

Adult Residential Facility Simulation Exercise for Physicians - DRAFT

Day 1 – Friday

It is Friday afternoon at 4pm. You receive a call from the Regional Medical Officer of Health (RMOH) indicating that an outbreak has been declared at an Adult Residential Facility (ARF) in your zone. Consequently, the Provincial Rapid Outbreak Management Team (PROMT) has been activated, including you as the physician on call for ARF outbreak coverage.

A personal support worker (PSW) at the ARF has just tested positive for COVID-19. This PSW has worked several shifts in the preceding 72h. There is significant risk that there has been transmission to other staff and residents of the ARF. The PSW has not yet shown symptoms and is now self-isolating at home. Nobody else in the ARF has displayed any COVID-19 symptoms.

The RMOH informs you that extra-mural nurses have been urgently deployed to the ARF to conduct mass testing on all residents and staff. All residents of the ARF in both wings will be admitted to the Extra-mural Program (EMP) with you as the attending. Per protocol, you are also asked to be the ordering physician for COVID testing of staff in the interest of expediency, with copies of results to their primary care providers.

You are asked to attend an urgent Skype meeting starting in one hour for a situational update and planning session with the rest of the PROMT team.

**Are you familiar with Skype and do you feel comfortable using it to join a meeting?
Are you familiar with Zoom and do you feel comfortable using it to join a meeting?**

Are you familiar with the make-up of the PROMT team and your role on this group?

You can familiarize yourself with the PROMT process and membership here. [LINK PROMT SOP, physician flowchart]

The situational update meeting is led by the PROMT Incident Commander. You learn that the ARF is a 50-bed home. It is composed of two wings, one of which is an 18-bed level 3B “memory care” unit, and the other is a 32-bed level 2 “special care home” unit. The 3B side is full, although one bed is empty because a patient was hospitalized 7 days ago with a hip fracture. There are 5 empty beds on the Level 2 side. It is an older home. Most rooms are double rooms with dividing wall and a shared bathroom. Hallways are narrow. There is a door between the two wings, which is closed and has an alarm but cannot be locked for fire safety reasons. There has not been a space identified in advance to cohort residents in an outbreak.

Are you familiar with these level of care designations?

Table Summarizing Care Levels Relevant to Physicians Working in an ARF

Care level	Age	Staff:Resident Ratio	Resident Frailty	Mobility	Registered Professions
Level 2 “Special Care Home”	19+	1:6	CFS up to 6	Independent	None required
	Residents who do not need continuous 24h supervision, most needing help with personal care to some degree, dependent for IADLs				
Level 3B “Memory Care”	65+	1:3	CFS up to 7	Independent (may need cues)	Must have 1 RN or LPN on staff
	Residents needing continuous 24h supervision, help with ADLs, complex dementia needs (e.g. wandering, sundowning) but no complex medical needs				
Level 3 “Nursing Home”	65+	3.1h care per resident/day	CFS 7-9	Any	24 on-site nursing care
	Resident requiring continuous 24h supervision, any level of function and mobility, medically stable but complex medical needs requiring at least daily nursing care				
Note: CFS = Clinical Frailty Scale [LINK]					

Are you familiar with the concept of cohorting infected residents in an outbreak, and what factors impact the facility’s ability to do so?

Cohorting of residents based on infection or contact risk is a measure taken to contain spread. COVID-19 is very infectious and can spread even among residents in a care home who are isolated. This is particularly true in older facilities with shared rooms and narrow hallways, and on dementia units where hands-on care is frequent and residents wander and touch things constantly. Cohorting has been successful in some outbreaks, however its effectiveness is limited by the potential for pre-symptomatic transmission, the facility layout, and the risk of increasing exposure by moving infected people around. Cohorting is most effective if a plan and process has been developed in advance as it is most beneficial at the outset of an outbreak when numbers and exposures are still low. [\[link to cohorting presentation for more info\]](#)

Contact tracing is underway for staff and residents by public health nurses. The PSW who tested positive is believed to have been exposed by her husband, who is a truck driver and has also tested positive. His exposure is thought to have been 5-6 days ago while out of province,

and he returned home 4 days ago. The PSW has worked 3 shifts, using personal protective equipment (PPE) since her husband's return: 1 on the Level 2 unit, and 2 on the Level 3B unit.

