivery of services, while balancing the safety of all involved. At several hospitals "birthing alone" policies were implemented, banning partners, family members and doulas from accompanying individuals giving birth.

"Organizations representing midwives in Canada and internationally, as well as the World Health Organization were quick to put out statements supporting the rights of pregnant women to have an asymptomatic partner present," says Phoebe



Friesen, an assistant professor in the Biomedical Ethics Unit.

In her recent research, published in the International Journal of Feminist Approaches to Bioethics, Friesen and her team offer an ethical analysis of policies imposed at the start of the COVID-19 pandemic that required birthing persons to labour alone. They looked at the hospitals in Montreal and New York, and similar cases that played out in Italy, Ireland and Germany.

Friesen co-authored the article with Sarah Towle and Tamara Perez, recent graduates from the master's specialization in Biomedical Ethics.

"We were interested in the justifications offered for these policies at the time they were implemented to better understand the reasons for and against them, as well as how the larger context of birth was impacted," explains Friesen.

What they found was that the policies invoked to reduce transmission of the virus were done so in contradiction to the evidence that women supported by a partner lead to an increase in "spontaneous" or uncomplicated births, as opposed to medical interventions like cesarean, forceps and vacuum deliveries.

"Negative birthing experiences are linked to postpartum depression and even PTSD, and giving birth to a child is a significant life event for women and their co-parents," says Friesen.

Birthing-alone policies created fear and anxiety among expectant parents, causing them to find last-minute adaptations to labour that introduced significant risk. Attempting to switch hospitals, induce or stop labour, or skip the hospital for an unattended birth can cause more complications and risks to a mother and her baby.

"Birthing alone for most women constitutes a negative experience, and these policies are

likely to have lasting implications for the psychological well-being of mothers," says Friesen.

"Not only do they take away her agency at the moment, but also have the potential to take away her agency long-term, impacting mental health, mother-infant bonding and her future reproductive decisions."

The team concluded that birthing alone policies are unjustified and harmful, as they fail to consider both what matters to birthing women, and the health benefits of a supported mother.

The authors hope that hospital leadership will use their findings to distinguish birthing partner policies from other no visitor policies in the future, ensuring that, whenever possible, women can take advantage of the immense benefits of having a birthing partner present, while at the same time balancing the safety needs of hospital staff and patients.



madhukar pai



Tuberculosis in times of COVID-19

The devastating effects and opportunities for the future

JASMINE STUART

he COVID-19 pandemic has had devastating effects on every aspect of global health.

One area that has particularly suffered is the diagnosis and treatment of tuberculosis.

Tuberculosis (TB) is preventable and curable. About 85% of people who develop the disease can be successfully treated with a six-month drug regimen.

In 2020, nearly 10 million people developed tuberculo-

sis, according to the WHO. The same year, only 5.8 million cases were diagnosed and reported; down 18% from 2019.

"This decrease in diagnosis was concentrated in 16 countries, all with major COVID-19 outbreaks and health care service disruptions," says Madhukar Pai.

Pai is a professor in the Department of Epidemiology, Biostatistics and Occupational Health, Canada Research Chair in Translational Epidemiology & Global Health and associate director of the McGill International TB Centre. His research focuses on improving the diagnosis and treatment of tuberculosis, especially in high-burden countries like India and South Africa. He is leading projects in 4 countries (funded by CIHR and Gates Foundation) to study the effect that the COVID-19 pandemic had on the low- and middle-income countries, especially when it comes to the diagnosis and treatment of tuberculosis.

COVID-19 lockdown measures disrupted prevention, diagnosis and treatment of TB

TB is highly contagious. Early detection allows for those who are symptomatic to isolate and avoid contact with others and limit community transmission.

Those that did know they had tuberculosis struggled to seek care in the context of lockdowns, leading to additional deaths that could have been easily avoided: for the first time in more than a decade, tuberculosis mortality has increased.

Measures also limited access to testing and many people with TB were not diagnosed in 2020. The WHO estimates that 4.1 million people currently suffer from TB but have not been diagnosed with the disease or have not officially reported. This figure is up from 2.9 million in 2019.

The severe disruptions of TB care and services caused by COVID-19 have set back progress towards achieving global TB targets, especially the 2018–2022 targets, and the objective of ending the TB epidemic by 2035. In order to restore progress towards TB elimination, a more refined and multifaceted approach to managing TB is needed.

