Alberta Health
Alberta Health Services

COVID-19 in Continuing Care Facilities

Report of the Auditor General

February 2023

Auditor General
OF ALBERTA

Auditor General
OF ALBERTA

Mark Smith, MLA
Chair
Standing Committee on Legislative Offices

I am honoured to transmit my report, *COVID-19 in Continuing Care Facilities*, to the Members of the Legislative Assembly of Alberta, under Section 20 of the *Auditor General Act*.

W. Doug Wylie FCPA, FCMA, ICD.D
Auditor General

Edmonton, Alberta
February 2023

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Related Reports

- Seniors Care and Programs (May 2005)
- Seniors Care in Long-term Care Facilities Followup (October 2014)
- Seniors Care in Long-term Care Facilities AOI (February 2023)

Appointed under *Alberta's Auditor General Act*, the Auditor General is the legislated auditor of every provincial ministry, department, and most provincial agencies, boards, commissions, and regulated funds. The audits conducted by the Office of the Auditor General report on how government is managing its responsibilities and the province's resources. Through our audit reports, we provide independent assurance to the 87 Members of the Legislative Assembly of Alberta, and the people of Alberta, that public money is properly accounted for and provides value.

Summary

COVID-19 was a global pandemic caused by the SARS-CoV-2 virus. The COVID-19 disease presented the greatest risk of severe illness and death to older people and those with underlying health conditions. It spread efficiently between people in enclosed spaces via respiratory droplets and aerosols, as well as contact.

The reality of the risk posed by the COVID-19 pandemic to continuing care facilities[1] and the residents they care for quickly became apparent across the world in early 2020, sometimes with terrible severity. Continuing care facilities across Canada came under severe pressure from COVID-19 as it began to spread across the country, resulting in large outbreaks and significant illness and death among both residents and staff. Governments and health authorities across the country were challenged to respond quickly to a disease for which there was limited initial understanding. COVID-19 was a threat unlike anything the continuing care system—indeed the entire health system—had faced.

Alberta Health identified the first COVID-19 outbreak in a continuing care facility on March 14, 2020, starting a years-long effort to protect facilities and to keep residents, and the staff who care for them, safe.

In this audit we looked at the public health response by the Department of Health (Alberta Health) and Alberta Health Services (AHS) to COVID-19 in Alberta's 355 publicly funded continuing care facilities. We audited what Alberta Health and AHS did to prepare for and respond to COVID-19 in these facilities during waves one and two of the COVID-19 pandemic—the period of March to December 2020. In that time, 379 outbreaks started in continuing care facilities, accounting for more than 8,300 COVID-19 cases and 1,000 deaths.

Our work is grouped into four crucial activities for success: planning, communicating, executing, and monitoring and enforcing compliance.

In the first section of our report, we discuss pre-COVID-19 pandemic planning and preparedness. We found planning and preparedness was in place but was not sufficient to respond to COVID-19. Facility-level plans quickly began showing limitations in the face of the scale and severity of COVID-19 outbreaks. Many facilities struggled to meet regulated standards for infection prevention and control and staff training even prior to COVID-19. Alberta Health and AHS found their existing provincial-level plans insufficient and quickly adapted away from them, resulting in initial confusion with role clarity during the first wave of COVID-19. We also noted that while emergency preparedness exercises specific to a pandemic had happened just a year before COVID-19 began, these exercises were siloed and did not practise scenarios and coordination across the many key participants—Alberta Health, AHS, facility operators, and others—which make up the continuing care sector.

[1] What are commonly called "nursing homes" and congregate care facilities for people who are elderly or infirm are referred to as "continuing care facilities" in Alberta. We adopt this naming convention for the remainder of this report.

The second section of our report discusses guidance and communication between provincial authorities and continuing care facilities. We found that the processes to develop guidance and ensure efficient two-way communication with facilities were effective. We noted that the Orders of the Chief Medical Officer of Health specific to continuing care facilities initially caused confusion and frustration at facilities in wave one. This happened because of their novelty, the pace at which they were issued in the first three months, and their length and complexity. Alberta Health continuously refined its process for creating and communicating these Orders across the first two waves.

