Managing Through the Pandemic: The McMaster Approach

Over the last few weeks we have undertaken a careful and staged return back to campus, which has included welcoming the vast majority of our students, faculty, and staff back to our classrooms, labs, libraries, and campus-based facilities and resources. After almost two years of reduced in-person activity, it is extremely gratifying to see the campus coming fully back to life in such a positive way.

As I highlighted in my Report to the Board in December, we have drawn upon our in-house health, safety, and wellness teams and faculty experts to support our campus community through this period of transition, and have placed particular focus on mental health and well-being. The goal is to support our students, staff, and faculty to move through the transition back to in-person activities without unnecessary stress or distress, and enable all members of our community to perform to their fullest potential.

Our focus throughout the pandemic has been to manage the wide variety of risks, uncertainties, transitions, and required decisions in a way that supports and enables the academic and research mission of the University, prioritizes the health, safety, and well-being of all members of our community, and preserves and advances the University’s reputation.

We developed guiding principles early in the pandemic and have used these principles to support and guide our decision-making processes and responses as the situation evolved over the last two years:

McMaster Guiding Framework for Planning Decisions During the Pandemic
(Updated November 2021)

1. For the 2021/22 academic year, we will continue to deliver on the academic and research mission of the University, while prioritizing the health, safety, and well-being of all members of our community.
2. In doing so, we will remain focused on supporting and enabling the success of our students, delivering a high-quality learning environment and overall student experience.
3. Our goal is to welcome new and returning students back to campus as soon as this can be done safely and in accordance with Public Health guidance and government protocols.
4. We will support return to work plans that deliver our programs, support our students, learning and research, and enhance McMaster’s sense of community.
5. While activities and people will return to their McMaster location in the new year, we support flexible arrangements that will strengthen the ability for people to contribute to the success of their students, programs, and departments.
6. We will maintain our focus on research excellence and on supporting the work of our researchers across all disciplines, as well as enabling and advancing our long history of creativity and innovation.

7. We will continue to uphold our core University values, principles, and policies, including our focus on inclusivity, accommodation, and respect for one another, and our collegial decision-making processes. Any revisions or updating of policies will continue to be developed through the University’s pre-existing governance processes.

8. We will continue to make fiscally prudent decisions that support our ongoing stability and success as an institution, balancing risk with opportunity.

9. We will continue to work together as a community to support our students, faculty, and staff across the University and will ensure that information, plans, and decisions are communicated clearly and promptly.

This principle-based approach has served us well and has provided a consistent and solid rationale for our decision-making. Throughout the pandemic the University leadership has also worked closely with a team of experts in a variety of areas, both internal and external to McMaster. These experts have provided invaluable advice, guidance, and context on operational questions and logistics ranging from data modelling and analysis, the evolution and transmissibility of the COVID-19 virus, the most effective means to implement Public Health measures and restrictions, the prioritization and distribution of available testing capability, the efficacy and appropriate use of various types of masks, to the implementation of effective ventilation systems. Such expert advice allows for an accurate assessment of risk, supports effective risk management processes, and enables timely and well-considered decision-making.

The University has also worked closely with our hospital partners and with Hamilton Public Health, and has been a key partner and contributor at the various community-level planning and discussion sessions that have taken place over the last two years. We have been able to draw upon the positive relationships and close connections developed over many years as we came together as a community to respond to the issues presented by the pandemic.

At the provincial level, the University has also been actively engaged, and has made significant contributions to policy making and scientific advice. Several McMaster faculty members have participated in the Ontario COVID-19 Science Advisory Table, a group of scientific experts and health system leaders with a mandate to provide weekly summaries of relevant scientific evidence for the province, integrating information from existing scientific tables, Ontario’s universities and agencies, and the best global evidence. We continue to work closely with our peer institutions across Ontario, including through the Council of Ontario Universities, which acts as a forum for collaboration and advocacy in support of the collective interests of the province’s universities. Our Vice-President (Research), Karen Mossman, co-chairs the Council of Ontario COVID-19 Reference Table, which maintains a close connection with the Science Advisory Table, and I am serving as a member of the COU Strategy and Planning Working Group, which is focused on government policy of relevance to post secondary institutions and related advocacy efforts.

