Update on Responses to COVID-19 and Ongoing Contingency/Scenario Planning

At our last Board meeting on March 5, 2020, when I outlined for the Board the key priorities and challenges for the year ahead, and reported on the contingency and business continuity planning underway with regard to a potential pandemic, I don’t think any of us anticipated that little more than a week later we would be ending in-person classes, moving to a virtual classroom and assessment process for the rest of the term, and sending the vast majority of our students home. As Board members know, as a result of government requirements around physical distancing and essential services, most of the University’s faculty and staff are now working remotely, the majority of research labs have been shut down, the library is operating on an entirely online basis, and in-person convocation ceremonies for Spring 2020 have been cancelled, with arrangements being made for a virtual celebration, which will be followed by an expanded Fall convocation for students who wish to return and celebrate their success with the McMaster community at that time.

The University is committed to ensuring that wherever possible students are able to complete their courses and programs as scheduled, that assessments can be undertaken, albeit in a different format, and that degrees are conferred to the regular timescale. Nonetheless it is clear that the abrupt end of the 2019/20 academic year and the enforced closure and remote working environment creates a myriad of issues for students, faculty and staff alike, as well as for the overall institution. Just by way of a very brief summary and overview, and not intended to be in any way exhaustive, some of the key issues include:

Impact on Students
Many students are experiencing severe financial hardship as a result of the loss of planned employment, summer jobs, co-op learning opportunities, and similar. For those seeking to return for the 2020/21 year this will clearly present additional financial barriers, and those who are members of the graduating class suddenly find themselves in a very challenging job market, and potentially also a highly competitive market for graduate applications alongside fewer funding sources (scholarships, research grants) as well. Depending on the nature of their work and discipline, many current graduate students find themselves unable to continue their studies at the current time without physical access to archives, labs and studios, and many are also unable to undertake necessary fieldwork. For affected students this will result in delays of at least a term in completing their studies.

While the University has put in place financial relief measures, including $560,000 to assist with students requiring immediate assistance, as well as freezing late fees and interest on student accounts in March, April, and May, much more support will be needed. Many students are not eligible for the Canada Emergency Response Benefit (CERB) since unless the job or position had already started it is not considered to be a lost job for those purposes. Our Government Relations team is working hard, together with our peer institutions through the Council of Ontario Universities, Universities Canada and the U15, to advocate for increased supports and emergency relief funds. As Board Members will appreciate, the loss of potentially many months
of income from summer jobs, placements, undergraduate summer research awards or other opportunities, for students who are reliant on such income to pay their tuition and other costs in the next academic year, will create extreme hardship for those affected, and will also mean that many students will be challenged to continue their studies in the Fall.

Impact on Research
The closure of research labs, studios, archives and libraries obviously has a huge impact on McMaster’s research enterprise as projects are delayed or shelved. We are working closely with our U15 research-intensive peer institutions, and with the granting councils, to quantify the losses and impact, and to try to address the continuity of payment issue for research personnel (students, postdocs, research associates). While granting councils are looking at addressing this payment issue for research personnel supported from Tri-agency funds, it is notable that many highly-qualified and experienced research personnel are paid from multiple sources outside Tri-agency funds (private sector, charities, etc.). As we continue to advocate for potential solutions to this lost funding, our current estimates show a loss in revenue and productivity of over $10M per month.

Impact on Staff
The University has been working hard to protect our employees throughout this period of disruption. All employees who can work from home are doing so, with only those employees whose work has been deemed essential still working on campus. This includes staff working in the McMaster Nuclear Reactor, in labs undertaking COVID-19 related research, as well as security, catering, and facility services staff. Where we are able to we are re-deploying individuals or adjusting work to keep as many employees working as possible. McMaster committed to maintaining pay for all employees through to the end of the pay period on April 4. For many employees there will be no changes after this date, but for others who have a lack of work or funding, adjustments will need to be made. Managers are being urged to be creative to keep people working wherever possible, including redeploying people into new roles, using vacation time, promoting job sharing, delivering on special projects or temporarily reducing hours. Regrettably, for some areas and situations, layoffs will also have to be considered and we will work closely with our unions and employee groups with regard to these difficult decisions. As Board Members may be aware, the new Canada Emergency Wage subsidy that covers 75 per cent of salaries is not available to universities.

Institutional Impact
Clearly the impact of the current pandemic has far-reaching effects across our campus and community. Roger Couldrey, Vice-President (Administration) and Dee Henne, Assistant Vice-President (Administration) and Chief Financial Officer, will give a detailed presentation on financial impacts at our meeting but, in addition to the impacts on McMaster’s research enterprise, our estimates for general operating losses since the onset of the pandemic in mid-March amount to approximately $13M until the end of April. This does not include the substantial losses we will realize on our investments. We are also modelling a range of scenarios for the 2020/21 academic year, including consideration of significant anticipated losses related to reductions in international students and potentially even domestic enrolment. Although we are currently planning for a physical return to campus by the start of the next academic year in late August, we are also considering the possibility that this may not be
possible and that the virtual learning environment will need to continue, potentially until the end of 2020.

