BC Cancer Research Institute COVID-19 Phase 1

TRAINING MODULE

Version 1.0

CONTENTS (HYPERLINKED)

ORGANIZATION AND CONTACTS MATRIX

Who to contact if you have questions AFTER the training module and during startup.

- Please review guidance and training documents carefully.
- Also, read through the FAQ's at the end of the training module, as you will find answers to many of your questions here.
- If you have any questions about the measures and procedures of BCCRCI's Return-to Work Plan/ Re-Entry Plan, or have any concerns about your health and safety in the workplace, please first contact the research or operations lead for your department, as listed below.
- If they are unable to answer your questions, the leads will contact research administration.

DEPARTMENT	RESEARCH LEAD	OPERATIONAL LEAD
Cancer Control Research	Dr. Stuart Peacock	Magali Coustalin
Clinical Research	Dr. Bernie Eigl	Chirag Kariya
Deeley Research Centre	Dr. Brad Nelson	David Bond
Experimental Therapeutics	Dr. Marcel Bally	Brent Sutherland
Genome Sciences Centre	Dr. Marco Marra	Robyn Roscoe
Integrative Oncology	Dr. Calum MacAulay	Jayne Hunter
Molecular Oncology	Dr. Sam Aparicio	Cynthia Ferguson
Lymphoid Cancer Research	Dr. Christian Steidl	Maddy Shemko
Terry Fox Laboratory	Dr. Pamela Hoodless	Amanda Kotzer

COVID-19 AND SARS-CoV-2

BACKGROUND

Covid-19 is a very serious disease that has taken many lives and sickened hundreds of thousands of people around the world. As of May 13th, there are 4.29 million confirmed cases and 293,000 deaths worldwide. In Canada, the number of confirmed cases stands at 71,200 with 5,169 deaths while in British Columbia there are now 2,360 confirmed cases and 131 deaths.

John Hopkins University Coronavirus Resource Center

The WHO mortality rate estimate is 3.4 % worldwide.

WHO IS AT RISK?

Anyone can become sick with Covid-19 but individuals 65 and older and those at any age with underlying medical conditions including those listed below are at an increased risk of a more serious outcome.

- Chronic lung disease or moderate to severe asthma
- Serious heart conditions
- Compromised immunity (e.g. due to cancer treatment, bone marrow transplant, immune deficiency, HIV/AIDS, use of immune-suppressor drugs, etc.)
- Obesity (BMI 40 or greater)
- Diabetes
- Chronic kidney disease, undergoing dialysis
- Liver disease

https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-at-higher-risk.htm

Consult with your family physician or an occupational health nurse, if you have any concerns about your return to work.

WHAT ARE THE SYMPTOMS OF COVID-19

The most common symptoms include the following:

- **Fever**
- **Cough**
- **Stuffy and runny nose**
- **Sore throat and painful swallowing**
- **Headache**
- **Fatigue**
- **Chills**

- **Muscle aches**
- **Loss of appetite**

Some people develop more severe symptoms:

- **High fever**
- **Severe cough**
- **Shortness of breath**
- **Pneumonia**

There have been cases where patients develop neurological and gastrointestinal symptoms such as vomiting and diarrhea, with or without respiratory symptoms.

https://www.health.harvard.edu/diseases-and-conditions/covid-19-basics

http://www.bccdc.ca/health-info/diseases-conditions/covid-19/about-covid-19/symptoms

HOW IS THE SARS-CoV-2 VIRUS, RESPONSIBLE FOR COVID-19, TRANSMITTED?

The SARS-CoV-2 virus infects the nose, throat and lungs but it can also infect the heart, kidney and GI tract.

This virus is transmitted through close contact from person to person in respiratory droplets from an infected individual. These infectious droplets are released upon sneezing, coughing or talking and then enter the mouth or nose or be inhaled into the lungs of those nearby.

Social distancing of at least 2 m is critical to help reduce the risk of person to person contact.

Another significant mode of transmission is through **touching contaminated objects or surfaces** and then touching the face, especially the nose, mouth and eyes before thorough hand washing.

Proper and frequent hand washing is critical to help reduce the risk of infection.

Most often people who are infected show symptoms but there is indication that there may also be asymptomatic spreaders of the virus.

https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks.html#h

https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html

https://www.health.harvard.edu/diseases-and-conditions/covid-19-basics

WHAT IS THE INCUBATION PERIOD FOR SARS-CoV-2?

On average, the incubation period is from three to five days. However, there have been cases where symptoms have appeared in as early as three days and as late as 13 days following an exposure.

https://www.health.harvard.edu/diseases-and-conditions/covid-19-basics

HOW LONG DOES THE VIRUS SURVIVE ON SURFACES?

The SARS-CoV-2 has been shown to survive for long periods of time on a variety of surfaces:

- Cardboard up to 24 hours
- Plastic - up to two to three days
- Stainless steel - up to two to three days
- Copper up to four hours
- Aerosols - detected viable virus in aerosols after three hours of sampling; observed a reduction in the infectious titer from 10^3.5 to 10^2.7 50% tissue culture infectious dose(TCID) per liter of air.

N van Doremalen, *et al*. Aerosol and surface stability of HCoV-19 (SARS-CoV-2) compared to SARS-CoV-1. *The New England Journal of Medicine*. DOI: 10.1056/NEJMc2004973 (2020).

It is important to understand that environmental factors such as temperature, humidity and exposure to sunlight will affect survival times.

