



## *COVID-19 Through a Quality Lens*

# Medical Imaging – A Person- and Family-Centered Approach to COVID-19.

**Bruce B. Forster MSc MD FRCPC FCAR**  
Medical Lead, Essential Imaging, BCPSQC

**Sarah Carriere RN MN**  
Acting Director, Health System Improvement  
BCPSQC



Thursday July 23, 2020

# Disclosures

Dr. Forster has an equity position in a private imaging facility in Vancouver BC



# Plan for Today

How did the medical imaging community respond to COVID-19?

What did we change and why?

What can you learn from their experience and adapt to your environment?

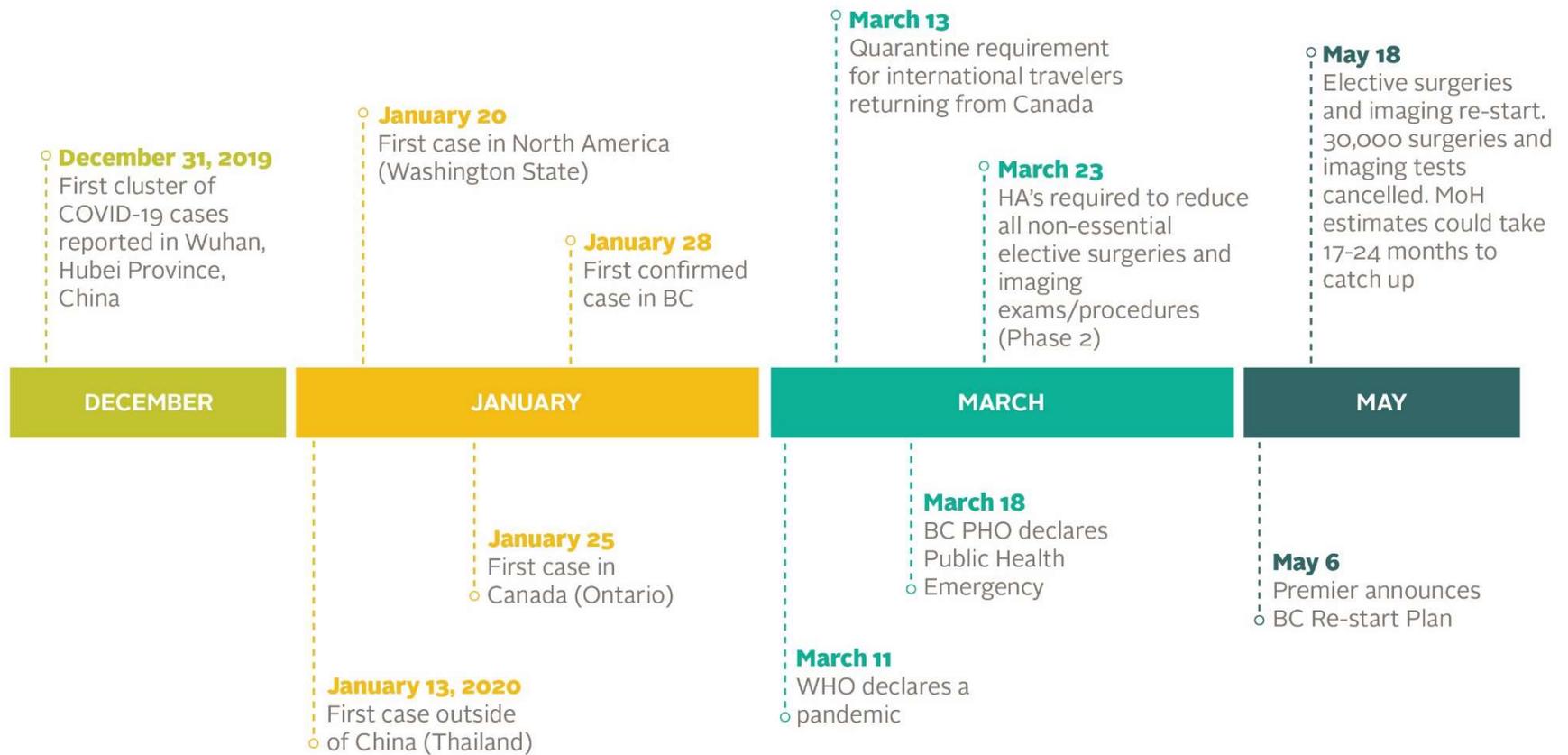


# What is Your Profession?

Radiologist	Radiology technologist	Physician	RN	Quality leader	Administration	Other health care provider