RMOH is conducting a thorough risk assessment. Staff categorised as close contacts have been asked to self-isolate for 14 days and all residents of the ARF have been placed on droplet-precaution isolation. Nasopharyngeal swabbing is underway. The RMOH has determined that 10 rapid GeneXpert tests will be done on 5 residents and 5 staff who have been deemed especially high-risk contacts of the infected PSW. No results are available yet.

Staff are being grouped to work only on one wing or the other, with no intermingling. A private cleaning company has been hired to begin disinfecting the home in its entirety 3 times per day, with cleaning staff teams limited to one wing or the other. Department of Social Development (DSD) has provided social workers to assist with communications and update families about the situation. Visitation to the facility has been halted.

Infection prevention and control (IPC) experts have inspected the facility and determined that isolation is possible and so all residents will be managed in the ARF when this is within their goals of care. The RMOH and IPC experts, along with the facility owner, are exploring options to create a makeshift COVID unit to cohort residents who test positive, however based on the initial site inspection, this will be logistically difficult due to the layout of the home and the limited ability to make any structural modifications at this point.

With the addition of nursing staff from EMP, staffing is sufficient for the night.

A list of contact phone numbers for all members of the PROMT team is compiled and circulated to all members in case of urgent communication needs. A register is placed at the sole entry of the ARF and all staff and other people entering the facility must answer screening questions and register every time they enter the facility.

At this point, what questions do you have that will help you anticipate the medical needs of the residents of the ARF?

You are advised by the EMP operations director that all residents of the home have been pre-assessed and have a "My Health Passport" [LINK] completed using information obtained from the ARF. At your request these are faxed to you to review. Not surprisingly, there are a number of patients with histories of COPD, CHF, diabetes and hypertension. You also notice that most patients receive medications 4 times daily.

All patients on the 3B unit have at least moderate stage dementia and all are mobile. Most wander extensively and require hands-on care for activities of daily living (ADL). Approximately half of the patients on the level 2 side have dementia, mainly early stage. Wandering is less of a problem there.

There is one patient on the level 2 side who attends Hemodialysis on Mondays, Wednesdays and Fridays. She underwent dialysis this morning and has since returned. The RMOH ordered a GeneXpert (rapid) swab for her.

There are 4 patients known to be “full code” and 3 others whose status remains undetermined. The rest have documented advance care plans indicating they do not wish to be resuscitated or transferred to hospital if comfort can be achieved at the ARF.

The only Aerosol-generating Medical Procedures (AGMP) are in 2 patients on the level 2 wing who normally use CPAP at night for mild obstructive sleep apnea. The RMOH recommends that you temporarily discontinue this treatment in both patients for the duration of the outbreak if possible. The Operational lead on the PROMT team reminds you that an EMP Respiratory Therapist is available to assist with any monitoring and advice for residents in whom CPAP must be held.

You identify the need to determine advance care plans for the 3 ‘unknown code status’ patients, as well as the benefit to reviewing the advance care plans for the 4 ‘full code’ patients in the context of the outbreak. How can you best help patients and families to have realistic expectations of active treatment the context of frailty during a COVID outbreak? What tools are available to you to assist with this?

Your approach to this will depend on your personal style and practice. This communication will almost certainly be done virtually. You might consider using technology to allow video communication (e.g. Zoom) if you and the other party are comfortable with this, although most likely these conversations will take place over the telephone. You may also choose to enlist the help of the patient’s family physician (if possible), as their pre-existing relationship could be beneficial here.

In terms of the content of the discussion, there are numerous tools that have been developed that provide specific guidance for this scenario. Consider reviewing the Nova Scotia Palliative and Therapeutic Harmonization (PATH) documents for discussing goals of care in the context of frailty. These include guides and information for the physician, as well as patient/family, and include suggested scripts for discussion. [LINKS]

Recognizing that frequent medication passes (instances when medications are administered) increase the potential for viral transmission between staff and residents, and increase the workload for staff who you already anticipate will be very busy and ‘working short’, what can be done to reduce the number of medication passes? What tools are you aware of that can help guide you?