While Pai wants to signal the alert for tuberculosis care in the age of COVID-19, he also hopes to find new lessons learned from the pandemic that can improve diagnosis and in high burden countries.

"COVID-19 has increased the risk of poor outcomes for people with TB, while simultaneously creating opportunities to leverage some of the technology and public health tools used to combat COVID-19," explains Pai.

Multiple layers of personal and shared responsibilities were needed to limit the spread of COVID-19. Mask mandates, lockdowns and access to vaccines and testing, along with social support for people that needed to take time off work to quarantine or care for sick family members, were all parts of a larger public health response to the disease.

Previously, TB care has primarily focused on empowering healthcare workers, emphasizing vertical diagnostics and treatment systems. But the COVID-19 pandemic has shown that action at the societal and personal levels is necessary for an effective strategy in disease prevention

"As a society we must tackle social determinants of health and inequities that underlie barriers to health," states Pai.

The pandemic has seen over 90 million additional people pushed into extreme poverty. By addressing the factors that contribute to ill health within these populations, the number of people at risk of developing and dying from TB would fall, as would COVID-19 mortality for the same groups.

Vaccination is a key societal prevention strategy both for COVID-19 and TB. The pandemic has seen the development of new technologies at record speeds. Using this same approach in developing effective vaccines for TB would have a significant impact on reducing transmission.

COVID-19 has seen a rise in misinformation campaigns and anti-science rhetoric. Public educa-

tion, community engagement and stigma reduction are all essential to any public health program.

TB campaigns need to resume where they had been halted as a result of the pandemic. Integrated campaigns for TB and COVID-19 would be most effective in ensuring timely testing, treatment and contact tracing for communities impacted by both diseases.

With concerns addressed at the societal level, Pai also advocates for personal action in stopping the spread of TB. Just like with COVID-19, face masks and cough etiquette are essential practices. The pandemic has also increased awareness about the importance of ventilation, making them commonplace in our daily lives. For example, with the use of masks and air purifiers now normalized, we might see better adoption of these types of practices by those infected with TB.

The COVID-19 pandemic has promoted innovations in infection prevention and control within the health care sector and in our communities. While adherence to protocols for airborne infection control was previously quite low, the COVID-19 protocols can help facilitate the adoption of similar protocols for TB.

"In order to restore progress towards eliminating TB, a more refined and multifaceted approach is needed," notes Pai.

It is Pai's hope that TB services will be re-evaluated to adapt to the realities of COVID-19, while improving political support, funding and reporting, and at the same time bringing justice to high burden countries. ◆

joanne liu



Pandemic management: Learning from our mistakes

JEAN-BENOÎT NADEAU



r. Joanne Liu wants to put the university to work developing solutions for the health crisis. When she arrived at the Faculty of Medicine and Health Sciences in May 2021, Liu, former international president of Doctors Without Borders, sat down with the School of Population and Global Health's director, Dr. Timothy Evans, to set up the Pandemic and Emergency Readiness Lab (PERL for short).

The pair agreed that PERL would act on three fronts: vaccine equity, improving knowledge about pandemic response and leadership development. "Several mistakes were made in the global management of this pandemic," says Liu. "We absolutely have to learn from them and avoid repeating them."

Increasing vaccine equity

"We can thank the Omicron variant of COVID-19 for one thing. Now everyone realizes that to avoid repeated waves of the pandemic we need to vaccinate the whole planet," says Dr. Joanne Liu, a professor in the School of Population and Global Health. "Closing borders won't be enough."

While high-income countries have been able to supply at least three or four vaccine doses to most of their populations, in the majority of low-income countries only 11% of the population is vaccinated—and with only one dose. This imbalance is encouraging the development of new variants.

"People generally agree that Canada, the U.S. and Europe should share their vaccine stocks. But that's not enough," says Liu. "If you want to turn vaccines into immunizations, you need people to monitor the process and find solutions."

Lessons learned

PERL will also develop a research cluster to examine lessons learned from the current pandemic and document them for future use. To do this, a team of a dozen research fellows will be formed to reflect on specific themes.

And then there is the question of vaccine hesitancy, which is still poorly understood. "It takes more than just tools to maintain confidence in vaccines. The vaccines must be accepted and used. This is the sixth major public health emergency of international concern since 2000 and we are still working by trial and error," said Liu.