## COVID-19 Pandemic Key Dates

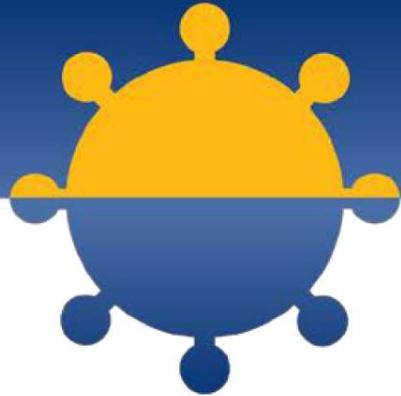


When Dr. Bonnie Henry declared a second public health emergency (COVID-19), how did you feel?



Once the emergency was declared, how confident were you that your work environment would rise to the challenge, adapt and redesign?





# Coronavirus COVID-19

BC Centre for Disease Control | BC Ministry of Health



Provincial Guidance for Medical Imaging Services within British Columbia During the COVID-19 Pandemic Phases

June 1, 2020

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**Table 1. Level of Pandemic Services for Medical Imaging**

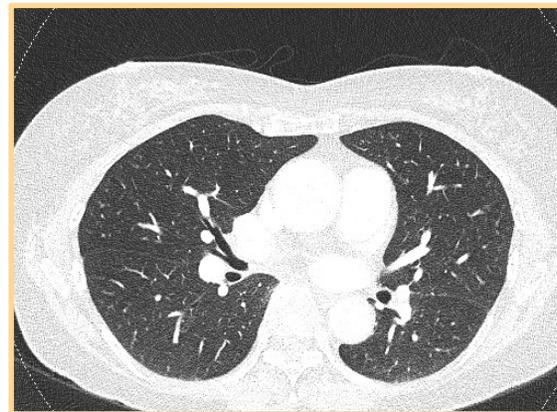
Level	Description of Service Level
1	Normal services levels operating at the same level pre-COVID pandemic (Status quo)
2	Only urgent* (priority 2) and emergent* (priority 1) services are performed
3	Only emergent* (priority 1) services are performed
4	No services are performed as the site is closed
5	Site is designated to perform only a specific type of service
6	All services are resuming from Level 2, 3 or 4 towards Level 1 status but with IPAC COVID-19 protocols still in effect (as per BCCDC guidance or Ministry of Health directive)

**Note:** \* Urgent or emergent services are defined as those services which are necessary to diagnose and/or treat disease that is immediately threatening to a patient's health or would have a significant impact to future health if not performed as soon as possible.



# Role of Imaging in COVID-19

- Imaging, even conventional radiography should not be used for the diagnosis of COVID-19 infection. COVID-19 is a diagnosis made with a nucleic acid test on an appropriate respiratory sample.
- A negative chest X-ray does not exclude COVID-19.
- Chest X-ray or chest CT should only be performed if the results are expected to influence patient management.
- Bedside US can be used to grade severity infection



# MEDICAL IMAGING DURING THE COVID-19 PANDEMIC

## You can help our health care system respond to COVID-19

Right now our system is prioritizing its resources to ensure care providers can respond to the pandemic. This involves ensuring chest CTs and X-rays are available when needed most.

Chest CTs and X-rays do not help to diagnose COVID-19 for patients with a recent onset of symptoms but our care providers are receiving requests to conduct them. These tests are only necessary to evaluate patients who have tested positive for COVID-19 and show signs of complications,<sup>1</sup> and there are guidelines that help care providers know if a test is necessary.