Frequent decontamination of surfaces, equipment, keyboards, computer mice, counter, door handles, push bars, light switches, elevator buttons and all other high touch surfaces is critical to help reduce the risk of infection.

WHAT IS THE SUSCEPTIBILITY OF THE SARS-CoV-2 TO DISINFECTANTS?

The SARS-CoV-2 is an enveloped virus and therefore one of the easiest to kill.

There are many chemical disinfectants that are effective against the coronavirus for surface decontamination including:

- **Ethanol 70%, 10 minutes contact time**
- Sodium hypochlorite 0.1%, 5 minutes contact
- 0.5 % Hydrogen peroxide, 5 minutes
- Quaternary ammonium compounds; follow manufacturer's recommendations
- Phenolic compounds; follow manufacturer's recommendations

Refer to Health Canada's *Hard surface disinfectants and hand sanitizers proven effective against Covid-19* for a list of surface disinfectants approved in Canada and the *EPA List N: Disinfectants for Use against SARS-CoV-2* for information that also includes on contact times.

Observe recommended contact times, use at the appropriate concentration and note the expiry on the container. Also, always make sure the disinfectant is compatible with the surface it is applied to and follow manufacturer's recommendations when used on equipment.

Note that chemical disinfectants can be harmful if not handled properly. They may cause irritation to the eyes, skin, mucous membranes and respiratory system. Flammability is another hazard to consider as is the case for alcohols. Always read the safety data sheet and follow manufacturer's instructions.

MITIGATING RISK

Core Principles

- **We will follow BC public health advice** and that of Worksafe BC, PHSA and align with UBC to the maximum extent practical
- **Re-opening will be phased** based on public health guidelines and may be reversed or modified at any time
- **Mandatory training and risk assessment** will form part of the reopening, applicable to all staff. No exceptions.
- **Audit/monitoring of the process** will be carried out and plans may be revised based on experiences gained.
- **Non-compliance** with the re-opening measures, will be regarded as a **safety infraction** and will be handled via the normal HR processes for operational safety infractions in the workplace. It important that everyone read and apply the guidelines

BC Public Health and Workplace BC Guidelines

The BC Ministry of Health has imposed a number of conditions that businesses and organizations must meet in order to reopen and resume their operations, albeit at significantly reduced levels.

- We are a large facility with close working in some areas and links to nearby hospitals when at full capacity. Specific measures beyond the general public health may be needed.
- Alignment with UBC as far as practical.
- The bedrock of safe opening requires everyone to adopt/practice the public health measures, at all times.
    - DO NOT come to work if you or someone in your family unit has symptoms
    - Observe physical distancing
    - Frequent handwashing
- Where possible work from home and make adjustments for this
- Preparation for second/ongoing waves: The virus will be with us for many months unfortunately, a second wave may occur, or pop-up outbreaks. Advice and plans may change.

***BC's Restart Plan*,**

This the provincial government's response plan for Covid-19, presents a number of measures and controls that are critical in reducing the risk of transmission in the workplace (and everywhere).

We will be adhering to these guidelines. If the guidance is updated our plans may change and have to reverse, at any moment.

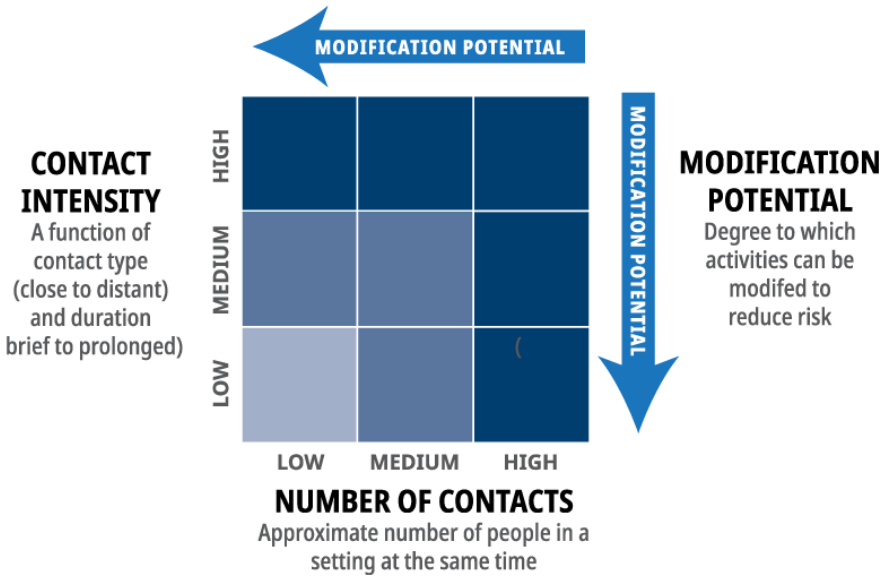
We may need to take building or operation specific measures to be compliant with the guidelines.

Below is an excerpt from the BC Restart Plan (Dated May 6th 2020).

What the New Normal Means for Employers and Public Institutions

The risk of transmission at busy workplaces and other institutions is a direct function of two variables: the number of contacts (the number of people present at the same time) and the contact intensity (the type of contact ie. close or distant and the length of contact ie. brief or prolonged). These are factors that we can rate as low, medium and high risks.

FIGURE 6: Reducing transmission



Based on these factors, steps can be taken to reduce the risk, including:

- ❏ *Physical distancing measures – measures to reduce the density of people*
- ❏ *Engineering controls – physical barriers (like plexiglass at checkouts) or increased ventilation*
- ❏ *Administrative controls – clear rules and guidelines*
- ❏ *Personal protective equipment – like the use of non-medical masks*

These modifications and controls, combined with the following measures, can reduce the risk of transmission.