A worksheet has been adapted for this purpose [LINK]. The goal is to simplify and rationalize treatment to minimize medication passes. However, this is best done in advance as some medication changes will pose a risk of creating more work than they save if the patient reacts differently than expected to the change. Thus, if this task is

undertaken in the midst of an outbreak, changes should be limited to those that have lowest likelihood of destabilizing controlled disease or causing the re-emergence of controlled symptoms (e.g. supplements, preventative medications).

What would you advise should be done about the patient on hemodialysis?

In this scenario, the RMOH is already aware of the situation and has already expedited her COVID test. The RMOH will also have engaged with the dialysis unit regarding infection control and contact tracing procedures. Anytime you learn of a potential source of viral spread like this you should inform the RMOH as soon as possible.

As the attending physician, it will be your role to determine the ongoing necessity of any recurrent medical procedures or investigations (e.g. dialysis, chemotherapy, transfusions, etc.) that require a resident to leave the facility or require someone else to enter. This would require discussion these issues with patients or families, and possibly with relevant specialists. In this case, dialysis is a life-sustaining treatment and would need to continue unless her goals of care change. It would be a good idea to contact her nephrologist. The local dialysis unit will need to anticipate the need to make special arrangements for isolation during transfer and at dialysis. This will be made under the guidance of the RMOH and would likely mean she will go at the end of the day under strict isolation. If she developed significant COVID illness, goals of care may need to be reviewed as hospitalization might be necessary if she were to opt to continue dialysis.

The meeting concludes with a plan to reconvene the following morning.

Later you receive 2 calls:

Call #1: The RMOH notifies you that 3 of the GeneXpert (rapid) tests have come back positive (1 PSW and 2 residents of the 3B unit). The other COVID test results are expected back sometime tomorrow.

Call #2: The EMP RN on site to discuss the condition of a resident on the 3B side, named Anne, who has become mildly delirious and has a fever of 38.1C. Vitals are otherwise normal and stable. She has no other apparent symptoms. At baseline, she has moderate stage dementia and a history of CHF. Her care plan is 'comfort only'. She was not one of the residents chosen for rapid testing, so her COVID status remains unknown at this time. You confirm that the RMOH has been notified of her symptoms so that they can have her test expedited. All residents are currently on strict isolation.

How should the symptoms mild COVID infection be managed?

Treatment of COVID-19 is supportive. Publications early in the pandemic staged COVID respiratory illness using categories of mild, severe and critical. Mild COVID has symptoms without requiring supplemental oxygen.

Acetaminophen to control fever is the main treatment in mild illness. Controlling fever can help improve comfort, reduce insensible fluid losses, and reduce delirium.

Delirium can be the initial or only symptom of COVID infection in frail patients. However, alternate causes of a delirium with fever should at least be considered while her COVID status is remains unconfirmed, depending on goals of care and the degree of clinical suspicion. In this case risk seems high so waiting for the COVID swab before embarking on a full delirium workup seems reasonable. Severe agitation related to delirium can be managed with low dose antipsychotics if necessary [LINK to COS].

Puffers can be used if bronchospasm is suspected, but aerosols should be avoided due to risk of aerosolizing the virus. [LINKS Horizon COS, palliative algorithms]

Day 2 - Saturday

The next morning you attend the PROMT meeting. The team discusses the situation in light of the confirmation of spread to residents and other staff. One of the 2 confirmed positives residents you learned about last night now has a mild cough. Anne has also tested positive. Having touched base with the EMP RN at the ARF prior to the PROMT meeting, you are able to provide the clinical update that this lady's fever has settled with acetaminophen and all other patients are feeling well so far.

Test results have also come in for the Level 2 wing, and thankfully all are negative. No residents on that side have symptoms. Isolation precautions will be maintained on all residents as exposure risk remains high. The team discusses strategies to minimize the risk of transmission of COVID between the two wings.

Staffing shortages are being addressed by PROMT Operational lead.

Led by the PROMT IPC Lead, personnel are on-site at the ARF to ensure that staff are being refreshed on proper use of PPE, with supervised donning and doffing to minimize errors.

With the confirmed positive cases, the entire 3B unit has been designated as a 'hot zone' and all patients are being isolated as much as possible. Staff have been able to reduce resident wandering somewhat with frequent redirection and distraction, but it appears increasingly futile to try and maintain strict isolation there.