### WHAT CAN YOU DO?

The most important things you can do to take care of your health are:



Stay home and stay away from others



Wash your hands regularly



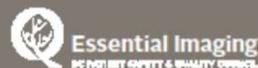
Avoid touching your face

### STAY INFORMED

- If you think you have COVID-19, check the [BC Centre for Disease Control's website](#) for a list of common symptoms and what you should do next.
- You can also use the [BC COVID-19 Self-Assessment Tool](#) to determine if you need further assessment or testing. If you still have questions after completing the self-assessment, contact your care provider or call 8-1-1.
- Things are changing quickly as we learn more about COVID-19 and how to treat the virus. We will update this post if best practice recommendations change.

<sup>1</sup>Canadian Association of Radiologists, Canadian Society of Thoracic Radiology and Canadian Association of Radiologists' statement on COVID-19 [Internet public statement]. Ottawa Canada; March 16, 2020. Available from: <https://bit.ly/3u1Q3lc>

BC Medical Imaging  
Advisory Committee



Learn more and access  
free resources at:

[bcpsqc.ca/essential](https://bcpsqc.ca/essential)  
[#bcpsqc.ca](https://www.instagram.com/bcpsqc.ca)



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604.688.8210



## Level 2 Impact (mid March)

- Pre-existing and pre-booked requisitions were triaged by radiologists
- All non-urgent and non-emergent exams were postponed with regular review
- Referring practitioners were encouraged to continue the normal practice of sending in all radiology requisitions emphasizing complete history
- Consultation with Radiology either DoD or RACE line to change priority



# BCRS/CAR Priority Levels

Priority Level	Description	Time Interval Benchmark
P1	<b>Emergent:</b> An examination immediately necessary to diagnose and/or treat life-threatening disease or injury.	Immediately to maximum 24 hours
P2	<b>Urgent:</b> An examination necessary to diagnose and/or treat disease or injury and/or alter treatment plan that is not immediately threatening to life or limb.	Maximum 7 calendar days
P3	<b>Semi-urgent:</b> An examination necessary to diagnose and/or treat disease or injury and/or alter treatment plan, where provided clinical information requires that the examination be performed sooner than the P4 benchmark period.	Maximum 30 calendar days
P4	<b>Non-urgent:</b> An examination necessary to diagnose and/or treat disease or injury, for long-range management or for prevention.	Maximum 60 calendar days
P5	<b>Follow-up:</b> The exam appointment date requested by the referring practitioner for the purpose of disease surveillance.	No time interval as they have a specified procedure date



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# Advice from Singapore

*‘Most important things you can do during pandemic response is keep reviewing your workflows and ensure optimal communication on the ground’*



# Reflection



# Level 2 Impact: Human Resources

- As imaging volumes dropped, staffing dropped
- ED visits greatly reduced
- Decrease in efficiency



**Table 4. The Provincial Estimated Cleaning Times by Modality (in minutes)**

MODALITY	1-PERSON	2-PERSON
MRI	15	10
CT	5	3
Mammography	5-7	-
X-Ray	3-4	2-3
Interventional Radiology	15	10
Ultrasound, including echo	10-15	5-10
Nuclear Medicine	7	4
Bone Density	5	3

Interventional Radiology: Most cases are AGMP, therefore full N95 donning/doffing, pause between cases for air exchange, enhanced contact surface hygiene, **temporal spacing of teams**



**Identified sources of anxiety amongst HCP (Adapted from “8 sources of anxiety amongst health care professionals; Shanafelt *et al*, 2020)**

1. Access to appropriate PPE
2. Being exposed to COVID-19 at work and taking the infection home to family
3. Not having rapid access to testing if they develop COVID-19 symptoms and concomitant fear of propagating the infection at work
4. Uncertainty that their organization will support/take care of their personal and family needs if they develop an infection
5. Access to childcare during increased work hours and school closures
6. Support for other personal and family needs as work hours and demands increase