- ❏ *Create clear workplace policies that ensure people with cold or flu symptoms do not come to work*
- ❏ *Implement sick day policies that allow people to be off or work safely from home when they are ill or have symptoms of a cold or flu*
- ❏ *Provide work from home options, when possible, to reduce contact intensity. When it's not an option, consider measures such as staggered shifts and virtual meetings as much as possible*

- ❏ *Implement strategies that reduce the number and intensity of contacts – from greater use of non-medical masks to more checkouts and increased shopping hours*
- ❏ *Clean "high-touch" areas in workplaces and retail outlets frequently and provide hand sanitizer at entrances*
- ❏ *Focus on higher-risk employees including those over the age of 60 and those with underlying medical conditions – from more flexible hours, to work from home options and workspace accommodation*

https://www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery/covid-19-provincial-support/bc-restart-plan

GRADUAL RETURN TO WORK

While restrictions may be gradually easing across BC, and the Ministry of Health may be allowing some sectors to resume their operations - though be at reduced levels- the threat of the pandemic is still very much with us.

This is no time to let our guard down because the risk of a sudden surge in cases, an outbreak and that of subsequent waves of infection remains high.

Infection control measures such as physical distancing, proper hand and respiratory hygiene, decontamination and appropriate use of personal protective equipment need to be applied diligently and consistently as these measures are critical to reduce the risk of facility wide infection.

Infection Control Measures At BCCRI

1.0 Surveillance/monitoring/reporting

1.1 Self-Assessment Tool

- A web based self-assessment tool MUST be completed each day for any person entering the building.
    - FOLLOW the instructions as per the screening tool: https://screening.bccrc.ca

1.2 When to Stay at Home

- **DO NOT COME TO WORK IF ANY OF THE FOLLOWING CONDITIONS APPLY:**
    - YOU ARE DISPLAYING SYMPTOMS (e.g. FEVER, DRY COUGH, SORE THROAT, SNEEZING, LOSS OF SMELL, FATIGUE, HEADACHE, etc.), WHETHER OR NOT YOUR ILLNESS HAS BEEN CONFIRMED AS COVID 19
    - YOU LIVE IN THE SAME HOUSEHOLD AS A PERSON WITH A CASE OF CONFIRMED OR CLINICAL COVID-19, WHO IS SELF-ISOLATING

- YOU HAVE BEEN EXPOSED TO A CONFIRMED COVID-19 INFECTED PERSON AND BEEN ADVISED BY PUBLIC HEALTH (811) TO SELF-ISOLATE
- YOU HAVE TRAVELLED INTERNATIONALLY WITHIN THE LAST 14 DAYS

1.3 Reporting an Illness or an Exposure

1.3.1 PHSA Personnel

If:

- you have had an exposure to Covid-19
- you have become ill
- you have been notified that you tested positive for Covid-19
- someone in your household has tested positive or is under self-isolation

Then:

- Follow normal sick-leave call-in procedure to report your absence PEARL (1-855-667-3275)
- Call PHSA's Covid-19 Resource Line (1-833-875-2155) with any workplace health- related questions.
- Refer to the PHSA website for more information

1.3.2 UBC Personnel

If:

- you have had an exposure to Covid-19
- you have become ill
- you have been notified that you tested positive for Covid-19
- someone in your household has tested positive or is under self-isolation

Then:

- Follow your normal sick-leave call-in procedures (alert your BC Cancer supervisor and/or operational lead immediately)
- Call PHSA's Covid-19 Resource Line (1-833-875-2155) with any workplace health- related questions

OR

- Call UBC's Occupational and Preventative Health line at 604-827-4713 or email oph.info@ubc.ca
- Refer to UBC's Covid-19 resource and information page

1.4 Positive Covid-19 Notification

- IF an individual with symptoms is advised to self-quarantine by public health and/or notified of a positive covid-19 test, contact tracing will be undertaken by PHSA

occupational health in cooperation with UBC occupational health. O**nly contacts deemed at risk will be notified directly.**

- Privacy and confidentiality must be respected at all times and as such the identity of the Covid-19 case must never be disclosed; this information must remain confidential and only known to the immediate supervisor.
- All surfaces and areas the ill staff/student may have come in contact with will be decontaminated as soon as possible; every effort will be made to respect confidentiality, but health and safety must be protected at all times.
- It is the responsibility of the principal investigator/manager to notify the departmental operational lead and the BC Cancer Research Safety Office of a positive Covid-19 case.
- The BC Cancer Research Safety Office will work with/direct the responsible lab manager/departmental operational leads in organizing additional cleaning.
    - **DO NOT** attempt informal contact tracing. Contact tracing of staff will be undertaken by occupational health.

1.5 Contact Tracing Process for BCCRI

a. Public Health will contact the employee directly to ask for supervisor information
b. Employee to direct Public Health to the Executive Director/ORA: Karen Lemmen klemmen@bccancer.bc.ca
c. Executive Director/ORA will contact Workplace Health and work with the department to generate a list of employees who may have been potentially exposed, based on the Medical Health Officer's (MHO) contact tracing and exposure criteria.
d. Executive Director/ORA and the department's operational lead will work together to contact individuals on the list for assessment based on MHO exposure criteria.
e. Executive Director/ORA and the department's operational lead will provide Workplace Health and the employee's supervisor with updates.