Liu was particularly disappointed in the political response to the pandemic. "When WHO triggered the highest level of International Health Regulations alerts on January 30, 2020, a few countries in Asia responded but Europe and America sat on their hands. February was completely lost. It was not until the Director General of WHO declared a global pandemic on March 11, 2020 that things got moving. We lost six crucial weeks," she said.

Toward better leadership

These leadership shortcomings were what convinced Liu and Evans that PERL's third area of focus had to be on the development of global health leadership.

"One of the lessons of the Ebola outbreak was that you must prepare for the future while the crisis is going on. It is not easy when everyone says, 'We are sick of it.' If you really do not want to hear about it anymore, you must finish the job," Liu explained.

While Liu gives global leaders a failing grade for their work during the pandemic, she is a woman of action. It was important for her to build something that would ensure we are prepared for the next public health emergency of international concern, rather than simply

This story was modified from the original version first published in FMHS Focus

admit defeat. •



Disrupted lives: Youth wellbeing and COVID-19

Looking at the impacts and ways forward for Canadian youths

JASMINE STUART

hile one's "youth" is always a period of growth and transition, the last two "pandemic years" have been especially challenging for young people. The COVID-19 pandemic ushered in policies that affected youth, intentionally or incidentally, with mixed impacts. A growing number of research reports and surveys of young

people across Canada point to disrupted futures, interrupted journeys and dreams, and times of confusion and insecurity that promise to have wide-ranging impacts for years to come.

To address the needs and fill gaps in existing knowledge, the Department of Equity, Ethics and Policy, joined forces with UNICEF Canada and the ListenUP for Youth Wellbeing (an initiative

of the School of Population and Global Health) to create an event to look at youth well-being.

The Disrupted Lives conference took place in June 2022, bringing together young people, researchers, community organizations, policymakers across jurisdictions and international leaders to take stock of the impact of the COVID-19 pandemic and pandemic policies on youth.

Disrupted Lives engaged speakers and participants in identifying priority policy considerations at this stage of the pandemic, and highlighted promising strategies for actively involving young people in shaping future policy.

Over 300 people attended the event's four moderated policy sessions focused on Education, Employment, Social Security and Public Health, the sessions shared the latest evidence, looked critically at the policy choices, and heard the perspectives of youth in attendance.

Each panel was followed by a Youth Reflections session, a moderated discussion among young people sharing their perspectives on the panel discussion - giving the young people that showed up for the conference the opportunity to respond to and engage with the ideas and opinions that had been presented to them, creating two-way communication between speakers and the "audience."

Participants were invited to vote on the recommendations "most important" to them on each of the topics presented.

Public health policy

Most young people in attendance want to see mechanisms for youth empowerment, so that they can become part of the solution. High on the list was the desire to see the public mental health system that moves away from crisis-oriented care to address upstream determinants. And finally, they want to see provincial and national youth well-being

monitoring systems to measure impacts and progress and keep decision-makers accountable.

Education policy

Participants wanted to see the relevance and significance of race and the experiences, needs, interests and aspirations of racialized students reflected in future policies, and noted that post-COVID-19 educational programs designed to help young people "catch up" are a key step in helping those behind in their education and learning following extended school closures, virtual and online classrooms throughout the waves of the pandemic.

They called for a multi-year multi-billion-dollar National Youth Health and Education Fund to support provinces, territories, and First Nations in planning, evidence-gathering, staffing, and resources to support youth well-being. As well as an increase in mental health support in educational institutions from kindergarten through to post-secondary training.

Employment policy

Concerns around youth employment revealed the need to proactively improve job quality, especially by raising minimum wages to reflect a living wage, as well as the development of policies that address the barriers to work which young people might face, especially as it relates to childcare, transportation, and training. To ensure employment

and training support are linked to other critical success factors for youth, especially those facing barriers, participants wanted to see improved access to career guidance, mentoring, mental health support and affordable housing.

Social security policy

Youth at the conference want to see the Federal Government ensure that income support is above the Low-Income After-Tax measure, and that it is indexed to inflation annually, so that everyone can access the essentials of life, as a minimum standard. They also want to see an assured income guarantee for all working-age Canadians.