What can be done to reduce wandering? Is it possible to reduce wandering with medication, and if so what are the risks?

No medication reduces wandering behaviour in dementia. If wandering is the product of other symptoms (e.g. anxiety, pain, hallucinations) then medications targeting those

symptoms can be helpful. Otherwise, using sedative medications to reduce wandering (e.g. benzodiazepines, antipsychotics) only works by sedating patients deeply enough that they are simply unable to get up. This confers other risks (e.g. pain, permanent loss of mobility, skin breakdown) which must be carefully weighed against the risks of allowing wandering to continue.

Physical restraints cause pain, indignity, fear, agitation and delirium, as well as the medical risks associated with immobility. It is never acceptable to use physical restraints without adequate pain control and sedation.

The most effective measures to deal with wandering are non-pharmacological, and amount to providing safe wandering spaces, addressing boredom, and channeling physical energy into other activities. For obvious reasons, this is very challenging in the midst of an outbreak, but there are feasible non-pharmacological approaches [LINK] to reduce wandering in LTC during an outbreak.

In all likelihood, some wandering will continue no matter what is done. Adequate staffing will at least permit decluttering the environment of objects which could become fomites once handled, frequent disinfection of high-touch surfaces, proper use of PPE, and measures to engage residents in safer wandering or other activities.

It may be that the risks of forcibly confining wandering residents (if even possible) is as harmful as accepting the risks and allowing some wandering to continue. This is a decision that would be made jointly with the RMOH depending on the specifics of the situation. A geriatrician may also be helpful in problem-solving difficult cases and in weighing the risks and benefits of different degrees of confinement. Communication with families about risks and benefits is important here as well.

Day 3 – Sunday

The outbreak was announced to the media yesterday afternoon. You are called this morning by the EMP RN on duty. She informs you that a patient's son is at the door of the ARF asking to speak with "the doctor", because he wants his father, Robert, be released into his care. They are awaiting a call back from the RMOH to assist with the situation. The son is Robert's Power of Attorney (POA). Robert is a resident in the (so far) unaffected level 2 wing. He is a 91-year-old man with moderate dementia, but he is medically uncomplicated. Although he is still on the Level 2 unit, he is on a waitlist to move to the 3B side. He is independently mobile with a walker. He is up frequently through the night, has urinary incontinence, and once or twice per week he has 'off days' where he needs some assistance to get in and out of bed and to and from the toilet. You are asked if you could discuss the situation with his son to help resolve the situation.

Whose decision is it whether Robert goes home with his son?

The decision to leave a care home, under normal circumstances, would be the patient's unless he lacks capacity to do so. To have capacity a person needs to be capable of a reasonable understanding of their care needs and what assistance would be required to meet them. They would also need to be able to demonstrate an ability to understand and appreciate the risks posed by living with inadequate care, and express a choice to accept these risks.

If Robert lacks this capacity (i.e. he is incompetent), then his legally appointed substitute decision-maker (SDM) makes decisions about his care. In this case it would be his son, who has POA. This may already have been determined and documented or may need to be determined now. If you are unable to determine capacity, calling a geriatrician for assistance may be helpful.

In a case like this, the first step should be to consult the RMOH. [LINK PH process] Public Health will conduct a risk assessment to see if temporary removal is an option. If he is in a section of an ARF considered to be in "active COVID outbreak", RMOH would most likely issue an order under the Public Health Act to keep him there. This order overrides the authority of either him or his POA. In this particular scenario he is on the unaffected wing, so it is possible the RMOH might not find sufficient grounds to mandate that he stay.

With the help of staff at the ARF, you confirm that Robert has previously been deemed incompetent as a result of his dementia and that his son is indeed his POA. The RMOH decides that his risk is insufficient to allow the Public Health Act to be used to keep him in the ARF, but if he leaves with his son there will be a mandatory self-isolation required of the entire household.

What would you want to discuss with his son prior to him taking Robert home?

