

FACTS FROM THE FRONTLINES: COVID-19 WEEKLY PODCAST SERIES

Each week, Dr. Bob Howard, the former President and CEO of St. Michael's Hospital, speaks with a different St. Michael's medical expert about the pandemic – and what their teams are doing to solve the toughest health challenge of our time.



Dr. Bob Howard

Episode 1: What We Know About COVID-19

Expert Guest

Dr. Matthew Muller

Medical Director of Infection Prevention and Control at St. Michael's Hospital

Original air date: March 16, 2020

COVID-19 is continuing its relentless assault on the world. In our inaugural broadcast, Dr. Muller spoke just as the pandemic was hitting, as non-essential businesses closed and people began physical distancing in earnest.

There's still a lot that scientists don't know about the virus, but as Dr. Muller explains, it is clear that COVID-19 is both more serious and more easily spread than other coronaviruses. It is capable of travelling around the world in a short period of time, and is more severe than influenza. It spreads through droplets and physical contact. People can be highly contagious before they experience symptoms.

Scientists don't know how long people stay contagious. "We have to wait for the symptoms to resolve," Dr. Muller says, "and then we test, and sometimes we find that the results are still positive. There have to be two consecutive negative tests, but that can be weeks later." That's why it's so important to follow the rules of physical distancing, he adds.

What's more, Dr. Muller says, COVID-19 is unpredictable. "It can be anything from a one- to two-week mild illness to a three-week ordeal in the hospital. The good news is that it's rare for it to cause severe disease in children."

What we all can do, he says, is wash our hands, avoid unnecessary contact and stay home while health-care experts do their best to battle the pandemic and scientists race to end it.



Dr. Matthew Muller

Episode 2: Mental Wellness in the Time of COVID-19

Expert Guest

Dr. Tom Ungar

Chief of Psychiatry at St. Michael's Hospital

Original air date: March 25, 2020

Loneliness and isolation. Stress and worry. Sleeplessness and fears about money and the health of ourselves and our family and friends.

It's not a surprise that these feelings are running rampant during the COVID-19 pandemic, says Dr. Ungar. Worry is normal and to be expected. The trick, he says, is to keep it in perspective, and to remember that social distancing is really about physical distancing while maintaining social connections with friends and family on the phone or through online video calls.

To minimize stress, Dr. Ungar recommends checking the news only once a day. And when the COVID-19 case numbers are posted, make sure to look at the number of people who have recovered from the disease as a reminder that people do get better. "I don't want to undermine it, it is a real threat," he says. "But we can catastrophize to infinity if we don't catch ourselves. It's OK to be worried. It's just about trying to do what we can in the worry."

Dr. Ungar recommends practising other good mental health habits, like getting enough sleep, eating well and exercising, refraining from too much alcohol and too much social media and making sure to maintain social connections.

And if you or a loved one is experiencing severe anxiety or panic attacks, reach out to your primary care provider or Telehealth. "If you're really having trouble, we're still providing care," Dr. Ungar adds. "Our inpatient unit continues, but we are doing a lot through virtual care. Amazingly, it does really well. Seeing a person's face is helpful, because you can get a lot of clinical information, like their expression, their movements, their surroundings. I think there will be a real rethink after this is over about how we deliver care, because it's just so much more efficient."



Dr. Tom Ungar

Episode 3: The Emergency Department in the Era of COVID-19

Expert Guest

Dr. Carolyn Snider

Chief of Emergency at St. Michael's Hospital

Original air date: March 30, 2020

A lot has changed in St. Michael's Emergency Department (ED) since the arrival of COVID-19. First came the COVID-19 Assessment Centre. Then health-care teams divided the Emergency Department into zones to separate COVID-19 patients and created an alternative ED space in case the hospital became overwhelmed. As Dr. Snider says, they're ready.

The ED is doing more COVID-19 testing, and working towards processing tests in the hospital rather than sending them to public health labs. They're expecting an increase in patients with mental health issues and have doctors ready. And they have someone in protective gear at the door to screen everyone for symptoms. The Assessment Centre is helping with the numbers. "It's been incredible," Dr. Snider says. "It took a major load off us. But some patients still get streamed through our COVID assessment zone, and they may be discharged or need to go to our COVID positive area."