[www.car.ca](http://www.car.ca)



# Resources for Coping: Staff

- **Communication!**
  - Frequent updates on cases, PPE
  - Scientific information on COVID-19 (UBC)
  - Town-halls
  - PHO/MOH
  - Education on burnout
  - Role social media
- **Roster of resources/approach to wellness**





## SIX PRINCIPLES OF STAYING OKAY

These principles are often mislabeled as "basic," but actually should be called "advanced" because they are challenging to accomplish on a daily basis. However, their impact on your mental health cannot be understated.



## COPING WITH ANXIETY

### HIGH QUALITY SLEEP

Aim for 7-9 hours per night, go to bed at a consistent time if possible, avoid screens 30-60 minutes before bed, have a wind-down routine, and avoid caffeine after 12pm.

### PHYSICAL ACTIVITY

At least 150 minutes of moderate to vigorous physical activity per week, in bouts as short as 10 minutes or more.

### SOCIAL CONNECTION

Aim to call or video chat with at least one friend or family member per day. New applications such as "Houseparty" can allow you to get together with a big group.

### MANAGING MEDIA INTAKE

Consider how your media intake may be impacting your mental health, and consider limiting it to the essentials and trusted sources.

### AVOIDING MALADAPTIVE COPING

Excess caffeine, sugar, processed foods, alcohol, and "numbing" activities, although they may help regulate emotions in the short-term, could be unhelpful long-term (sometimes as soon as the next hour or day).

### NUTRITION & HYDRATION

Make sure that you are drinking enough water. Consume balanced meals to maintain even blood sugar levels throughout the day.

## "THREE STEPS TO COPING WITH ANYTHING, INCLUDING COVID-19"

Adopted from video by Drs. Bob Maunder and Jon Hunter, Staff Psychiatrists at UoFT. See the full video at [youtube.com/watch?v=ip03AaqbZq8](https://www.youtube.com/watch?v=ip03AaqbZq8), and reference (Folkman and Greer 2000).

# 1

### DEALING WITH THE THINGS YOU CAN CONTROL

#### PROBLEM-FOCUSED COPING

- Using available PPE.
- Clear policies, procedures, and training.
- Problem solving local complications.
- Getting the facts.
- Clear communication (respectful assertive dialogue and learning).



Offering and accepting help and support – avoid emotional isolation, even with social isolation.

Remember our shared experience and expertise.

Be prepared for procedures to change with new information.

### FEELING BETTER ABOUT THE THINGS YOU CAN'T CONTROL

# 2

#### EMOTION-FOCUSED COPING



# UBC Radiology COVID-19 Grand Round series

Cisco Webex Meetings

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loretta (Host) Don's Mac Air Radiology Grand Rounds epasin

12:05



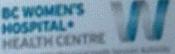
**ANXIETY, UNCERTAINTY, EXHAUSTION  
& GRIEF: STRATEGIES FOR COPING  
WITH COVID-19**

Dr Theresa Newlove, R.Psych  
Director of Workplace Wellness Culture & Experience  
Adjunct Professor, Dept of Psychology, UBC  
01 April 2020

 Provincial Health Services Authority  
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 BC CHILDREN'S HOSPITAL

 CANY HILL  
HEALTH SERVICES FOR CHILDREN

 BC WOMEN'S HOSPITAL HEALTH CENTRE  
A part of the Provincial Health Services Authority



# UBC Radiology COVID-19 Grand Round Series



**GRAND ROUNDS**  
DEPARTMENT OF RADIOLOGY  
THE UNIVERSITY OF BRITISH COLUMBIA

**Wed., May 20th**  
**12-1:00pm PST**

Title: **The Role of Chest Imaging in Patient Management during the COVID-19 Pandemic**



Speakers: **Drs.**  
**Geoffrey Rubin &**  
**Christopher Ryerson**



LIVE WEBCAST: <http://webex.med.ubc.ca/webex2>



# Radiology Resumption of Clinical Services



Canadian Association of Radiologists  
L'Association canadienne des radiologistes