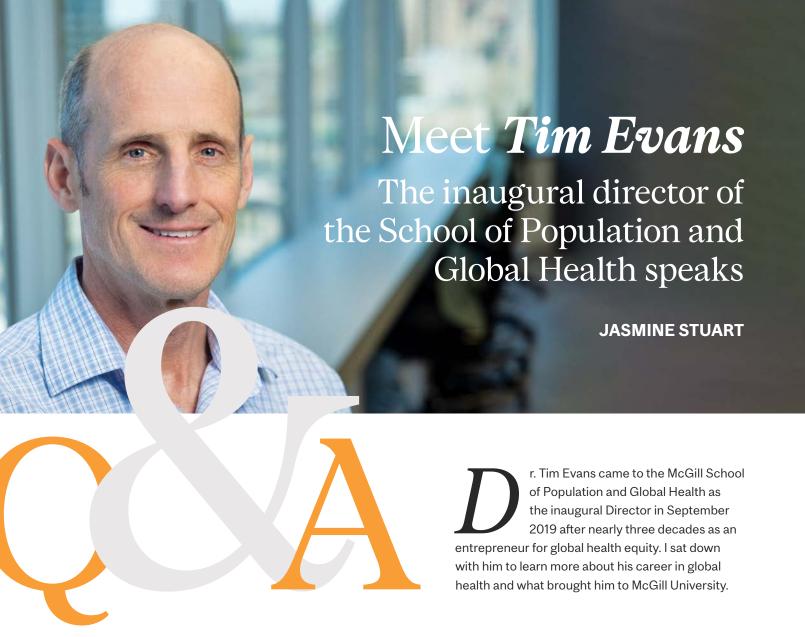
Youth-engaged policy

Participants called for an increase in authentic and meaningful engagement of lived experience in policy development, implementation, monitoring and evaluation, as well as intersectional analysis throughout the policy process.

The impacts of decisions made across sectors, and at all levels of government, affect the lives of young people. In the context of the COVID-19 pandemic, young people have seen significant impact on their mental health, employment, relationships, education, and economic security. At the Disrupted Lives conference, it was clear that young people can articulate their experiences and needs and want a seat at the table to inform the policies that affect their futures. •







Q. How did you find global health as your career path?

A. As a teenager, between finishing high school and beginning university, I was a volunteer in West Africa. I worked in very poor communities whose livelihoods revolved around subsistence agriculture whereby households worked their land to grow food to feed their families. In this setting, the vicious cycle between ill-health and poverty became distressingly clear.

Illnesses like malaria and river blindness inhibited people from working their lands. Without all hands on board during the farming season the ability of a family to feed themselves was dramatically compromised. This experience inspired my doctorate work in Agricultural Economics where I examined the economic consequences of ill-health and the wealth benefits for improved health.

O. Why McGill and why now?

At this stage in my career, I wanted to come home to Canada to focus my energies on creating training and research programs that will help nurture the next generation of health leaders. McGill is a great university that has tremendous potential to contribute even more prominently to population and global health. Although we have all been swept up in the pandemic, it has been inspiring to see how faculty, staff and students have rallied to sustain a rich learning environment and contribute so generously and effectively to the pandemic.

Q. What guides your approach to population and global health?

A. Simply put: everyone, anywhere on this planet, should have the same opportunity to live a healthy life. There is no biological reason why mothers in one part of the world should have a 1,000 fold greater risk of dying in childbirth. Redressing inequities in health requires that we acknowledge and act upon the broad spectrum of social, economic and environmental forces that shape and stratify opportunities for health. All health systems face similar challenges and can benefit from drawing on the global pool of knowledge to tailor local health solutions. At the same time, there are shared health challenges like pandemics and climate change that require shared solutions that all countries can access equally like vaccines for COVID-19. Mobilizing this knowledge and know-how for health equity is the foundation of global health.

Q. What do people need to know about global health?

A. Global health is not something that happens far away from Montreal, or Quebec or Canada. Infectious threats like SARS-CoV-2 and tuberculosis are found everywhere. Climate change doesn't recognize national borders. Trust in science and the safety of new medical products must be earned in all societies. The blind spots to racial inequities in health and mental illness are egregious not only in Canada, but in virtually all countries of the world. Understanding predisposition to certain types of illness amongst Canada's hundreds of ethnic diasporas is enhanced with viable knowledge linkages with their countries of origin. In short, global health recognizes that there is one world health to which we are all inextricably linked and where latent opportunities for novel solutions are abundant and waiting to be harnessed.