Dr. Snider herself had to self-isolate after she woke up one morning with a cough and a sore throat. She worked from home, using Zoom, before being cleared to return – and during her isolation she loved hearing people banging pots and pans to thank health-care workers.

Sadly, a lot of St. Michael's patients have no home where they can self-isolate. Dr. Snider and her team are working with our Family Health teams and Inner City Health Associates to find safe places for them. One nurse even ordered pizza for a group of homeless people in Emergency who didn't have anywhere else to go. "These are the little things that make such a difference to our patients," she says.

"COVID-19 moves fast, and for those of us who like to have a certain amount of control, it is challenging," she adds. "But I'm fortunate to work with the most engaged, positive group of health-care workers you can imagine. We're the right group of people in the right space, and we're on top of it as much as possible."



Dr. Carolyn Snider

Episode 4: Building St. Michael's COVID-19 Assessment Centre

Expert Guests

Dr. Joel Lockwood

Emergency Physician at St. Michael's Hospital

Dr. Paul Das

Family Physician at St. Michael's Hospital

Original air date: March 30, 2020

If you have a fever and cough, you could find yourself at St. Michael's COVID-19 Assessment Centre, where people who might have the virus can be screened and tested.

Drs. Lockwood and Das, co-medical directors of the Assessment Centre, worked with colleagues –including Chief of Emergency Medicine Carolyn Snider and teams from Infection Control, Family Medicine and hospital facilities and security – to set up the centre. Amazingly, it went from a sketched idea to an open facility in less than two weeks.

The team's priority was patient and staff safety. All visitors use an automated door. Physical distancing is strictly enforced. All staff wear personal protective equipment. During the assessment itself, there is minimal contact. Outside drinks and food are banned. The centre is located across the street from the hospital, in a ground floor room with its own entrance, to keep those with COVID-19 separate from other patients.

Testing procedures for COVID-19 are changing as the pandemic progresses, with a focus on frontline staff, vulnerable populations and those referred by public health. The centre also educates visitors on how to self-isolate and protect themselves and their communities. Dr. Lockwood stresses that anyone experiencing cold symptoms should assume they have COVID-19 and practise self-isolation for at least 14 days.

Both Dr. Das and Dr. Lockwood say that the pandemic will get worse before it gets better. And while they are anticipating a surge in the number of patients coming to the Assessment Centre, they're proud of the way the whole St. Michael's family, from the construction crew to the frontline staff to the cleaners and clerical staff, have come together to tackle the crisis and serve the community.



Dr. Joel Lockwood



Dr. Paul Das

Episode 5: Ventilators Demystified

Expert Guest

Dr. Art Slutsky

Critical Care Respiriologist at St. Michael's Hospital

Original air date: April 2, 2020

While many patients who develop COVID-19 experience mild symptoms, a smaller number require hospitalization, and even fewer need mechanical ventilation to help them breathe. Dr. Slutsky, former VP of Research at St. Michael's Hospital and one of the world's top experts in mechanical ventilation, explains that the COVID-19 virus can damage the lungs by blocking their ability to take in oxygen. People with hypertension, diabetes, heart disease or COPD and smokers are susceptible to the more serious symptoms.

When patients are admitted to hospital with breathing problems caused by COVID-19, the first step is to assist breathing through devices that exert pressure to push oxygen into the lungs. If those fail, says Dr. Slutsky, then doctors consider a ventilator, which involves a piston that pushes oxygen into the patient's lungs. Ventilators can save lives, but if they're used inappropriately, Dr. Slutsky warns, they can be detrimental. "We have to use gentle mechanical ventilation or risk injuring the lung more," he says. "So using the right strategy is important."

Right now, there are about 10 respirators per 100,000 people in Ontario. Dr. Slutsky wants to double that number, although he worries it still might not be enough to provide ventilation to everyone who needs it over the next weeks and months. His hope is that physical distancing can flatten the curve of COVID-19 infection and prevent large numbers of seriously ill patients from arriving in the ICU at the same time. He is also working with groups to develop a small ventilator that is currently in trials. And his colleague Dr. Laurent Bouchard is leading an international clinical trial that looks at ventilation strategies around the world.

St. Michael's is the premier centre for mechanical ventilation in Canada, thanks to the expertise of our physicians, our culture, and our focus on critical care as a priority area for research.

And that, he says, is exactly what's needed to defeat COVID-19.



