



HIGHER HEALTH

Higher Education and Training
Health, Wellness and Development Centre

Protocol on Institutional Response to a Confirmed COVID-19 case within Post School Education & Training (PSET) Institutions

Version: 22 June 2020

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www.higherhealth.ac.za

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Contents

Introduction2

Definitions:.....2

 Confirmed COVID-19 case.....2

 Contact of a COVID-19 case2

What to do with a student/staff member with confirmed COVID-19?.....2

What to do with a student/staff member who is a Contact of a confirmed COVID-19 case?3

Cleaning and Disinfecting a building, residence, classroom, office, or any other facility if someone is found Positive for COVID-194

What cleaning staff need to do when cleaning and disinfecting if someone is found positive for COVID-19 5

Acceptable Cleaning Chemicals6

Cleaning outdoor areas.....6

Addendum 1: Cleaning Solutions.....7

Addendum 2: Use of bleach.....8

Introduction

COVID-19 is the disease caused by infection with the SARS CoV-2 virus. This viral infection causes a mild disease in most of those who are infected and have symptoms, while a minority (20%) go onto more serious disease requiring hospitalization.

In managing the COVID-19 pandemic, it is important to prevent as many infections as possible, and the following is a reminder of what to do in institutions with persons who are confirmed COVID-19 cases, and for those who are contacts of confirmed COVID-19 cases.

Definitions:

Confirmed COVID-19 Case

- A person with an acute respiratory infection who has a laboratory diagnosis demonstrating infection with SARS CoV-2.
- [It needs to bear in mind that, in the future, the laboratory capacity to test every symptomatic person for SARS CoV-2 will be exceeded, and the laboratory test will not be required. But that is in the future, where the diagnosis will be made based on contact with a COVID-19 case, and then developing the same symptoms.]

Contact of a COVID-19 Case

- A person who is in contact with a confirmed COVID-19 person, and this can be from 2 days before the symptoms begin in that COVID-19 case.
- The contact with the COVID-19 case is not “casual” contact. It is sustained contact with the index case for more than 15 minutes, and that being within 2 metres of the index case.
- The contact may be in a family/intimate environment, or within a work/transportation/etc. space.

What to do with a student/staff member with Confirmed COVID-19?

As per the above definitions of a **Confirmed COVID-19 staff/student**, the following recommendations applies:

1. The diagnosing laboratory/ doctor must register the case with the National Institute for Communicable Diseases [www.nicd.ac.za] and inform the provincial public health authorities.
2. The case must immediately put him/herself into “self-isolation.” This entails:
 - a. Stay at home all the time for a minimum of 14 days.
 - b. Where possible, stay in separate room, and have as little contact as possible with other house members. No visitors.
 - c. Where possible, use separate bathroom facilities and eating space.
 - d. Always wear a medical mask.
 - e. Family members should always wear masks.
 - f. Exquisite attention to personal hygiene, washing hands, using either soap and water or 70% alcohol wipes should apply.
 - g. Use the protocols for daily washing of house and environment, using i) soap and water, ii) dilute bleach and/or iii) 70% alcohol.

- h. If home space is inadequate for physical distancing because of small or over-crowded living space, then contact public health officials and see if it is possible to be housed in a state quarantine facility.
 - i. The case stays at home if there is mild disease. If the case becomes short of breath or develops another serious medical problem, then take person to hospital.
 - j. The person can return to work/study after 14 days (or longer if still sick)
 - k. No laboratory test is required to return to work/study after 14 days.
3. A list of all contacts (see definition above) of the index case in the last 2 days (before symptoms started) should be developed. Those who are contacts should be informed of the infected person either by the case or the public health officials.

What to do with a student/staff member who is a Contact of a confirmed COVID-19 case?