2.0 Physical distancing

Two meter distancing between individuals to be maintained in the workplace. If this cannot be achieved due to operational or equipment limitations, additional measures must be implemented to mitigate risk. Such measures could include plexiglass barriers and/or personal protective equipment such as a procedure mask, full face shields and/or N95 respirators, as appropriate.

The following specific measures will be implemented to facilitate physical distancing:

2.1 Density control/Occupancy

- The number of personnel on site at one time will be limited. Density and number of people present will be based on the 'Return to Work Master Plan' and on the Lab-Specific Plan presented by the PI. This may be achieved through working in shifts or working alternate days.
- Staff that can perform their tasks from home will continue doing so
- Those who need to come onsite to perform their work will leave when finished
- Meetings will continue to be held online, unless 2 m physical distancing can be maintained
- Phase 1 Occupancy limits are **required, not suggested**. **No more than 30% of PI/core facility staff to be present at any one time.**
- The PI/Core facility manager will determine/decide in their planning who should be present and on what schedule.
- Flow of personnel within the building will be controlled

2.2 Building access monitoring

We are required to monitor the density of persons in the building and to know who is in the building on any day. The card access system will provide this.

Everyone must scan their own access card on the card readers in order to have a record of entry and transit throughout the building. Therefore, **do not tailgate or use** someone else's access card.

Also, those visiting other sites to collect or deliver samples must keep a record that includes the date, time and persons contacted.

All external parties and contractors will be permitted on-site only when absolutely required and on a case by case basis.

- Access requests must be emailed to Tom Stodola, BC Cancer Research operations (tstodola@bccrc.ca) CRC operations (ORA) for pre-approval to ensure the time of access and impact of the work proposed will not adversely increase risk to Research Institute staff.
- Once approved, external parties/contractors will be under the complete supervision and must be accompanied at all times by a designated departmental or lab manager.
- The external party/contractor(s) must complete the self-assessment questionnaire prior to entering our facility each day and must observe the same PPE, handwashing and self-distancing guidelines as all other research staff when onsite

2.3 Traffic Flow Control

2.3.1 Main lobby entrance

As social distancing is not consistently achievable in the BC Cancer Research Centre's lobby, upon entering the building, perform hand hygiene and don a face mask, as described in section 5.

- Going upstairs to levels 2 - 4: take the stairwell #1, which is directly across from the main lobby entrance at reception and is access controlled.
- Going to levels 5 - 15: take the main elevators
- Going to B1 or parkade: take the elevators down

2.3.2 Stairwells

Stairwells will have a unidirectional flow as indicated by signage

- Stairwell #1 (across from main lobby entrance) will be used for upwards travel ONLY
- Stairwell #2 (north side, near First Aid Rooms) will be used for downwards travel ONLY
- Traffic flow control will not be put in place for the spiral staircase but physical distancing must be maintained at all times.

2.3.3 Main elevators

- **All** occupants must be wearing a face mask **before** entering the elevators as physical distancing is not consistently achievable.
    - Face masks and ABHR dispensers will be available in front of the elevators on G, B1, B2 and B3
- Occupancy will be limited to 2 people per elevator car at a time, and should be used only for upward travel to floors 5-15.
- Lineups are expected and should begin towards the northernmost of the 3 elevators and end towards the southernmost elevator.
- Lineup start and end will be noted with a sign, and 2m spacers will be indicated on the floor with painters tape.
- Within the elevator cars, 'stand here' Xs will be made on the floors with painter tape in diametrically opposed corners.

2.3.4 Parkade entrance

- Enter the elevator lobby via either door.
- Maintain physical distance within the elevator entrance and if necessary, continue the line-up just outside the elevator entrance area. Maximum occupancy in the lobby is limited to 3 people.
- Lineups are expected, especially at peak times (8, 8:30 and 9 am)
- Upon entering the elevator entrance, perform hand hygiene and don a face mask as physical distancing is not consistently achievable.
    - Face masks and ABHR dispensers will be available in the elevator lobbies on levels B2 and B3.
- **All occupants must be wearing a face mask before entering the elevators.**
- Occupancy will be limited to 2 people per elevator car at a time
- Within the elevator cars, 'stand here' Xs will be made on the floors with painter tape in diametrically opposed corners

2.3.5 B1/Bike entrance

- Because there will be minimal staff in B1, no traffic controls will be implemented here.
- The bike room will have a 1 person occupancy posted, and 2m spacers will be indicated on the floor with painter tape outside the room in case a line forms.

2.3.6 Service elevators/east lab stairwell

- Because traffic in these areas will be minimal, and because staff must travel between floors and to ARC with lab materials, directional controls will not be put in place in these areas.
- Service elevators will have a maximum occupancy of 2 people. Face masks must be worn by all occupants before entering the car and distancing must be maintained by standing on spots indicated on the floor.

2.3.7 Travel within the building and between sites

- Limit travel to other sites and other floors as much as possible
- If collecting clinical specimens from other sites, ensure this event is documented for the purpose of contact tracing, should it be required.
- Minimize the trips to other sites as much as possible and ensure all institutional protocols are followed.

2.4 Meeting Rooms and Lunch Rooms

- Meeting rooms on the 7th, 8th, 9th, 11th, 12th and 13th floors will not be used for meetings during phase 1 re-opening, but may be used in a limited capacity for eating.