Dr. Art Slutsky

Episode 6: Family Health in the Time of COVID-19

Expert Guests

Dr. Karen Weyman

Chief of Family Medicine at St. Michael's Hospital

Linda Jackson

Senior Clinical Program Director for Primary and Community Care at St. Michael's Hospital

Original air date: April 7, 2020

How can family health physicians continue to provide primary care for their patients while keeping everyone safe during a pandemic? That's the main concern for St. Michael's Family Health Teams, and it's why they converted almost all their patient visits to virtual care through telephone or video conferencing – in under a month.

It's a huge change for both patients and doctors, but Dr. Weyman and Linda Jackson say the transition is going well. When there are situations that require patients to come in to one of St. Michael's clinics, Dr. Weyman advises patients to phone first. They will be screened to protect staff and other patients, and personal protective equipment (PPE) will be used.

Many of the clinics' patients experience marginalization, homelessness and poverty, and Dr. Weyman and Ms. Jackson emphasize the importance of these patients receiving the quality of care they deserve. It's why clinic staff reach out to isolated seniors and other vulnerable patients to make sure their needs are met.

The shift to virtual care required a tremendous amount of planning and education. Non-essential tests and appointments had to be postponed. Psychologists, social workers and physiotherapists as well as primary care physicians conduct consultations over the phone or online. They also offer 24-7 phone access so patients are never left without care.



Dr. Karen Weyman, Dr. Bob Howard and Linda Jackson

Episode 7: COVID-19 and the Homelessness Crisis

Expert Guest

Dr. Stephen Hwang

Director of MAP Centre for Urban Health Solutions at
St. Michael's Hospital

Original air date: April 9, 2020

People experiencing homelessness are more likely to suffer from chronic health conditions, making them more vulnerable to COVID-19 infection and its serious complications. And they may have no place to self-isolate.

Dr. Hwang is worried about the potential for the disease to spread rapidly in shelters, and stresses the importance of screening. "A significant number of those experiencing homelessness will show symptoms like fever, cough, or shortness of breath, and they need to be sent to the Assessment Centre for testing," he says. "Toronto Public Health has prioritized homeless people for testing, so anyone with symptoms will be swabbed, but that raises a dilemma. After the swab is sent, those patients can't be sent back to the shelter to wait for results."

The city is opening 10 shelters with beds at least two metres apart, so those who are precariously housed can decompress and safely isolate. As well, St. Michael's is working with Inner City Health Associates to open hotel rooms where patients can await their test results.

Scientists at St. Michael's MAP Centre for Urban Health Solutions are also conducting research in the area of COVID-19, homelessness and urban health. They are leading the charge to find a drug to minimize COVID-19 transmission, and exploring how financial support might alleviate the need for the precariously housed to leave home for work so that they can maintain physical distancing

These initiatives can provide long-term benefits, Dr. Hwang explains. "COVID-19 presents a tremendous opportunity to think of homelessness in a different way," he says. "There's a cost to doing nothing and accepting the status quo, and it's never been more apparent. We're taking drastic measures now, but when COVID-19 has passed, we need to ask ourselves how we can take this opportunity to end homelessness for good rather than everyone just going back to the shelters. We can tackle these tough problems together as a community."



Dr. Stephen Hwang

Episode 8: Update on Testing, Treatment and Flattening the Curve

Expert Guest

Dr. Matthew Muller

Medical Director of Infection Prevention and Control at
St. Michael's Hospital

Original air date: April 14, 2020

As the COVID-19 pandemic transforms the way we live and work, Dr. Muller returns with an update on what St. Michael's Hospital is doing to manage the crisis and what the near future might hold.

St. Michael's ICU has seen an increase in the number of COVID-19 patients, but it is not overwhelmed, and Dr. Muller is hopeful that physical distancing is helping to flatten the curve. He warns that it's too early to consider relaxing restrictions on social gatherings. "For the next few weeks, we need to be strict to help the health-care system manage," he says. "It's unclear how we'll move forward, because if we relax these measures, it might result in another flare-up. But we'll see what happens in China and European countries."

Our scientists have been learning more about this unpredictable and often deadly virus that's causing the pandemic, says Dr. Muller. We're identifying a longer list of possible COVID-19 symptoms (such as a runny nose and diarrhea). We've expanded how we test protocols. And we are conducting more than 80 research studies.