As with any decision, the decision-maker should be properly informed about the decision at hand. In this case, the son should be made aware of his substantial care needs and the risks of failing to meet these. An assessment form may be helpful in gathering and summarizing his needs and risks, to help families understand what they are getting into. [LINK to Ottawa decision tool]

There should also be discussion about the real possibility that he could already be exposed to COVID-19 and his care needs will increase if he becomes ill, potentially requiring hospitalization. There is also the risk that he might transmit COVID-19 to others in the household, endangering the health of his family and caregiver(s) and thus their ability to look after him. Also, the mandatory self-isolation would mean that outside caregivers would not be able to enter the home for 14 days.

Also, ensure that his son has a realistic expectation for how long his father would likely be home with him. An outbreak is only declared over when 2 full incubation periods have passed since the last person recovers (i.e. $2 \times 14 = 28$ days). Normally, DSD can hold his bed for 30 days after leaving, potentially longer under extenuating circumstances (an outbreak might qualify). But family should be aware that his bed may not necessarily be held for him and if not, he would need to reapply for placement. A social worker from DSD is available and should be involved to help with communication, risk assessment, and troubleshooting of care deficiencies in a situation like this.

If you had serious concerns that Robert's needs would not be met upon returning home, placing him at risk of neglect or harm, who should you contact to follow-up?

Adult Protection Services could be contacted to investigate and potentially intervene by obtaining a protective custody order. You or any member of the care team could request an investigation by AP. Obviously, this is a last resort that is best avoided if possible.

Day 4 - Monday

You have been rounding virtually twice daily, interacting by phone with nursing staff on site. So far, all patients have remained stable. The results of the first round of testing confirmed that 3 residents are positive, plus with 2 PSWs (including the original first case). The dialysis patient is negative. Repeat testing of all staff and residents is set to take place again today.

What is the optimal interval for screening of residents in an outbreak?

This is not known for certain and would ultimately be up to the RMOH to determine. Best practice appears to be approximately twice weekly screening of any residents or staff who have not yet tested positive. The purpose of asymptomatic screening is twofold:

- 1. To identify cases for cohorting and isolation to minimize spread*
- 2. To monitor the extent of the outbreak to plan for required resources which may rapidly become necessary (oxygen, medication, staff...)*

Depending on the extent of the outbreak and the geographic arrangement of the ARF, the RMOH may choose to alter the interval of testing or stop routine screening if it is determined that it will no longer have a significant impact on either of these factors. As the attending physician, your opinion on this would be carefully considered.

Although intuitively it might seem that frail older people in long-term care would always develop symptoms when infected, asymptomatic carrier rates have been reported between 25 and 40% among patients long-term care settings. And, a delay of up to 7 days between a positive test and manifestation of symptoms has been reported in long-term care residents. So, using symptoms alone to guide testing is insufficient.

Remember also that nasopharyngeal swabbing is a relatively invasive and uncomfortable procedure, and repeated swabbing can be upsetting and uncomfortable for both the tester and the patient. This is particularly relevant in a setting where many have chosen “comfort measures only”. This document outlines strategies to test those with cognitive impairment more successfully. [LINK]

While you are on the phone with the nurse this morning, a PSW interrupts her and you learn that a 68-year-old male resident of the 3B wing could not be woken up on morning rounds. He eventually responded but is extremely drowsy. He has no fever, but he is tachycardic, tachypneic and oxygen saturations are 80%. He takes no medications that could depress his level of consciousness. He was feeling well going to bed the night before. You recall speaking with his wife a few days earlier to review his goals of care, and she had been adamant that he remain a ‘full code’.

What options do you have to administer supplemental oxygen in this setting?

Per PROMT procedure, oxygen concentrators will be made available on-site as soon as an outbreak is declared. These are capable of delivering oxygen by nasal prong up to 5 Litres/minute, which is not considered aerosol-generating. Nursing staff and a respiratory therapist will be available on site to assist with administration and monitoring.

You order oxygen up to 5 Litres per minute (LPM) to be applied immediately using a concentrator on site and ask the nurse to assess the patient and then contact you immediately with clinical data.

While you are waiting, you contemplate your options to assess this man more directly if necessary.

Are you set up with a Zoom Healthcare Account? Have you tested the connection? Are you confident using the software? Have you tested it using your usual internet connections? Have you tested it with this ARF prior to potentially needing to connect urgently?