- Each meeting room will have a maximum occupancy of 3 and a time limit of 30 minutes. There will be signage nearby to indicate these restrictions.
- Diamond Theatre, Dorothy Lam, and meeting rooms on 2nd, 14th, 15th will remain closed until further notice.
- Tables will be spaced out and seating will be limited in the lunch rooms as indicated below. Do not rearrange as physical distancing must be maintained.
    - 1st floor lunchroom: 8 tables will be spaced out with a maximum occupancy of 1 person per table. 30 minute time limit.
    - 15th floor lunchroom: 7 tables will be spaced out with a maximum occupancy of 1 person per table. 30 minute time limit.
    - B1 lunch room: 3 person occupancy and 30 minute time limit.

2.5 Lab spaces

Occupancy limits will be set for all areas including general lab areas, specialized labs, core facilities, ARC, MARC, tissue culture rooms, radioisotope labs, as well as in the offices, administration and student areas, and these will be shown on signage posted nearby

- In phase 1, all confined lab rooms such as tissue culture and core equipment rooms will be limited to a 1 person occupancy, but no time limit. These occupancies will be posted by each confined room. Floor coordinators to organize equitable booking/use of shared equipment rooms where needed.
- Individual lab bays will be restricted to a maximum of 1 person per lab bay. This restriction will only be posted at the lab entrances on each floor.
- Consider flow of personnel within specific lab bays while performing certain procedures to avoid excessive traffic and congestion.
    - For instance, relocate movable equipment and/or reconfigure certain stations to avoid congestion, and help with distancing.
    - lab managers or head technicians and core facility managers should set-up an online booking system to use specialized and/or highly used equipment, access facilities and services to avoid choke points.

3.0 Kitchens

The measures listed below will cause some inconvenience but they have been implemented to minimize the risk of infection and transmission. These measures will be temporary and it is important for everyone to be patient and work together to get us through these challenging times.

- During phase 1 of re-opening, kitchens will be inaccessible, as they represent a “high touch” area. This includes the kitchens in the B1 staff room, the lunch rooms on the main and 15th floors as well as those on the 3rd, 5th, 7th, 9th, 11th and 13th floors.
- Sinks will not be available for use. Please use the washroom sinks for handwashing.

- Water coolers will remain operational but each user is required to wipe down the high-touch surfaces of the cooler with a disinfecting wipe before and after drawing water. A tub containing disinfecting wipes will be placed on top of the bottle.
- Kitchens will not be available for food preparation, storage, reheating or washing dishes. The kitchens will be cordoned off with caution tape, and small appliances (kettles, toasters, but not microwaves)are not to be used.
- There will be no reusable dishes, cups or cutlery available in the kitchens. Staff are advised to bring their own and wash these at home. This will be strictly enforced.

4.0 Locker Rooms on Floor B1

During Phase 1 of re-entry, the showers in the locker rooms located on B1 will be closed to general staff and reserved for use by ARC staff who will be accessing the Modified Animal Resource Centre (MARC) and must shower before entering.

The washrooms will remain open.

5.0 Personal Workstations

There will be no sharing of personal workstations/desks.
Please clean/wipe shared phones before and after use.

6.0 Hand Hygiene

Hand hygiene is the **single most effective way** to prevent infection and the spread of communicable diseases.
However, hand hygiene must be done correctly and frequently to be effective.

When should hands be washed?

- After handling shared objects and touching contaminated surfaces
- Before preparing food or eating
- After using the washroom
- After sneezing, coughing or using a tissue
- Before and after caring for someone who is sick
- After cleaning or handling garbage
- Before touching your face, mouth or eyes
- Before donning and doffing a face mask
- After doffing a face mask

Wash hands with soap and water whenever possible but if soap and water are not available, an alcohol-based hand rub containing a minimum of 60% alcohol can be used. Signs will be posted throughout as a reminder.

6.1 Handwashing with Soap and Water

Wash hands with soap and water after using the bathroom and whenever hands are soiled or greasy.

Steps for Washing your Hands with Soap and Water

- Remove any hand or arm jewelry you may be wearing.
- Wet your hands with warm water.
- Apply plain soap to your hands and rub together for **20 seconds**
- Wash the front and back of your hands, as well as between your fingers, your thumbs, the backs of your fingers and your fingertips by rubbing them on the palms of your hands in a circular motion.
- Rinse your hands well for 10 seconds under warm running water, using a rubbing motion.
- Gently wipe and dry your hands with a paper towel.
- Turn off the tap using the paper towel so that you do not re-contaminate your hands and use the same paper towel to open the door when you leave.
- Use a moisturizing lotion if hands become dry.

Complete the Provincial Hand Hygiene Basics available on PHSA Learning Hub here.
Alternatively, you may view the WHO video on handwashing

6.2 Using an Alcohol-Based Hand Rub (ABHR)

Alcohol-based hand rubs are convenient to use when soap and water are not readily available. However, while ABHRs effectively kill bacteria and many viruses including SARS-CoV-2, they do not inactivate many pathogens that cause GI infections.

ABHRs are ineffective on soiled and greasy hands and in such instances must be washed with soap and water.

Steps for Using ABHR

- Make sure your hands are dry, as wet hands will dilute the alcohol-based hand product.
- Use enough of the product to cover all the surfaces of your hands and fingers- about a loonie-sized dollop.
- Rub your hands together covering the front and back of the hands, between the fingers, the thumbs, backs of the fingers and fingertips until the product has evaporated.
- Apply hand moisturizer if dry skin is a problem.

WHO video available here.

7.0 Respiratory etiquette

Respiratory hygiene limits the transmission of pathogens spread via droplets and aerosols.
Use a tissue or raise your arm to your face to cover your mouth with the inside of your elbow when coughing or sneezing.
Alternatively, use a clean tissue and throw it away immediately after use.
After coughing, sneezing or using a tissue wash your hands.

