



Provincial Health Services Authority

Infection Prevention and Control Guidelines for the Management of Patients Receiving Nebulized Therapy during the COVID -19 Pandemic Practice Guide

Summary of Changes

| | NEW | Previous |
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| BC Cancer | July 8, 2020 | April 24, 2020 |

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Nebulized Therapy during the COVID- 19 Pandemic Practice Guide

1. Introduction

Nebulized therapy is considered an aerosol generating medical procedure (AGMP) as per the BCCDC [provincial infection control guidelines](#). **When possible, plan for use of a Metred Dose Inhaler (MDI) or an MDI in combination with an aerosol chamber instead of nebulizer. MDI and MDI with an aerosol chamber use is not an AGMP.**

Infection Prevention and Control (IPAC) recommendations for the management of patient requiring nebulized therapy are based on the BC Centre for Disease Control (BCCDC) and the Ministry of Health (MoH) guidelines for AGMP during surgery which were developed based on the current epidemiology of COVID-19 in BC. Please refer to “Infection Prevention and Control (IPC) Protocol for Surgical Procedures during COVID-19: Adults”.

2. Focus

The purpose of this document is to provide IPAC guidelines for the management of patients requiring nebulized therapy at BC Cancer including in a shared open concept space with no engineering controls in an emergency situation (e.g. due to a hypersensitivity drug reaction).

The clinical team will refer to the [Provincial Cancer Clinical Management Guidelines in a Pandemic Situation \(COVID-19\)](#) for decision making regarding if it is appropriate to proceed with any scheduled therapy.

3. Health Organization Site Applicability

This document applies to all staff involved in the provision of nebulized therapy.

This is the guiding document, but site-specific practices will be developed to respond to differences in environmental controls and workflow.

Consider contributions from the following: Administration, Infection Control, Clinical Nurse Educators, Oncologists, Nurse Practitioners, Physicians, Clinical Manager, Senior Practice Leaders.

Nebulized therapy can occur as a planned situation or in an emergency situation and could occur anywhere in the centre including Radiation Therapy, Systemic Therapy, Ambulatory Clinic, Inpatient Unit (Vancouver Cancer Centre), and Surgical Suite.

4. Equipment and Supplies

Personal Protective Equipment (PPE) including surgical mask or N95 respirator, eye protection, gloves and gown.

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5. Definitions

Clearance (Settle) time refers to the amount of time required for the removal of airborne microorganisms from a given air space. The clearance time varies depending on the number of air exchanges.

Suspect COVID-19 is a patient with one of the following:

- history of travel outside of Canada in the last 14 days, **or** has been in contact with someone known/suspected to have COVID-19 **or** has been part of a COVID-19 outbreak-within the last 14 days
- COVID-19 like symptoms that cannot be explained by underlying cancer diagnosis or other medical conditions. Refer to [BC Cancer Active Screening Algorithm](#) for list of symptoms.
- COVID-19 test results are pending or unknown

Confirmed COVID-19 is a patient with positive COVID-19 laboratory results. Further details about case management and decision to discontinue precautions should be made in consultation with public health and infection control. Please refer to http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Epid/CD%20Manual/Chapter%201%20-%20CDC/2019-nCoV-Interim_Guidelines.pdf

6. Practice Guidelines

6.1 Preparation

6.1.1 Patient assessment

- Active screening upon entering the centre as per the [BC Cancer Active Screening Algorithm](#) to identify symptomatic individuals prior to appointment
- Refer to [BC Cancer PPE framework](#) to guide PPE use during therapy.
 - Determine if patient is suspect /confirmed for COVID-19-[see definition](#).
 - **Symptomatic patients requiring treatment:** Collect nasopharyngeal swab and sputum sample (if patient has productive cough) and delay care to await results when possible. If urgent treatment is required, use available site resources to minimize potential exposure (i.e. single occupancy room, end of day treatment, treat during less patient volume, additional precautions discharge clean.)
 - **Asymptomatic patients with no exposure history but with a higher likelihood of a hypersensitivity reaction:** -use available site resources to ensure droplet & contact precautions can be quickly and easily implemented if emergency nebulized therapy is required. (i.e. single occupancy room, end of day treatment, treat during less patient volume)

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- **Asymptomatic patients with no exposure history on well-established treatment regime with no history of hypersensitivity reactions:** Routine Infection Control Practices.