[LINKS for ZOOM orientation]

Note also that EMP nursing staff have been trained to use the RESTORE2-mini tool [LINKS], which is validated for recognition, observation, and communication of acute illness in the LTC setting. You may wish to familiarize yourself with this tool to optimize communication on the receiving end when providing virtual care.

The nurse calls you back. The man is indeed quite sick. She informs you that he is still breathless and hypoxic (Oxygen saturation 84%) on oxygen 5LPM. His temperature is 36.1C. Blood pressure is 110/50 and pulse is 115bpm. He currently cannot sit up in bed without assistance

and is quite drowsy. He has no appetite. He has been incontinent of urine and stool, which is unusual for him. Normally he is independently mobile and quite alert with a good sense of humour.

New hypoxemia is an indicator of severe COVID respiratory illness. Supportive management of this stage is often still possible in the ARF setting. What other active treatment measures might you consider for this man?

[LINK COS]

In addition to oxygen, patients with severe COVID respiratory illness may benefit from

- *Acetaminophen for fever*
- *Fluids (IV/hypodermoclysis) for dehydration*
- *antibiotics if bacterial superinfection or suspected sepsis.*
- *Sedation if agitated symptoms of delirium develop.*

(All of these can be provided in an ARF with the assistance of EMP.)

Can you meet this man's goals of care at the ARF?

No. He is still hypoxic and deteriorating on maximal available therapy. He needs hospital transfer to access the full care he has chosen. You know that there is little else that you could provide for him at the ARF in terms of further workup or treatment, and so assessing him on-site will not change the need to transfer him to hospital and would potentially delay him accessing necessary critical care.

What is the process to arrange a hospital transfer?

Always seek advice from the RMOH before any transfer of a patient during an outbreak. The process for transferring to hospital will be delineated at a PROMT meeting early in the outbreak, but it is important to make sure other factors have not changed it since then.

When transfer is necessary, direct contact with the physician(s) at the receiving site is critical to ensure proper transfer of care and minimize risk of transmission on arrival. This would probably start with the local medical director, especially early in an outbreak when the process has not yet been perfected. Once the initial destination of the patient has been determined, you should also contact the receiving physician directly.

Because access to medical advice and onsite assessment is not normally available, staff at the ARF will be accustomed to calling 911 themselves in a medical emergency. This should not happen in an outbreak, as it is critically important that the transfer process be carefully planned before it happens. As a member of the PROMT team, Ambulance New Brunswick will be aware that this ARF is in a COVID outbreak and prepared to take necessary precautions when responding to the facility.

The patient is safely transferred to the local Emergency Department (ED) by ambulance, using appropriate IPC. He has a rapid GeneXpert test upon arrival as pre-arranged by the RMOH, which is positive for COVID-19. After assessment, he is intubated and transferred to the ICU.

Later that day, you connect with on-site RN at the ARF and the RMOH for another information update. Several other patients on the 3B unit are now showing worsening symptoms suggestive of COVID-19: 2 have low grade fever, 1 of these has a cough, 4 patients are noticeably more lethargic but showing no other signs, and 1 patient is more agitated than usual. All residents and staff were swabbed again that morning as part of the protocol ordered by the RMOH. Results are pending.

Assuming that as many as 7 more symptomatic cases of COVID-19 may be present, potentially bringing the total in the affected wing to 10, you anticipate that several may need active palliation in the coming days.

What medications and other supplies should you order to have on-site to ensure you are able to meet the needs of a surge in the number of sick patients?

See palliative med kit documentation as well as list of necessary palliative care supplies [filenames] EMP has protocols to ensure that adequate supplies for administering medications are available, but it never hurts to ensure that adequate stock of syringes, needles, butterflies, etc. is available on-site.

You can also use the palliative care medication calculator tool in excel [LINK] to estimate how much medication may be needed over a given time period for a given outbreak size. This can help guide you in ordering supply. Assuming adequate community stock and pharmacy availability, it is probably safe to initially plan for 24h supply with adjustments based on drug consumption rates.

How can you obtain palliative medications in advance in an ARF?