[bcpsqc.ca](http://bcpsqc.ca)



# Recovery

- Public health response to pandemic in April/May resulted in 50-70% drop in radiology services, and 90% drop in mammography services across Canada.
- Result is huge delays in diagnostic imaging, screening exams, image-guided procedures and in interventional radiology
- Effective recovery requires strategy, patience, collaboration, flexibility and attention to patient anxiety and HCW anxiety/burnout



# Resuming non-urgent medical exams

- As services resume, MI Depts began performing exams based on highest urgency using robust prioritization criteria.
- Balance of need to exceed pre-COVID exam volumes to reduce wait times, vs limited number of technologists and risk of burnout
- Coordinate with other services
- Breast screening:
  - Initial screens, women ages 50-74
  - Remaining women to be triaged based on time since last screen



# Medical Imaging Appropriateness



## Start the Conversation About Medical Imaging!

Appropriate medical imaging contributes to improved patient care and ensures vital imaging is available when it is needed the most.

It's important that you have all the information you need in order to make informed decisions about your care.

### Four questions to ask your care provider when discussing imaging tests:<sup>1</sup>

1. Do I really need this test, treatment or procedure?
2. What are the downsides?
3. Are there simpler, safer options?
4. What happens if I do nothing?



# Patient Journey

## **PLAN AHEAD: ENSURING YOUR SAFETY IN THE MEDICAL IMAGING DEPARTMENT**

Welcome to our hospital. While you are here, your safety is our priority.

We know that you might be worried about returning to the hospital but please know that we are committed to providing a safe environment for you and health care providers. To help ensure you are prepared and comfortable, please follow these simple steps before, during and after your appointment.



## Returning to Normal: Modified Patient Anxiety & Information Survey for Medical Imaging Tests

\*Age:

\*Gender:

\*1. I am worried about coming into the hospital.

- Strongly Disagree  Disagree  Undecided  Agree  Strongly Agree

\*2. The risk of getting COVID-19 is on my mind constantly.

- Strongly Disagree  Disagree  Undecided  Agree  Strongly Agree

\*3. I would like to know as much as possible about protecting myself and health care providers against COVID-19.

- Strongly Disagree  Disagree  Undecided  Agree  Strongly Agree

\*4. I am worried about my medical imaging appointment.

- Strongly Disagree  Disagree  Undecided  Agree  Strongly Agree

\*5. The safety of radiology department staff is on my mind constantly.

- Strongly Disagree  Disagree  Undecided  Agree  Strongly Agree

\*6. I would like to know as much as possible about preparing for my medical imaging appointment.

- Strongly Disagree  Disagree  Undecided  Agree  Strongly Agree



Back

Finish



# Optimizing Response to Second Wave

- Communication
- Safety
- Moderate response based on local setting
- Equity/Access
- Technology
- Timely



# Crisis Leadership

Canadian Association of Radiologists Journal



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## Crisis Leadership During and Following COVID-19

[Bruce B. Forster](#), MSc, MD, [Michael N. Patlas](#), MD, FRCPC, FASER, FCAR, FSAR, [Frank J. Lexa](#), MD, MBA

First Published May 12, 2020 | [Editorial](#) | [Find in PubMed](#)

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<https://doi.org/10.1177/0846537120926752>



[bcpsqc.ca](https://bcpsqc.ca)



*‘The pessimist complains about the wind.  
The optimist expects it to change.  
The leader adjusts the sails.’*  
—John Maxwell



# Delegate from BC Pandemic Study Group

*“[It was an] absolutely an honor and a privilege to be working with B.C. colleagues re: our COVID-19 response. The Spirit of cooperation across the board – similar to New Zealand - we’re a team of 5 million.”*



# Thank you



**Bruce Forster**



@bruceforster



Bruce.forster@ubc.ca



**Sarah Carriere**



scarriere@bcpsqc.ca