Q. What is the School of Population and Global Health going to do to support this vision for public and global health?

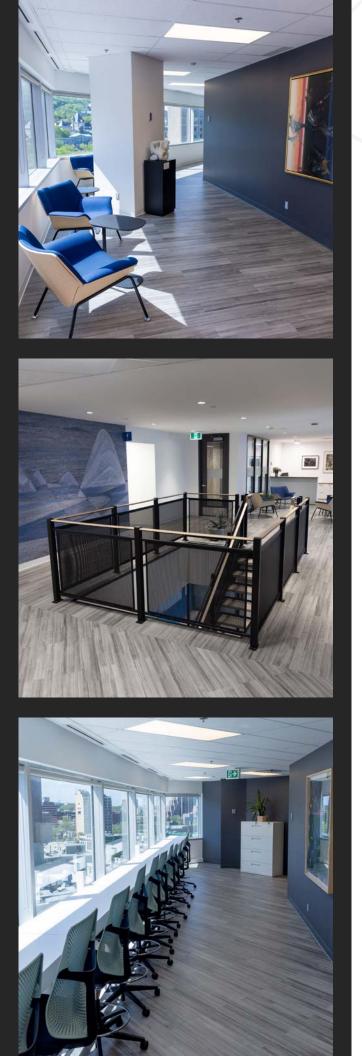
A. McGill has a long and rich legacy of engaging in population and global health issues. The diverse units that constitute the School reflect a large portion of that legacy; however, it is not about resting on our laurels but building on our strengths. Indeed, there is an exciting unity across our diverse constituents that recognizes our success is a function of how well we mobilize our modest resources towards the future, working with colleagues across disciplines and engaging with community partners beyond the university.

McGill's Senate just approved a new interfaculty undergraduate degree in population and global health. This new program responds to the growing expectations of students coming to McGill to learn across disciplines, to engage in experiential learning and to become effective change agents locally and globally. Last year we launched a Pandemic and Emergency Readiness Lab that has taken on the challenge of vaccine equity with respect to COVID-19 vaccines. And in the next few years, we aim to ratchet up our efforts in areas such as youth mental health and well-being, climate change and planetary health, and digital health and data science. We live in exciting times and these are exciting times for the School!



Dr. Evans has been at the forefront of advancing global health equity and strengthening health systems delivery for more than 20 years. He has held leadership roles in NGOs, universities, charitable foundations and in United Nation's institutions around the world. Read his full biography:





2001: A Space Odyssey

he School of Population and Global Health has brought its founding units together and made its home at 2001 McGill College Avenue home. With sweeping views of Mont-Royal and McGill's downtown campus on one side, and Montreal's bustling centre-ville on the other. Our space sits on the 11th and 12th floors, and serves not just as a place of meeting, but also as a space for students and faculty to share, learn and collaborate.

Students and researchers engage in the latest global health discourse, benefitting from this bright and welcoming environment, outfitted with a host of study spaces, conference rooms and classrooms. All the while remaining grounded in our community's urban environment.

The School is organized into three departments that are aligned by school-wide programs related to research, education and service to facilitate, strengthen and enhance the growth of school-wide priorities, as well as support department-level activities for the benefit of students and faculty. Strategic standing committees and units support the implementation of the research, education, anti-racism and EDI (equity, diversity, and inclusion) priorities and objectives in the School's **strategic plan**.

The administration of the School's academic affairs, human resources, and financial resources is supported by a team of professional staff from Administrative Excellence Centre 3, providing expertise and advising on policies and procedures that govern our operations. •



The School's founding units:

- Department of Epidemiology, Biostatistics and Occupational Health
- 5 Biomedical Ethics Unit
- Institute for Health and Social Policy
- Global Health Programs

Meet the Director's Operations Committee

ay-to-day operational issues related to academic and non-academic human resources, work environment, budget and resource mobilization issues are managed by the Director's Operations Committee. The committee, made up of the School's Director, the three Department Chairs, Unit directors and the Associate Director, Administrative Excellence Centre meet regularly to review the projects and initiatives active at the School and provide feedback and guidance from the perspective of their unit and community members.