As per the above definitions of a **Contact of a Confirmed COVID-19 staff/student**, the following recommendations applies:

1. The person/institution should confirm that the COVID-19 person is indeed a confirmed case.
2. If the “contact” satisfies the definition given above about who is a contact, then the following applies.
 - a. The “contact” goes into self-isolation, even though not ill.
 - b. Self-isolation is for 14 days.
 - c. If a staff member, the person informs their employer, and applies for “special leave.”
 - i. Employers are entitled to ask the staff member to perform tasks while on special leave.
 - d. Students should notify the designated institutional COVID-19 structure.
 - e. Only if the contact becomes ill, does the person apply for sick leave, and go through the process described above for COVID-19 cases.
 - f. The public health authorities are notified of the person’s details.
 - g. The contact does self-screening twice daily, including taking their temperature, to assess possible infection with SARS CoV-2.
3. If contact develops COVID-19 symptoms, the person applies for sick leave and the above protocol for COVID-19 cases applies.
4. The contact returns to the institution after 14 days if no symptoms develop.
5. No testing is required unless contact develops COVID-19 symptoms.

Figure 1 provides a scenario algorithm for handling students / staff presenting with symptoms of COVID-19, has confirmed COVID-19 or is a contact of an individual with confirmed COVID-19

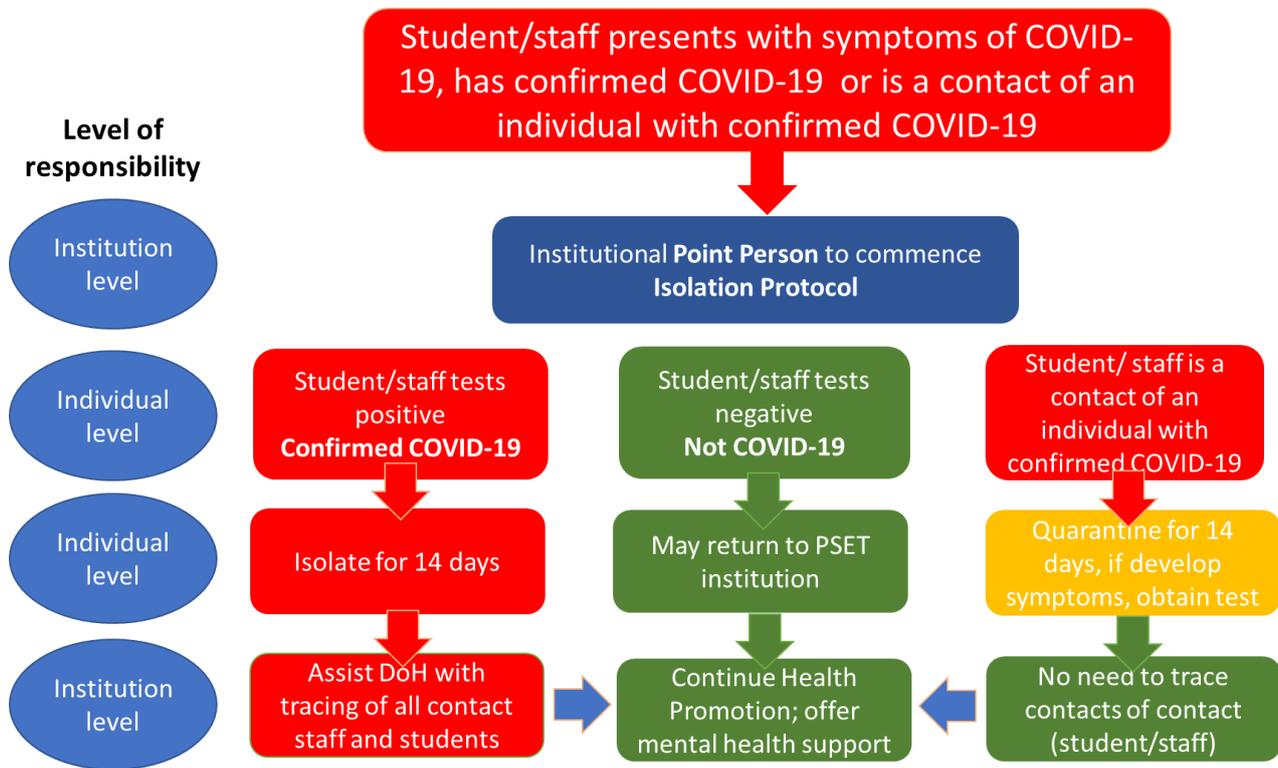


Figure 1: Algorithms to follow for confirmed or contacts of confirmed COVID-19

Cleaning and Disinfecting a building, residence, classroom, office, or any other facility if someone is found Positive for COVID-19