Beyond the financial impact, the University is extremely concerned by the impact on the health and well-being of our students, faculty and staff, including the impact on mental health across our community. We are continuing to make supports available through our Student Wellness Centre, and through Human Resources Services. The longer the current situation continues, the more acute such issues are likely to become.

Planning for the Future
As mentioned, we are planning for a range of potential scenarios and will continue to engage in modelling and scenario planning as the current situation unfolds. We will also continue to work closely with all three levels of government, and with peer institutions, to make the case for the supports the university community needs, in order to emerge successfully and strongly from the current crisis. In addition to discussions with the Ministry of Colleges and Universities around short-term funds and additional operating support, we have also been engaged in discussions with regard to SMA3, the agreements for which were due to have been finalized by March 31. The Ministry has agreed to defer the introduction of SMA3 for the time being, which means that the current SMA2 agreement will remain in place. Clearly before SMA3 can be finalized we will need to look closely at the metrics and performance measures and advocate for adjustments based on the impact of current events.

Opportunities and Successes
Despite all the difficult challenges we are currently dealing with as a community, there are positive elements that we can all take pride in. I am immensely proud, for example, of the way that members of our University have come together to support one another and the institution and find solutions to the many questions and concerns that we have been recently confronted with. These positive elements range from research successes to community-building activities, to practical supports, and I thought it appropriate to end my report by offering a few examples of the ways in which McMaster has joined the fight against COVID-19.

Research
- Currently, our researchers are working around the clock to conduct urgent research into COVID-19. This includes identifying and testing new forms of therapies, working on new novel test strips, and creating prototypes/manufacturing/testing of ventilators and PPE for frontline healthcare workers. We are also working with manufacturers directly to accelerate production of essential medical equipment, and testing ventilators and PPE so they can move from the factory to frontline healthcare workers. McMaster researchers have also been working directly with Woodbridge Foam Corporation to get a new made-in-Canada mask designed, tested and certified.
- In addition to the 22 COVID-related projects underway in campus labs, other COVID-related research continues across the disciplines. This includes work focused on the toll of the virus on mental health, studies considering the benefits of exercise, and research on the economic impacts and the resiliency of businesses.
- McMaster researchers have developed a tool to share with the international health sciences community which can help determine how the virus that causes COVID-19 is spreading and whether it is evolving. The tool, which is essentially a set of molecular
‘fishing hooks’ to isolate the virus, SARS-CoV-2, from biological samples, can be used to track how the virus evolves over time and how it transmits between people.

- A McMaster researcher, postdoctoral fellow Arinjay Banerjee, played a critical role on a small team that successfully isolated and grew copies of the virus responsible for COVID-19, enabling urgent Canadian research into how it behaves.

- McMaster engineers are exploring whether a technology developed to 3D print cells that mimic human tissue can be put to use printing cells that are affected by COVID-19. This would potentially provide scientists with an important tool in researching treatments.

- McMaster is a key partner in a Canadian consortium that has launched one of the world’s largest clinical trials of a potential treatment for COVID-19 to determine whether blood plasma taken from those who survive the infection can be used to treat those who are hospitalized by it.

- A team of McMaster engineers is using data analytics and machine learning to help inform Canada’s crisis response, using recent COVID-19 data for their algorithms. The team has collected data on how other countries have used non-pharmaceutical interventions, such as physical distancing, then used that information to create algorithms that could help inform Canada’s response to the crisis.

- A team from McMaster played a key role in developing and issuing guidelines for healthcare workers who are treating intensive care unit patients with COVID-19. Thirty-six experts from around the world, including six from McMaster, worked together to develop the guidelines which were formulated in only days.

- The Office of the Vice-President (Research) is working with colleagues across the U15 to create and populate the CanCOVID platform – an expert community of Canadian COVID-19 researchers, clinical collaborators, and healthcare stakeholders from across the country. Canada’s Chief Science Officer mandated the creation of CanCOVID to optimize Canada’s research response to the COVID-19 public health crisis. The Office is also working with the Council of Ontario Universities to populate Ontario Together: Help Fight Coronavirus Portal – connecting businesses, researchers and organizations who can supply emergency products and innovative solutions to support the provincial response.

Community Engagement

- Faculties across McMaster are donating vital medical equipment and supplies to help support local hospitals in the battle against COVID-19. Responding to a call from Hamilton Health Sciences (HHS), researchers in Engineering, Health Sciences, Science and Humanities have collected thousands of masks, goggles, gloves, face shields, cleanroom suits, sanitizer and swabs for use by local health care providers.

- McMaster researchers have rallied together to answer calls for the provision of critical equipment, including masks and ventilators. Researchers at the McMaster Manufacturing Research Institute have been studying how to quickly produce ventilators, while others are finding ways of pivoting equipment to produce masks and other needed items.

- The McMaster Optimal Aging Portal, a unique online health resource created by McMaster to support the healthy aging of Canada’s older adult population, is shifting its focus to highlight ways for older adults to stay active and engaged while practising physical distancing during the current COVID-19 pandemic.

- The University is working closely with the City of Hamilton and with Hamilton Health Sciences and St. Joseph’s Healthcare to determine how the University’s residence buildings can potentially be used to support them at this critical time.