Do not use your hands to cover a sneeze or a cough

Insert https://ready.ubc.ca/wp-content/uploads/2020/03/Cover_cough_poster_11x17.pdf

8.0 Decontamination

While the SARS-CoV-2 virus is very susceptible to many chemical disinfectants, it is also very resilient on surfaces, as it has been shown to remain viable on plastic and stainless steel surfaces for several days.

Therefore, frequent and thorough decontamination using disinfectants that are readily available, such as 70% ethanol, 70% isopropyl alcohol or 0.5% accelerated hydrogen peroxide, will inactivate the virus and eliminate the risk. It is important to note that visibly soiled surfaces must be cleaned before disinfection. Contact times, as recommended by the manufacturer, must be followed for effective inactivation of pathogens. Refer to the product's safety data sheet and manufacturer's instructions on safe handling.

Disinfectants will be made available at various locations throughout the building. Please notify your lab manager or supervisor at once if the container needs to be refilled.

Refer to Health Canada's list of hard surface disinfectants and hand sanitizers proven effective against Covid-19.

Ensure that appropriate personal protective equipment is used when decontaminating surfaces that a Covid-19 case may have come in contact with. See Section 7.3 for more information.

8.1 Office Spaces including Student Areas, IT Offices and Shipping & Receiving

7.1.1 Non-porous hard surfaces - Tables, benches, desks, counter tops, etc.

Spray surfaces with 70% ethanol or Accelerated Hydrogen Peroxide 0.5% and allow for sufficient contact time.

Frequency will depend on use, but decontamination should be done 3 times/day at a minimum and more frequently in heavily used spaces such as eating areas, seminar rooms where it is recommended that it be done before and after use.

7.1.2 Personal Workstations

Each user is responsible for disinfecting their own desk/workstation at the beginning and end of the work day. Keyboards, mouse, phone and other high touch surfaces should be decontaminated at the beginning and end of the workday. Use Accel or PREempt Hydrogen peroxide wipes or spray 70% ethanol on a paper towel and wipe all touched surfaces.

Shared workstations must be disinfected by each person before and after use.

7.1.3 Office Equipment

Use Accel or PREempt Hydrogen peroxide wipes or spray 70% ethanol only a paper towel and wipe surfaces. Disinfect 2 -3 times/day based on usage.

7.1.4 High touch areas

This includes door handles, push bars, card readers, elevator buttons, and any other spots not cleaned by housekeeping. These high touch areas should be disinfected 3 times/day at a minimum. Wipe light switches with a disinfectant wipe or paper towel sprayed with 70% alcohol.

8.2 Laboratory

8.2.1 Lab Equipment

Disinfect as per manufacturer's recommendations. It is the responsibility of the user to disinfect before and after use of the equipment/instrument. Instrument dedicated keyboards must have a keyboard cover for safe decontamination.

8.2.2 High touch areas – Ice machine, carts, Cold Room, fridge and freezer handles, door handles, push bars, light switches, touch control pads, card readers, etc.

Decontamination frequency: minimum 3x/day, as described previously.

8.2.3 Personal and shared workstation

Same as described above.

8.2.4 Pipettors, pipette aids

Disinfect as per standard operating procedure, before and after use.

8.2.5 Non-porous hard surfaces including lab benches and chairs should be sprayed down with 70% alcohol by the person assigned to the space at the beginning and end of each workday.

Benches that are part of shared space should be decontaminated 2 - 3 times a day, depending on use.

8.3 Enhanced Decontamination

Cleaning and decontamination of all surfaces an ill person may have come in contact with must be performed as soon as possible, being mindful of the employee's/ student's right to privacy and confidentiality. **The BC Cancer Research Safety office will organize and supervise additional cleaning in conjunction with departmental operational leads. Please follow their guidance.**

Additional precautions must be taken when cleaning and decontaminating under these circumstances:

- **The BC Cancer Research Safety office will organize and supervise additional cleaning in conjunction with departmental operational leads.** Some of the considerations will include:
- personnel assigned to perform the task must be trained and experienced
- personal protective equipment including a procedure mask, gloves, a disposable or clean reusable gown, and eye protection must be used.
    - An N95 respirator would only be required if there is a risk of exposure to infectious aerosols at the time of decontamination.
        - In a recent study, viable SARS-CoV-2 virus was detected in aerosols over a 3 hour period (65% relative humidity, 21-23C) with a half life estimated at 1.1 - 1.2 hours. In the conditions tested in for aerosols, there was a reduction in the infectious titer from 10^3.5 to 10^2.7 50% tissue culture infectious dose(TCID) per liter of air.
        - Based on the above, any infectious aerosols should be less than 1% of initial burden in an area within 8 hours and less than 10% within 5 hours, in the default case of no air exchanges, but may clear faster in high volume, high ventilation areas. Initial burden and infectious particles/l will be affected by volume of air, length of time, degree of shedding, which are not measurable/knowable factors. As guidance, N95 is recommended within **6 hours of the presence of an infected staff member for performing extra cleaning of surfaces.**
- Chemical disinfectants must be handled according to the manufacturer's instructions for safe and effective use
- Contact times for chemical disinfectants must be observed (e.g. 70% ethanol or isopropyl alcohol - 10 minutes; 0.5 % hydrogen peroxide - 5 minutes).
- Personal protective equipment must be doffed correctly, and used gloves, wipes and paper towels must be disposed of inside a plastic bag that is sealed and discarded in a biohazardous waste container.