In addition to the broader strategic and policy-focused issues, the University has had a myriad of operational and logistical issues to manage during the pandemic. To do so effectively, the senior
team created a number of key operational groups, which have been meeting regularly. A core team involving leaders from Facility Services, Student Affairs, Housing and Conference Services, Human Resources Services, Environmental and Occupational Health Support Services, and Communications and Public Affairs has been meeting on a frequent and ongoing basis; the Provost’s Office has for many months led a dedicated Return to Work group focused on managing the transition back to campus. This group is made up of key academic and administrative leaders, including the Faculty Deans; the office of the Vice-President (Research) has worked closely with researchers across the campus to guide and support the ongoing use of labs and critical in-person research operations, including the McMaster Nuclear Reactor, throughout the pandemic; and the President and Vice-Presidents’ group continues to oversee the strategic direction of the University and key decision-making, including communications and reputation management.

Effective communication has been a core tenet of our work and has focused on ensuring the prompt and clear communication of plans, decisions, guidance, and information to members of our community and beyond, as well as positively advancing McMaster’s reputation. The proactive communication of the many research successes and innovations, contributions to policy and decision-making, and community-focused work, undertaken by McMaster’s researchers, both supports and enhances the University’s profile at the local, national, and international levels.

At our meeting on March 3, Dr. Mossman will be leading a presentation focused on COVID-related research, highlighting the significant contributions and advances made by some of McMaster’s faculty experts, and the positive impact of their work. Some of these key research successes are also highlighted in the research section of this report.

**CAMPUS UPDATE**

**McMaster Ranks among Top 50 Most International Universities**

McMaster recently ranked among the 50 most international universities in the world in a Times Higher Education ranking. McMaster also continues to rank among the country’s most research-intensive universities – for both graduate students and faculty members – in the annual ranking of the country’s Top 50 Research Universities. McMaster placed first in graduate student research intensity – averaging $68,900 per graduate student, and second in faculty research intensity – averaging $369,400 per faculty member; significantly above the national average for both.

**McMaster Appointees to Order of Canada**

McMaster Professor, Mehran Anvari, was named an officer of the Order of Canada for his decades of research in telerobotic surgery to help patients in remote regions. Four McMaster graduates were also appointed to the Order of Canada at the start of the year. Marine Biologist, Verena Tunnicliffe (’75 BSc.(H), Biology), for her pioneering work in the scientific exploration of the deep sea; Elizabeth McGregor (’68 BA & ’72 MA, Geography) for her promotion of women in science; Barry Smit (’77 PhD, Geography) for his contributions to our understanding of climate change impacts and adaptation; and Former Nova Scotia Deputy Minister of Health
and Wellness Peter Vaughan (*'82 MD) for his pioneering leadership in the establishment and advancement of digital health.

Research

Researchers confirm Newly-Developed Inhaled Vaccine Delivers Broad Protection against COVID-19 Variants of Concern
A team of McMaster scientists has begun human trials for two next-generation COVID-19 vaccines. Both vaccines are delivered by inhaled aerosol, not by injection, targeting the lungs and upper airways, where respiratory infections begin. These are two of the very few COVID vaccines being developed in Canada.

In February 2022, this team published new research, confirming the inhaled form of COVID vaccine can provide broad, long-lasting protection against the original strain of SARS-CoV-2 and variants of concern.

Heersink $32M Gift boosts McMaster’s Biomedical and Global Health Innovation
A donation of more than $32M from Marnix Heersink, an Alabama physician and entrepreneur, will boost McMaster’s role as a hub for biomedical innovation, entrepreneurship, and global health. The gift will create the Marnix E. Heersink School of Biomedical Innovation and Entrepreneurship to educate the next generation of entrepreneurial health innovators.

McMaster to Partner with Lund University
McMaster and Lund University, a leading Swedish institution, have entered into a promising new partnership that will advance research and education in both countries. Lund is a key player in Scandinavia’s health sciences ecosystem and McMaster is home to Canada’s Global Nexus on Pandemics and Biological Threats. The two institutions will work together to focus their research and training efforts to advance the fight against the COVID-19 pandemic.

Global Report Highlights the Importance of Providing Leaders with High-Quality Evidence
McMaster Health Forum Director, John Lavis, is co-lead of the Secretariat of the Global Commission on Evidence to Address Societal Challenges. The Secretariat has released a report analyzing the use of relevant evidence throughout the pandemic and the impact on decision-making as a result. The report highlights the importance of providing governments and leaders with high-quality evidence, and systematizing the aspects of using evidence that are going well, to help inform responses to other pressing issues and societal challenges.

