LEADING INNOVATION FOR A HEALTHIER WORLD
CHEF DE FILE EN INNOVATION POUR UN MONDE EN SANTÉ
Faculty of Medicine
International and Global Health Office (IGHO)
COVID19 Webinar Series 2020

COVID-19 Global Pandemic and Global Response
Friday, April 17, 2020  11:00am-12:00pm

Guest speaker: Mark Walker, MD, FRCSC, MSc, MHCM
Program

• Welcome remarks by Moderator
  • Introduction of Guest Speaker
  • Disclosures
  • Accreditation
  • Learning Objectives

• Presentation

• Questions from participants – coordinated by moderator
Biography – Dr. Mark Walker

Dr. Walker is a healthcare executive and the current Chairman and Chief of the Department of Obstetrics and Gynecology at the University of Ottawa and The Ottawa Hospital, and has recently taken on the role of Interim Director of Global Health and Internationalization with the Faculty of Medicine.

As well as being a highly respected clinician and researcher, Dr. Walker holds a Masters in Epidemiology from the University of Toronto and a Masters in Health Care Management from Harvard University.

Dr. Walker's main research interests include health services, population health, and clinical studies in perinatology. His work in research has been as an epidemiologist, public health advocate and clinical trialist.

He has published more than 330 peer reviewed articles and been awarded more than $15 million as Principal Investigator in research.

He is currently a Senior Scientist and the Scientific Director of the Better Outcomes Registry & Network (BORN Ontario) as well as a board member of the CHEO Research Institute Dr. Walker is the co-founder of the Obstetrics & Maternal Newborn Investigations (OMNI) Research Group, at the Ottawa Hospital Research Institute (OHRI).

He has supervised 117 trainees from summer students, Post-Doctoral Fellows, Residents and Clinical Fellows.
Disclosure of Commercial Support

• Potential for conflict(s) of interest: None
Accreditation

• **RCPSC**: This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada, and approved by the University of Ottawa’s Office of Continuing Professional Development. You may claim a maximum of **1.0 hours** (credits are automatically calculated).

• **CFPC**: This one-credit-per-hour Group Learning program meets the certification criteria of the College of Family Physicians of Canada and has been certified by the University of Ottawa’s Office of Continuing Professional Development for up to **1.00 Mainpro+ credits**.
COVID-19
Global Pandemic and Global Response

Dr Mark Walker, MD, MSc, MHCM, FRCS(C)
University of Ottawa / Faculty of Medicine
Interim Director Internationalization and Global Health

uOttawa
Faculté de médecine
Faculty of Medicine
Learning Objectives

To describe what COVID-19 is and the impact of globalization on its spread.

To identify how we leveraged our global resources and partnership to prepare for the pandemic.

To explain how the global community of scientists will work together for treatments and a vaccine.
Video

https://www.youtube.com/watch?v=j4Xiow30bGo
Quiz
How the virus spread around the world
Red dots show new confirmed cases on featured date. Shading indicates a country’s first case

**22 January**
Daily cases 555 | Total cases 555
New cases in Thailand, Japan, China, South Korea, Taiwan and US

**26 January**
Daily cases 684 | Total cases 2,118
New cases in Australia and Canada

**31 January**
Daily cases 1,693 | Total cases 9,927
New cases in Italy, Sweden, Russia and United Kingdom

**19 February**
Daily cases 503 | Total cases 75,639
New cases in Iran

**26 February**
Daily cases 982 | Total cases 81,395
New cases in Pakistan, Brazil, Georgia, Greece, North Macedonia, Norway and Romania

**3 March**
Daily cases 2,534 | Total cases 92,840
New cases in Argentina, Chile, Jordan and Ukraine

**9 March**
Daily cases 3,766 | Total cases 113,561
New cases in Albania, Cyprus and Brunei

**13 March**
Daily cases 16,850 | Total cases 145,193
New cases in Kazakhstan, Ethiopia, Sudan, Guinea, Kenya and Antigua and Barb.

**22 March**
Daily cases 31,431 | Total cases 335,955
New cases in Dominica, Grenada, Mozambique and Syria
Questions from participants
March 11, 2020 Global Pandemic Declared by WHO
COVID-19 Update

March 11, 2020 / as of 8:13 AM EST

1,016 U.S. cases
31 U.S. deaths

121,061 Worldwide cases
4,368 Worldwide deaths

Source: CDC, WHO; JHU CSSE; Worldometers.info
### COVID-19 in Italia

**Total Cases:** 25,058

**Deaths:** 1,697

**Operative Sanitary Operators:** 2,339

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Health Care System challenges

- Be prepared:
  - The epidemic runs very fast even geographically
  - SARS-CoV-2 is very contagious
  - The HS may be soon overwhelmed
  - Internal coordination (Administration, Physicians, Pharmacy, Supplies, …)
  - Individual Protective Devices (supply, correct use, etc.)
  - Diagnostic (false negative nasofaringeal swabs, BAL…)
  - Therapeutic guidelines (no established regimens)
  - Impact on other health needs
Therapeutic options

- Protease inhibitors (lopinavir? darunavir?)
- Chloroquine
- Remdesivir
- Tocilizumab
- Other IL-6 inhibitors
- ....
Key messages

- SARS-COV-2 spreads rapidly in geographical terms unless drastic restriction measures are taken
- SARS-COV-2 ramps very quickly in terms of epidemic curve
- Hospitals need to have a well-established emergency plan (beds, staff, equipment, supplies, etc.)
- Clinical course may be sneaky, with quick worsening of respiratory function
- Lung TC is quite typical, with basilar and peripheral infiltrates (high PPV)
- Nasopharingeal swab may be negative at first (BAL)
- High infectiousness among health care workers
- Supply stock (mask, ventilators, etc.)
FACTORS THAT INCREASE RISK OF TRANSMISSION TO HEALTHCARE PROVIDERS

- Inadequate personal protection use at the beginning of the epidemic
- Long-time exposure to large scale of infected patients
- Shortage of PPE
- Insufficient training of frontline staff for infection prevention and control
Questions from participants
Global Solutions
Quiz
Figure 3. Confirmed Ottawa COVID-19 cases currently in hospital or intensive care, by day
FLATTENING THE COVID-19 CURVE

# OF CASES

WITHOUT PROTECTIVE MEASURES

HEALTH CARE SYSTEM CAPACITY

TIME SINCE THE FIRST CASE
Timing and width of peak uncertain due to:
- Stochasticity in early dynamics
- Heterogeneities in contact patterns
- Spatial variation
- Uncertainty in key epidemiological parameters

Epidemic growth, doubling time 4-7 days

Social distancing flattens curve

Risk of resurgence following lifting of interventions
**1st Wave**
- Immediate mortality and morbidity of COVID-19

**2nd Wave**
- Impact of resource restriction on urgent non-COVID conditions

**3rd Wave**
- Impact of interrupted care on chronic conditions

**1st Wave Tail**
- Post-ICU recovery

**4th Wave**
- Psychic trauma
- Mental illness
- Economic injury
- Burnout
1. Collect blood sample
2. Add blood sample to sample well
3. Place 2-3 drops of buffer in sample well
4. Read results after 15 minutes
Questions from participants
Feedback *(is very much appreciated)*

• Please take a brief moment to complete the online evaluation for today’s webinar
• It will be sent to you by email today
• You can also access it by clicking the link below:

  https://www.surveymonkey.ca/r/IGHO-COVID19_2