6.1.2 Management of Patients Receiving Nebulized Therapy

| Management of Patients Receiving Nebulized Therapy during COVID-19 | | |
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| | Non-suspect for COVID-19 | Suspect/Confirmed COVID-19 |
| Isolation Precautions when nebulized therapy is being performed | <p>SINGLE ROOM</p> <ul style="list-style-type: none"> • Limit personnel in the room. • Implement Droplet and Contact precautions. • Post Droplet and Contact precaution signs and cleaning communication tool. • Remove all unnecessary items from the room. • Drape items that cannot be removed with clean sheet. <p>SHARED OR OPEN CONCEPT SPACE WITH OTHER PATIENTS</p> <ul style="list-style-type: none"> • Pull the privacy curtain to create a barrier from other patients. • Ensure Droplet and Contact precaution signage is posted. • Staff to create 2 metre distance, when possible, between patient receiving nebulized therapy and other patients. If unable to maintain distance, provide other patients in close proximity within 2 metres a mask to wear until the nebulized therapy is completed. | <p>Airborne Isolation Room</p> <ul style="list-style-type: none"> • Nebulized therapy should ideally be administered in an airborne isolation room with standard ventilation requirements including negative pressure. If an airborne isolation room is not available, a single room with closed door could be used instead. • Limit personnel in the room. • Implement Airborne, Droplet and Contact precautions. • Post additional precaution signs and cleaning communication tool. • Remove all unnecessary items from the room. • Drape items that cannot be removed with clean sheet. • Keep door closed until patient is discharged, clearance time is complete and room is cleaned. • If the number of air exchanges of the room is unknown then plan for clearance time of 90 minutes after the patient has left. If the air exchange is known, please consult IPAC. <p><i>The 90 minutes clearance time is based on the minimum standard air exchange in a healthcare setting as per Public Health Agency of Canada guidelines.</i></p> |
| PPE | <ul style="list-style-type: none"> • Surgical mask • Eye protection • Gown • Gloves | <ul style="list-style-type: none"> • fit-tested N95 respirator • Eye protection • Gown • Gloves |

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| Post Nebulized Therapy | <ul style="list-style-type: none"> • Doff PPE per BCCDC COVID-19 standards. | <ul style="list-style-type: none"> • Doff PPE per BCCDC COVID-19 standards. • Doff N95 respirator and eye protection outside the room. • Document on cleaning communication tool when clearance time completed. |
| When to clean the room? | <ul style="list-style-type: none"> • No need to wait for clearance time to begin cleaning • Housekeeping will perform an additional precaution clean once the patient has been discharged. • Housekeeping to remove additional precaution signage and to inform unit staff when cleaned. | <ul style="list-style-type: none"> • Housekeeping will perform additional precaution discharge clean once clearance time is complete. • Once housekeeping clean completed and clearance time elapsed, unit staff to clean any Non-Critical Medical Equipment, not cleaned by housekeeping, per unit protocols and remove precaution signage. If the room is required urgently after an AGMP and prior to clearance time is complete then housekeeping staff can enter the room and must wear PPE based on additional precaution signage including an N95 respirator. |
| PPE for Cleaning and Disinfection Staff | <ul style="list-style-type: none"> • Surgical mask • Eye protection • Gown/Gloves | <p>Once clearance time is complete:</p> <ul style="list-style-type: none"> • Surgical mask • Eye protection • Gown/Gloves |

6.1.3 Follow up and notify

- Notify your local leader if nebulized therapy is required on patient suspect/confirmed for COVID-19.
- Consult infection control if nebulized therapy occurs on a patient suspect/confirmed for COVID-19 in an open space.

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7. Related Document and References

1. [BCCDC- PICNet 2019 Novel Coronavirus: Aerosol Generating Medical Procedures in Healthcare Settings](#)
2. Infection Prevention and Control (IPC) Protocol for Surgical Procedures During COVID-19: Adult. May 24, 2020. http://www.bccdc.ca/Health-Professionals-Site/Documents/COVID19_IPCProtocolSurgicalProceduresAdult.pdf
3. http://www.bccancer.bc.ca/health-professionals-site/Documents/BC%20Cancer_Procedure_COVID-19_Application%20of%20PPE%20Framework_April%2014%202020.pdf
4. [BC Ministry of Health. Emergency Prioritization in a Pandemic Personal Protective Equipment \(PPE\) Allocation Framework - Page 56 AGMP in oncology settings](#)
5. <http://www.bccdc.ca/Health-Info-Site/Documents/Respiratory-protection-COVID19.pdf>

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| First Issued: | 23-APR-2020 | | |
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| Posted Date: | 24-APR-2020 | | |
| Version: | 1.0 | | |
| Revision: | Name of Reviser | Description | Date |
| | Infection Prevention and Control and Professional Practice Working group | Change of PPE requirements for non-suspect COVID-19 based on direction provided by the Ministry of Health. | 08-JUL-2020 |
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