Immune Response and Vaccine Hesitancy in First Nations Investigated
McMaster scientists are joining forces with First Nations, federal government, and academic partners to investigate vaccine effectiveness and hesitancy in three Indigenous communities across Canada. The COVID CommUNITY-First Nations study will collect, analyze, and report data relating to COVID-19 vaccine effectiveness and safety; as well as examine hesitancy in the Six Nations of the Grand River near Hamilton, Lac La Ronge Indian Band in Saskatchewan, and Wendake in Quebec.
McMaster and Cubic Reimagine the Future of Inclusive Mobility
Experts from the McMaster Automotive Resource Centre, led by Canada Research Chair in Transportation Electrification and Smart Mobility, Ali Emadi, are working with Cubic Transportation Services to reimagine the future of inclusive mobility. This long-term program will develop the building blocks to design the future of inclusive mobility through innovation and technology collaboration between government, academia, and the public and private sectors.

McMaster Economist Adam Lavecchia Awarded Polanyi Prize
McMaster's Adam Lavecchia has been awarded the 2021 Polanyi Prize in Economics for early-career researchers. The award was given in recognition of his work in several areas of public and labour economics, including minimum wage and interventions for underserved high school youth.

Ten McMaster Researchers Named Canada Research Chairs
Ten McMaster researchers across four Faculties have been named Canada Research Chairs as part of a national strategy to make Canada a global leader in research and development. Five of the researchers have had their chairs renewed, while five have been named new Canada Research Chairs — an investment of nearly $9M:

- Ali Ashkar (Tier 1) has established an active lab with a focus on innate immunity to cancer and viral infections.
- Sara Bannerman (Tier 2) examines how big tech can play a role in shaping global events and culture.
- Katrina Choe (Tier 2) studies how gene mutations associated with psychiatric disorders affect brain controls at molecular, cellular, circuit, and network levels.
- Zeinab Hosseinidoust (Tier 2) employs the intelligence of biological systems to tackle outstanding challenges related to human health.
- Victor Kuperman (Tier 2) studies how the COVID-19 pandemic has affected the social mobility of certain vulnerable segments of the Canadian population.
- James MacKillop (Tier 1) applies behavioural economics and neuroeconomics to understand addictive behavior. His recent work examines changes in alcohol and cannabis use during the pandemic.
- Hsein Seow (Tier 2) is focused on innovating the palliative care health system and improving quality of care.
- Heather Sheardown (Tier 1), the Acting Dean of McMaster’s Faculty of Engineering, is working to find ways to treat ocular diseases of the aging eye.
- Sarah Styler (Tier 2) aims to provide insight into the air quality of urban centres and in turn, the climate and health challenges these areas face.
- Igor Zhitomirsky (Tier 1) is focused on research in biomaterials, nanomaterials, energy storage, electrochemical technologies, and functional materials.

Community Engagement and Support

Celebrating Black Excellence: Black History Month at McMaster
Every year, the Equity and Inclusion Office coordinates the work of the Black History Month Planning Committee. This year, the Committee identified the goal of highlighting McMaster’s ongoing commitments to attracting Black students, faculty, and staff and supporting their well-
being and success. To launch the month of virtual workshops, events, and storytelling, the Committee hosted a panel to both highlight Black-focused initiatives on campus, as well as the work still to be done.

**Additional Mental Health Support Resources for Students**
McMaster has received $100,000 from Bell Let’s Talk to establish additional mental health support resources for students. The funding will enhance mental health supports and establish the Student Urgent Response Team (SURT). The service is designed to help students facing mental health crises on campus, providing both in-person and virtual support. McMaster is one of 16 Canadian colleges and universities receiving a grant from Bell Let’s Talk to support mental health initiatives on campus.

**McMaster Students Launch Community Fridge**
Students from a Fall 2021 Sustainability course are working with the McMaster Student Wellness Centre, MSU Food Collective Centre, and others to install a community fridge on campus. The fridge will offer accessible, nutritious and free produce, packaged meals, and other food staples and be open 24/7 for all community members to access.

**Student-led Group working on Overdose Prevention and Safe Substance Use**
McMaster Social Work students, Olivia Mancini, Kayla Crabtree, and Samm Floren, have created the Student Overdose Prevention and Education Network (SOPEN), a volunteer-based program to teach youth about safe substance use and overdose prevention.