Cleaning after a confirmed COVID-19 person has been present is a more meticulous version of routine cleaning. As per the definition of a confirmed positive COVID-19 student/staff, the following recommendations for disinfection and cleaning of facilities will apply:

1. Close off areas used by the person who has been found positive for COVID-19. Institutions do not necessarily need to close operations if they can close off affected areas. As we learn to “live with this virus” it is anticipated that only affected components of organisations will close, rather than the entire organisation.
2. Regarding the affected room/building:
 - Open outside doors and windows to increase air circulation in the area.
 - If possible, wait 24 hours before cleaning/disinfecting. If 24 hours is not feasible, wait if possible.
 - Clean and disinfect all areas used by the person who has COVID-19, such as offices, bathrooms, common areas, shared electronic equipment like tablets, touch screens, keyboards, remote controls, and ATMs.
 - Hypochlorite should be the solution that is used over wide areas, such as floors, desks, chairs, steps, etc.

- Since 60-70% alcohol solutions are far more expensive, it should be used for other smaller areas and items that corrode. Thus, all metals and electronic goods, keyboards, door handles, laptops, etc. should be cleaned with an alcohol solution.
3. Once the area has been appropriately disinfected, it can be opened for use.
 4. If there is any linen or laundry in the area (e.g. tablecloths), these should be washed in a heating cycle in the washing machine.
 5. Workers without close contact with the person who has COVID-19 can return to work immediately after disinfection. Those who have had exposure – according to the national guideline definition – should be in self-isolation, according to national guidelines.
 6. If it is more than 7 days since the person who has COVID-19 visited or used the facility, additional cleaning and disinfection is not necessary.
 7. Continue routine cleaning and disinfection after the special clean, as per this document. This includes everyday practices that businesses and communities normally use to maintain a healthy environment.

What cleaning staff need to do when cleaning and disinfecting if someone is found positive for COVID-19

- Regular cleaning staff can clean and disinfect the area after 24 hours of ventilating the affected facilities
- During the cleaning and disinfecting process, cleaning staff need to ensure:
 - They wear disposable gloves and gowns for all tasks in the cleaning process, including handling trash. Additional personal protective equipment (PPE) like goggles might be required based on the cleaning/disinfectant products being used and whether there is a risk of splash.
 - Gloves and gowns should be removed carefully to avoid contamination of the wearer and the surrounding area.
 - Disposable gloves and gowns should be disposed of immediately in an infectious waste container
 - If reusable gowns were used ensure that they are immediately cleaned with disinfectant
 - Any cleaning cloths or materials used for the cleaning process should also be adequately disinfected post the cleaning operation
 - Always wash hands with soap and water for 20 seconds immediately after removing gloves, gowns, mask and goggles.

Acceptable Cleaning Chemicals

See Addendum 1: Cleaning Solutions & Addendum 2: Use of Bleach

Cleaning outdoor areas

Outdoor areas generally require normal routine cleaning, but do not require disinfection.

- Do not spray disinfectant on outdoor items - it is not an efficient use of supplies and is not proven to reduce the risk of COVID-19 to the public.
- The exception - frequently touched surfaces made of plastic or metal, such as grab bars and railings should be cleaned routinely.
- Cleaning and disinfection of wooden surfaces (benches, tables) is not recommended.
- Sidewalks and roads should not be disinfected.
- Spread of COVID-19 from these surfaces is very unlikely and disinfection is not effective.

Addendum 1: Cleaning Solutions

As the world understands more about SARS CoV-2, it is possible to recommend specific compounds. While there are thousands of possible solutions, we recommend the highlighted ones for different purposes, as above. In South Africa, sodium hypochlorite (bleach) can be found in the form of multiple commercial products, “Jik” (or equivalent).