"There's a lot of innovation going on that could be helpful," he says. "Increased testing, lots of trials of drugs and treatments, and how to come up with things that are in short supply, like ways of repurposing personal protective equipment for multiple use."

While he's hopeful, Dr. Muller adds that a vaccine is not yet on the horizon. "Vaccine development doesn't happen overnight," he says. "Trials have started, but that can give people a false sense of hope. There are no guarantees, and it's not a short-term solution. It will take a substantial amount of time."



Dr. Matthew Muller

Episode 9: Nursing in the COVID-19 pandemic

Expert Guest

Fergus Cabbage

ICU nurse at St. Michael's Hospital

Original air date: April 17, 2020

Fergus Cabbage has worked as an ICU nurse at St. Michael's Hospital for 15 years, but he's never seen anything like COVID-19. The pandemic has resulted in long hours of caring for sick patients, fears about COVID-19 infection, and countless new protocols to follow.

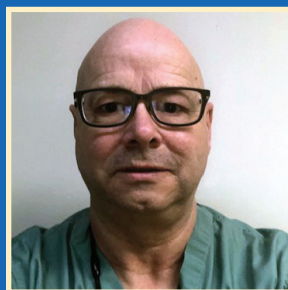
"When we go into the rooms now, we use full PPE: face shield, N95 mask, gloves and gowns," he says. "'Donning and doffing' the PPE properly is very important. Most health-care workers get infected during the doffing. We have someone watching to ensure there are no broken protocols. We try to limit how often we visit patients to protect our PPE supplies, and offer intravenous lines outside of the room instead of inside."

Cabbage and his colleagues also try to mitigate the isolation faced by their patients. "No one is allowed to visit, and I can't imagine how difficult that would be," he says. "We provide updates over the telephone and offer FaceTime, Zoom or Skype so they can speak to their families."

The opening of several floors in St. Michael's new Peter Gilgan Patient Care Tower for COVID-19 patients will improve privacy and infection control, Cabbage says. "It's all single rooms, very modern. It's going to be fantastic."

And despite the pandemic, Cabbage says the ICU staff is holding up well. "We've increased our staffing levels from 25 to 35," he says. "There's a long list of nurses who want to come in to help. Management has given us all the support we need. And the support from the community is great. We get food delivered to us, and we had a fire crew support us with sirens."

Underlying everything, Cabbage says, is the way staff at St. Michael's work together, from doctors and nurses to chaplains, physiotherapists, security, pharmacy, porters, labs, radiologists, infectious disease people and more. "We've all gotten on so well," he says. "We're really working as a team."



Fergus Cabbage

Episode 10: The Global Research Race to End COVID-19

Expert Guest

Dr. Ori Rotstein

VP of Research and Innovation at Unity Health Toronto and the Keenan Chair in Research Leadership at St. Michael's Hospital

Original air date: April 17, 2020

Everyone wants scientists to find a vaccine for COVID-19 -- or at least a treatment that could stop it from killing people -- and we want it now. But despite all the studies and tests and trials going on around the world, Dr. Rotstein warns, developing a safe treatment or vaccine can be a long, slow and expensive process.

"I'm an optimistic person, but we need to understand the gravity of the situation," he says. "If we don't use science to understand the pandemic, we're going to have it with us for a while. We're contributing globally and locally, but we all have to work together."

When the pandemic hit, Dr. Rotstein and his team evaluated St. Michael's vast array of research projects in progress and identified the most essential ones -- mostly COVID-19-related work -- that would continue while others were put on hold. Dr. Rotstein points out that St. Michael's has expertise in many research areas related to COVID-19, including molecular biology, lung inflammation, black box technology, marginalized populations and mechanical ventilation. "The strength of the institution aligns really well to the key questions to managing and treating the COVID pandemic," he says.

With the pandemic in mind, the St. Michael's Hospital Foundation's Research Innovation Council's annual investment dinner, which awards donor funds to research projects, was moved up from June to April to support COVID-related work, and the Foundation has launched the Power Fund to raise money for COVID-19 research.

"Research funding is scarce," Dr. Rotstein says. "We have way more great ideas than funding, and if there were ever a time that money would be extremely effective, it's now. But I'm cautiously optimistic that we'll have impact. We're focused and we know what we need to do."



Dr. Ori Rotstein