Palliative medication kits can be ordered using the EMP Form [LINK]. These must be ordered for a specific patient but can subsequently be administered to any patient in need with your order. For EMP patients, palliative medication kits come from Mapleton Pharmacy in Moncton. Delivery is assured the same day province-wide, but you may want to adjust expectations depending on where you are in the province. Early in the outbreak, you will want to make sure adequate medications are on hand as COVID positive patients in LTC facilities can deteriorate suddenly. This has often been anecdotally reported to be around day 5 of their illness.

Day 5 - Tuesday

At the morning team update meeting, as feared 9 more residents have tested positive, bringing the total number of infected to 12 (11 at the ARF, 1 in hospital). All are on the 3B wing. Two more staff working on the COVID wing have also tested positive and are self-isolating, further impacting staffing shortages. There had been a plan to construct a temporary barrier and cohort the positive residents separately on the 3B wing, but this proved unfeasible in the time frame available, and now there are too many positives to cohort anyway.

All residents on the level 2 wing have tested negative again.

You update the team that so far 8 of the 11 positive cases remaining at the ARF are showing symptoms attributable to COVID-19. Fevers in 4 are being treated with acetaminophen. Two are on supplemental oxygen but stable. Hypoactive delirium is a bigger problem than agitation, with most symptomatic patients tending to be lethargic and staying in their beds. Other medical conditions have required you to make some minor adjustments to medications, but overall things are fairly stable.

The Operations Lead, who has now taken over direction of the PROMT team, explains that staffing continues to be very fragile, but the province-wide call for help has yielded several additional PSWs who are working daily shifts and staying in an isolated wing of a local hotel. Staff anxiety has increased with the surge in positive cases. IPC staff remain present on a daily basis coaching and problem-solving PPE use and isolation, which is helping somewhat. Full length mirrors have been obtained and put in place at the entrance and exits of the affected unit to help with safe donning and doffing of PPE. The 'buddy system' is also being used to help staff catch IPC errors, which are inevitable with an exhausted care team.

Day 6 – Wednesday

You receive a call from the EMP RN on site. A COVID positive resident is deteriorating quickly. Her previously expressed wishes are for comfort care only and not to be transferred to hospital. She is drowsy, visibly uncomfortable, and no longer able to get out of bed. She is dyspneic but removes oxygen tubing whenever staff try to apply it. She has no appetite and is only taking occasional sips of water. Her blood pressure (BP) is 120/80, HR is 90, temperature is normal (she is receiving acetaminophen every 4 hours), respiratory rate is 20 and her oxygen saturations are 88% on room air.

What is the process to order palliative medication for her?

This process will be the same as usual for EMP patients. Orders can be written on an EMP communication form and faxed to the RN at the ARF. If you are not able to access a fax machine immediately, verbal orders can be given and the RN will record these on an EMP communication form and fax that to you for signature later.

What is the suggested palliative management for symptoms of COVID-19?

The Palliative Care Clinical Groups in Horizon and Vitalité have provided algorithms for the initial management of end of life symptoms of COVID-19 illness [LINKS]. Palliative care specialists are also available to you through the usual channels in your area if you require additional advice or consultation.

Day 8 – Friday

You receive a call from an orthopedic surgeon at the nearest regional hospital. The 79-year-old lady who fractured her hip several weeks before the outbreak is ready for discharge after 28 days in hospital. She lives on the 3B wing. The surgeon says that usually these discharges are coordinated directly with the ARF but given the outbreak he was instructed to speak with you directly first. The patient is now medically stable, ambulating independently with a walker, and back to her cognitive baseline of moderate stage dementia.

Should you accept this lady back to the ARF in the midst of a COVID-19 outbreak?

The RMOH should always be consulted before any transfer in or out of a home in active outbreak. They would absolutely not allow this lady to return at this point. This would place her at high risk of exposure and would further tax an already overwhelmed staff. As the attending, you can refuse a transfer at any point if you feel it would be unsafe or impossible to care for an incoming patient.

Day 15

There have been 3 more residents who have tested positive on the 3B unit, bringing the total to 15/18 patients. Two have died peacefully with good palliation. Thankfully, none have tested positive on the level 2 unit. In total, 5 staff have tested positive and are home self-isolating, with mild illness or less. The PROMT team has been successful in cobbling together sufficient staff to maintain adequate care at the home. Although all are exhausted, morale is reasonably good, as the number of new cases has been decreasing and some residents who are COVID positive have begun to recover.