Surgical type face masks are used primarily to lower the risk of transmission by blocking the dispersion of droplets from the user, for the safety of co-workers. Please think of your colleagues.

9.0 Personal Protective Equipment

9.1 Face masks/procedure masks

Face masks help to contain droplets released by the users while talking, sneezing or coughing thereby reducing the risk of transmission to others nearby.

Face masks must be worn correctly to provide protection, and donned and doffed appropriately to prevent infection and contamination.

Procedure masks will be available from dispensers located throughout the building, including the main entrance lobby, the B1 entrance and parkade elevator lobbies.
If a cloth mask is worn (e.g. during commute), please remove it upon entering the building, and follow the procedures outlined above for entry into the building.

9.1.1 Where are Face Masks Worn?

As physical distancing cannot be maintained consistently in these premises, face masks MUST be worn in the following areas:

- Entry lobby - immediately upon entering the building, following hand hygiene
- Elevators
- Student common write up areas if more than 1 person present
- Public areas in the office open spaces spaces if more than 1 person present
- Seminar rooms, other rooms with more than 1 person present
- Laboratory - if more than 1 person is present per laboratory bay

If an office or seminar room has only 1 person, masks are not required, but should be worn for transiting in the common areas if other people are present. In these areas, staff may wear masks if they wish, but it is not required.

9.1.2 Donning and Doffing of a Face Masks

9.1.2.1 Donning (putting on)

a) Perform hand hygiene using an ABHR or soap and water
b) Open the mask, expand the pleats or folds
c) Examine for defects or tears

d) Orient the mask so that the colored side of the mask faces outwards and the flexible nose band is up
e) Loop the face mask around the ears
f) Mold the nose piece to your nose bridge
g) Pull the bottom of the mask to fit under your chin
h) Perform hand hygiene

9.1.2.2 Doffing (taking off)

a) Perform hand hygiene
b) Lean forward and grab the mask by the ear loops
c) Remove straight out, away from the face
d) Discard or safely store for reuse, if appropriate
e) Wash your hands

Once a face mask worn in an elevator is no longer required, as would be the case for those in private offices or areas where physical distancing is not a challenge, it is removed and should be placed in a plastic zip lock bag for reuse during the work shift. Face masks should be disposed of if soiled or torn or at the end of the day.

Those exiting the elevators and entering the lab may leave the face mask on.
Once removed, if not soiled or torn, face masks should be stored in a zip lock bag for reuse during the work shift and discarded at the end of the day.

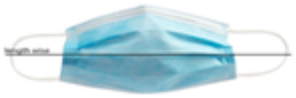
9.1.2.3 Reusing a Face Mask

As stated above, soiled or torn face masks must not be reused but be discarded instead.

Preventing exposure and contamination of the face mask are critical considerations when donning and doffing and as such, special care must be taken when storing and reusing face masks.

Follow these steps for **doffing and storing** a used face mask:

- Wipe down or spray the exterior of a zip lock bag with disinfectant and place on top of a clean paper towel
- Proceed with steps a) through c) for doffing
- Fold the face mask in half lengthwise, so that the side that was in direct contact with the face (clean side) is in the interior of the folded mask and the outside (considered potentially contaminated) is on the exterior.



- Ensure that the exterior of the used face mask is not touched when folding –use the ear loops or, if necessary, only touch the mask at the point where the loops attach to the mask
- Slide the face mask into a clean zip lock mask and store
- Wash your hands

Once ready to **don** the used face mask follow these steps:

- Wipe down or spray the exterior of the zip lock bag with disinfectant and place on top of a clean paper towel
- Perform hand hygiene
- Carefully remove the folded used mask from the zip lock bag using the ear loops and if necessary only touching the mask at the point where the loops attach to the mask.
- Follow steps b) through h) as described for donning above.

Do Not:

- Touch the mask once donned
- Leave face mask hanging from one ear
- Slide it over your forehead
- Slide it over your arm
- Leave it around the neck
- Do not leave used face masks on your desk, bench, in the lunch or seminar room, etc.

Do:

- Replace a face mask when wet or soiled
- Perform hand hygiene before and after donning and doffing
- Store the un-soiled face mask in a zip lock bag for reuse if the mask is **only** used to protect other personnel when transiting through areas and not used for laboratory procedures that require a mask.

Insert BCCDC Poster http://www.bccdc.ca/Health-Professionals-Site/Documents/COVID19_SurgicalMaskPoster.pdf

9.2 Gloves

The use of gloves **will not be recommended** in the context of Covid-19 exposure control.

Given that SARS-CoV-2 virus transmission occurs via droplets and transfer of the virus from contaminated hands to the nose, mouth and eyes, there is no added protection provided when gloves are worn.

Regular and frequent handwashing is far more effective than the use of gloves to protect against infection.

Gloves may be used as would routinely/normally be done for lab procedures requiring them.

9.3 Face shields

Reusable face shields used for laboratory procedures must be decontaminated with 70% ethanol or isopropanol **before and after each use**. This is the responsibility of each user.

10.0 Animal Resource Centre (and MARC, 13th floor)

All staff who require access to ARC in Phase 1 (regardless of previous access status), and are listed on an approved PI Activity and RA form, must be aware that: A fresh ARC Access Request Form must be submitted (via https://redcap.bccrc.ca/surveys/?s=4R33FCJR7W), prior to entry.