Antimicrobial agents effective against different coronaviruses: human coronavirus 229E (HCoV-229E), mouse hepatitis virus (MHV-2 and MHV-N), canine coronavirus (CCV), transmissible gastroenteritis virus (TGEV), and severe acute respiratory syndrome coronavirus (SARS-CoV)1 Antimicrobial agent

	Concentration	Coronaviruses tested
Ethanol	70%	HCoV-229E, MHV-2, MHV-N, CCV, TGEV
Sodium hypochlorite	0.1–0.5% 0.05–0.1%	HCoV-229E SARS-CoV
Povidone-iodine	10% (1% iodine)	HCoV-229E
Glutaraldehyde	2%	HCoV-229E
Isopropanol	50%	MHV-2, MHV-N, CCV
Benzalkonium chloride	0.05%	MHV-2, MHV-N, CCV
Sodium chlorite	0.23%	MHV-2, MHV-N, CCV
Formaldehyde	0.7%	MHV-2, MHV-N, CCV

Addendum 2: Use of bleach

From: <https://www.info.gov.hk/info/sars/en/useofbleach.htm>

Bleach is a strong and effective disinfectant. Its active ingredient, sodium hypochlorite, denatures protein in micro-organisms and is therefore effective in killing bacteria, fungus, and viruses. Household bleach works quickly and is widely available at a low cost. Diluted household bleach is thus recommended for the disinfection of facilities.

As bleach irritates mucous membranes, the skin and the airway, decomposes under heat or light, and reacts readily with other chemicals, caution should be exercised in the use of it. Improper use of bleach may reduce its effectiveness in disinfection and also lead to accidents which can be harmful to health. Overuse of bleach or using a bleach solution that is too concentrated results in the production of toxic substances that pollute the environment and disturb the ecological balance.

Tools and Equipment

Before cleaning, get all the necessary tools and equipment ready. Cleaning tools, cleansers/disinfectants, measuring tools, and protective gear will be needed.

- **Cleaning tools:** Brush, mop, towel, spray can and bucket.
- **Cleansers/disinfectants:** Bleach and water.
- **Measuring tools:** Tablespoon and measuring cup.
- **Protective gear:** Mask, rubber gloves, plastic apron, and goggles (recommended).

Procedures for Preparing/Using Diluted Bleach

Keep windows open when diluting or using bleach to ensure good ventilation. Put on protective gear when diluting or using bleach as it irritates mucous membranes, the skin, and the airways. Cold water should be used for dilution as hot water decomposes the active ingredient of bleach and renders it ineffective. Bleach containing 5.25% sodium hypochlorite should be diluted as follows (demonstration short):

1:99 diluted household bleach (mixing 10ml of bleach with 1litre of water) can be used for general household cleaning.

1:49 diluted household bleach (mixing 10ml of bleach with 0.5litre of water) is used to disinfect surfaces or articles contaminated with vomitus, excreta, secretions or blood.

Adjust the amount of bleach added if its concentration of sodium hypochlorite is above or below 5.25%

Calculation: Multiplier of the amount of bleach added = $5.25 \div \text{concentration of sodium hypochlorite in bleach}$

For example, when diluting a bleach-containing only 5% sodium hypochlorite, the multiplier is $5.25 \div 5 = 1.05$. That means $10 \times 1.05 = 10.5\text{ml}$ of bleach should be used when preparing a bleach solution. For accurate measurement of the amount of bleach added, a tablespoon or measuring cup can be used. Rinse disinfected articles with water and wipe dry. Cleaning tools should be soaked in diluted bleach for 30

minutes and then rinsed thoroughly before reuse. Finally, wash hands with liquid soap, then dry hands with a clean towel or disposable towel.

Precautions

Avoid using bleach on metals, wool, nylon, silk, dyed fabric, and painted surfaces. Avoid touching the eyes. If bleach gets into the eyes, immediately rinse with water for at least 15 minutes and consult a doctor.

Bleach should not be used together or mixed with other household detergents as this reduces its effectiveness in disinfection and causes chemical reactions. For instance, a toxic gas is produced when bleach is mixed with acidic detergents such as those used for toilet cleaning. This could result in accidents and injuries. If necessary, use detergents first and rinse thoroughly with water before using bleach for disinfection.

As undiluted bleach liberates a toxic gas when exposed to sunlight, it should be stored in a cool and shaded place out of reach of children. Sodium hypochlorite decomposes with time. To ensure its effectiveness, it is advised to purchase recently produced bleach and avoid over-stocking. For effective disinfection, diluted bleach should be used within 24 hours after preparation as decomposition increases with time if left unused.