What are the notification requirements when a COVID positive patient dies?

A COVID-19 death must be reported to public health. The RMOH should always be notified directly as soon as possible.

Two of the recovering residents have spent much of their illness in bed and are now quite deconditioned. Staff are struggling to manage their care as they are now much more dependent than they were before. They now exceed what can normally be managed in a level 3B setting.

What are the options to rehabilitate these residents?

EMP Physiotherapy and Occupational therapy can be brought in to assess and provide therapy. This is the best first step. Moving potentially infectious residents elsewhere is not a good option, for obvious reasons. Ideally, additional staffing should be brought in if care needs are too high.

Once they are declared recovered by Public Health, inpatient rehabilitation services could be an option if available and if their goals of care would include transfer for this reason. The feasibility of this would need to be carefully explored with input from RMOH.

Day 17

Residents continue to slowly recover. Many are back to baseline now. EMP therapeutic staff are visiting daily to assist with rehabilitation. There were no positive results in the last round of COVID screening. The RMOH determines that further testing will be done only if symptoms arise.

You receive a call from a physician at the regional hospital. The COVID positive man who went to ICU with respiratory failure did remarkably well and was extubated 4 days ago and is stable on the medical ward. He is still quite weak, needing assistance to ambulate and he remains incontinent. He has stopped repeatedly asking for his wife now that he is able to remember she is not allowed to visit in person and based on phone discussions and reports from nursing staff she feels he is improving but not quite cognitively back to baseline. The hospital is near capacity and nursing shortages have increased pressure to discharge as many patients as possible. You are asked if it would be possible to take this man back to the ARF to continue his recovery and rehabilitation there with therapeutic staff from EMP.

You discuss the situation with the facility operator. This man has been a resident there for several years and is very popular with the staff. His return might be uplifting to staff, and with help from EMP therapeutics they feel capable of managing his care needs based on the description above.

Are there any special requirements that must be met before a COVID positive patient can return to a LTC facility?

Per Memo#37 from the pandemic task force (August 24.2020) When the community is in YELLOW Phase, residents pronounced to be recovered from COVID-19 by a medical officer of health do not require a negative test prior to being admitted to a LTC facility. Although this may be different in ORANGE or RED phases, in the case of a LTC facility already in the midst of a COVID outbreak, this man's COVID status should not be a relevant factor in the decision to transfer him. In this case, it would come down to

whether or not it was possible to safely look after him, which would require input from the facility.

Day 21

Staff at the ARF report that due to the prolonged isolation, residents on both wings are struggling to cope. This is particularly true for those with dementia. Wandering is getting harder and harder to control. There is more resistance to daily care. Aggressive outbursts are frequent. Many residents are anxious, some cry on a regular basis. Evenings are chaotic due to increased sundowning behaviour. Virtual visitation from families is happening using technology, but because this task must be juggled by ARF staff along with their other duties, these visits are short and infrequent.

What resources are available to you to guide the team in addressing the increase in Behavioural and Psychological Symptoms of Dementia (BPSD)? Which of these problems might respond to medication, and what are the risks?

Treatment of BPSD is difficult under normal circumstances. In a facility under lockdown it will be very difficult. Non-pharmacologic approaches, when done properly, are more effective and much safer than medications for most behaviours, and many behaviours are not responsive to medications at all. To help, algorithms have been prepared by New Brunswick geriatricians [[LINK BPSD algorithms](#)]. You can also seek advice from a geriatrician or geriatric psychiatrist directly using the usual communication channels.

Day 49

It has now been 28 days (two incubation periods) since the last resident with COVID-19 was deemed “recovered” by Public Health. No further infections have been identified. Several residents were tested for non-specific presentations such as delirium or falls, but COVID testing was negative and other plausible explanations for their conditions were identified. In all, 15/18 residents on the 3B side tested positive. Most of these had symptoms, 4 required oxygen, 2 died, 7 needed physiotherapy to help recover, 3 did not regain independent mobility and are now waiting for reassessment to move to a higher level of care.

The RMOH declares the outbreak over. EMP discharges the ARF patients from their caseload. You and your colleagues are relieved of your coverage duties at the ARF and resume on-call availability in case of another outbreak in the zone.