Revised SOPs (2019/2020) are available at http://my.bccrc.ca/index.php/documents/documents/arc/required-sops-for-access , and http://my.bccrc.ca/index.php/documents/documents/arc/sops-modified-arc-marc In addition to these, and Provincial, PHSA, and BCCRI, Guidelines, additional practices have been implemented to protect the ARC's Essential Service and Users:

10.1 Physical Distancing

- Users are encouraged to request Fee for Service (FFS) whenever possible, to reduce traffic flow. A new email address (ARCTechServices@bccrc.ca) has been created to accept all FFS and CM Requests, moving forward (http://my.bccrc.ca/index.php/documents/documents/arc/fee-for-service-ffs-and-colony-management-cm-requests).

- The ARC Team shifts are 7:00am - 3:00pm; 8:00am - 4:00pm; 9:00am - 5:00pm. Please consider these times, in your entry plans, to avoid bottlenecks in the change rooms. A maximum of two people will be permitted at a time, and distancing signage will be placed in the B4 corridor, shortly.

- Please limit time in the ARC to immediate tasks, to ensure equitable space management.

- Procedure room occupancy is limited to one person per BSC. Continue to use the Resource Booking Calendar to book BSCs.

- Researchers who need to use a cage change station (CCS) must email ARCHusbandryStaff@bccrc.ca in advance, so that the cage changing schedule for ARC staff can be changed around the researcher's visit, and to ensure there is no overlap with other researchers. Occupancy is limited to two people per room.

- Researcher access to the offices is limited to the use of the printers/scanners, only, with priority given to the ARC Team. Laptops, or tablets, are available in all animal rooms. Additional computer work will need to be completed in the lab's office space, or at home.

- If computer use is necessary, please disinfect keyboard, mouse, tabletop and printer, before you leave.

- The lunch room is limited to the ARC Team only, with a maximum of two people at a time.

10.2 Hand-hygiene

Hands must be washed with soap and water upon entering and before leaving the ARC and MARC. Soap is available at sinks within the ARC, and hand sanitizer is available in the offices. Every effort is made to ensure supply, but please let the ARC Team know if you notice they are less than ¼ full.

10.3 Face Masks

- A face mask must be worn at all times while in the ARC and the MARC.

- A cart with masks and alcohol-based hand sanitizer has been placed near the airshower. Please sanitize hands before selecting the type of mask you will need for your work, from here (procedure mask or N95 respirator), as they will be unavailable in individual rooms. This is to better account for masks, and project how long our stock will last.

- If it is safe and comfortable to do so, during this time, masks can be worn from one animal/procedure room to another. Masks are usually considered potential fomites, moving from room to room, but under these unusual circumstances, we can rely on the ARC's engineering controls (vented caging, cage changing stations and BSC's) to prevent transfer, in favour of minimizing mask use.

- Advice at the time of writing is to wear N95 masks for the duration of work, discarding only when soiled, or at break time. If in doubt, please do not compromise safety, and follow manufacturer's instructions.

- Mask stock is monitored daily, but please notify an ARC Team member if you notice that the supply of masks is less than ¼ full.

10.4 Decontamination

- Peroxiguard disinfectant and paper towels will be provided in the change rooms for decontamination of lockers before and after use. Contact time is 5 minutes.
- Wipe down the change room bench with Peroxiguard disinfectant before and after use.
- Store all personal items in the lockers. Coat hooks are for the ARC Team's wet items only. Dry items must be stored in lockers.
- Door knobs and Watchdog PIN pads to animal rooms will be disinfected after each Daily Health Check by the ARC Team.
- Procedure Room and Office door knobs will be disinfected daily by the ARC Team.
- Disinfectant and soap containers are monitored regularly, but please notify an ARC Team member if you notice they are less than ¼ full.

The ARC Team has authority to coach Users on these additional guidelines, and regular SOPs, to ensure everyone's safety. Please contact Gayle Paquette if you have any concerns.

10.5 Guidelines For Animal Work

Initial ARC Activity Planning, in Phase 1, must consider:

- CCAC and UBC ACC Guidelines will continue to be met,
- 30% of pre-curtailment animal work to ensure appropriate animal care and technical support, with reduced traffic flow,
- Equipment required (BSCs, CCSs),
- Type and frequency of animal procedures (injections, anesthesia, surgery, gavage, blood collection, irradiation, post procedure monitoring, etc.),
- Numbers of animals in proposed study groups,
- Number, frequency, and duration, of personnel entering ARC,
- Breeding should not exceed 20% of pre-COVID population,
- Requirements for procedure and N95 masks,
- Contingency plan, and animal rank (in Mosaic), if re-curtailment becomes necessary.

PI's are encouraged to prioritize animal studies to:

- Ones that the ARC Team perform. For example: breeding, colony management (CM), aging, provision of special diets, rederivation of preserved strains, technical procedures, and monitoring.
- Lower risk studies, eg. small groups, short duration, minimal nursing care and monitoring, minimal traffic flow, not requiring N95 masks.
- Graduating student/PDF project completion, ie. those in their last year of study.

Appendix1: Resources and References

WorkSafe BC

Health Canada

https://www.health.harvard.edu/diseases-and-conditions/covid-19-basics

BC's Restart Plan

John Hopkins University Coronavirus Resource Center

Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1

Infectious virus in exhaled breath of symptomatic seasonal influenza cases from a college community

Aerosol emission and superemission during human speech increase with voice loudness.

Tools

BC Covid-19 Symptom Self-Assessment Tool

Contacts

PHSA - Covid-19 Resource Line: 604-875-2155

PHSA - Workplace Health OHN: occupationalhealthnursing@phsa.ca

PHSA - PEARL: 1-855-667-3275

UBC Coronavirus Response