TIM EVANS
Director of the School of
Population and Global Health



TASHA AYINDE
Associate Director, Administration,
Administrative Excellence Centre 3
Faculty of Medicine and Health
Sciences



JOSÉE DUPUIS
Chair and professor, Department
of Epidemiology, Biostatistics and
Occupational Health



CATHERINE HANKINS
Interim Chair, Department of
Global and Public Health



JONATHAN KIMMELMAN Interim Director and James McGill Professor, Biomedical Ethics Unit



CHARLES LARSON Interim Director, Global Health Programs



ARIJIT NANDIInterim Chair, Department of Equity, Ethics and Policy

Our International *Advisory Board*

The School's International Advisory Board assists the Director (and by extension the School) in achieving their strategic goals and objectives. The Board provides guidance, insight and expertise on initiatives and projects to enhance the current offerings in education, research and community engagement, and to identify new opportunities in each area.



VICTOR DZAU (CHAIR)

President, United States National Academy of Medicine



MYRON COHEN

Director, UNC Institute for Global Health and Infectious Diseases

Associate Vice Chancellor for Global Health, UNC-Chapel Hill



TINA ALSTER

Founding director, Washington Institute of Dermatologic Laser Surgery

Professor of Dermatology, Georgetown University Medical Center



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SRINATH REDDY

President, Public Health Foundation of India



CHRISTOPHER J. L. MURRAY

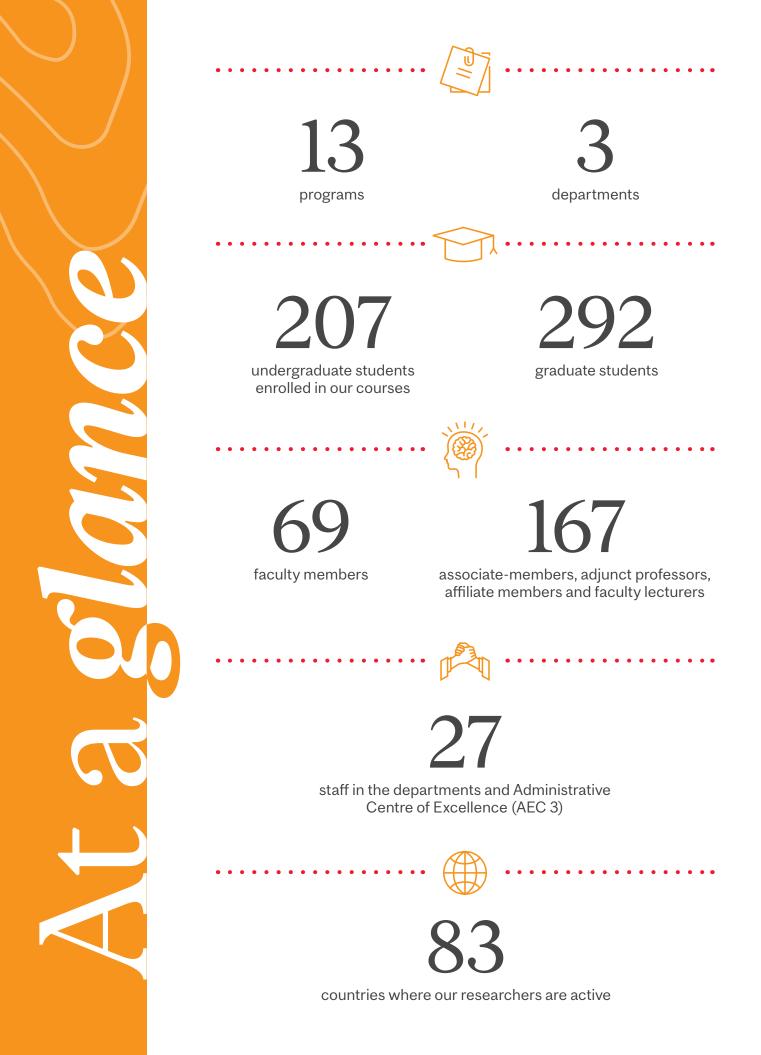
Professor and Chair of Health Metrics Sciences

Director of the Institute for Health Metrics and Evaluation, University of Washington



JEANETTE VEGA MORALES

Chief Medical and Innovation Officer, Red de Salud UC-Christus (Chile)







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