The third section of our report looks at the processes to provide key resources and supports to facilities to prevent and respond to COVID-19 outbreaks. We found that facilities struggled to ensure they had enough of the right staff to provide safe resident care. This was especially true during an outbreak, which could cause 20 to 50 per cent of already stretched facility staff to be off due to illness or isolation requirements. The use of shared rooms, as well as large and dated buildings were common in the most severe COVID-19 outbreaks. Facilities also struggled to manage outbreaks due to delays in receiving COVID-19 test results for their residents and staff—sometimes waiting a week or more at the same time as Albertans in the public were receiving their own test results within days. Decisions to provide $250 million of funding and personal protective equipment (PPE) to facilities were key to relieving some strain and came as facilities were reaching a breaking point in these areas.

The last section of our report considers the systems to monitor the response to COVID-19 in continuing care facilities. We found that Alberta Health and AHS developed and used several systems to monitor facilities, particularly during COVID-19 outbreaks. Alberta Health and AHS both quickly established in-person facility inspection programs. While they initially struggled with coordination, consistency, and siloed information, there can be no doubt that facility inspections improved resident safety. Other monitoring processes—such as epidemiological investigations of large outbreaks and in-depth internal reviews of the system-level response—took place, but these critical monitoring efforts ceased after wave one.

Our report notes many findings in areas relating to preparedness, the impacts of conditions at the start of the pandemic, and other structural challenges on the COVID-19 response. However, our report also consistently notes the effort of people—individuals and groups—at all levels of the continuing care system to respond to COVID-19 and protect residents despite, and often directly in the face of, these sorts of structural challenges. We consistently saw examples of people adapting, finding workarounds and temporary solutions to structural problems, and a genuine effort to critically evaluate what was working and what was not, so that they could continuously improve the response over time.

Overall, we concluded that Alberta Health and AHS had processes to respond to COVID-19 in continuing care facilities, but that improvements can be made.

We make eight recommendations in our report. Four recommendations deal with preparedness and structural factors that challenged the COVID-19 response. These recommendations include updating and better coordinating pandemic plans and preparedness, as well as taking steps to increase the resilience of the facility staffing system and resolving infrastructure limitations encountered during COVID-19. Four recommendations deal with ensuring that adaptations, learnings, and other processes that were developed or reinforced to resolve problems during COVID-19 are not lost.

We cannot overstate the dedication, focus, care, and indefatigable spirit shown by people across the system in responding to COVID-19.

Audit objective:

To determine whether the Department of Health and Alberta Health Services effectively actioned a pandemic and outbreak response to COVID-19 in publicly funded continuing care facilities.

Criterion 1:

Alberta Health and AHS should have strategies, plans, and protocols ready to guide the facilities' pandemic and outbreak response.

Key findings:

- Continuing care facilities were not well-prepared for communicable disease outbreaks the magnitude of COVID-19—facility pandemic plans were not sufficient and many facilities did not meet all requirements around infection prevention and control and staff training prior to COVID-19.
- Provincial pandemic emergency plans were in place, but role clarity between major participants was an issue in the first wave of the COVID-19 response.
- Pre-COVID pandemic and emergency preparedness exercises did not practise coordination across the continuing care sector and lacked operational staff involvement.

Recommendations:

- Recommendation 1: Update and expand a pandemic plan common to entire continuing care sector
- Recommendation 2: Exercise and simulate updated plan regularly, with all parties

Criterion 2:

Alberta Health and AHS should communicate all relevant plans, updates, guidance, and emerging information to facilities.

Key findings:

- Because of the novelty of the process and the urgency of the task, Alberta Health did not fully work through the implications of the first few iterations of Orders on facilities—as a result, the Orders caused confusion and frustration at the front lines.
- AHS guidance for continuing care facilities was robust, consistent, and made widely available.
- Alberta Health and AHS quickly established two-way communication channels with facility operators.

Recommendations:

Alberta Health resolved noted issues during the course of our audit. We made no recommendations related to communication.

Criterion 3:

Alberta Health and AHS should assess whether facilities have resources to implement plans, protocols, and guidance.

Key findings:

- Having enough staff to provide safe care during an outbreak was a persistent, systemic problem.
- Facilities experienced major delays in getting the results of COVID-19 tests for residents and staff.
- Shared rooms and aspects of facility infrastructure featured prominently in the most severe COVID-19 outbreaks.
- Alberta Health and AHS provided over $250 million in incremental funding to facilities in 2020.
- PPE and supplies were a critical constraint for the first month, but rectified after mid-April 2020.

Recommendations:

- Recommendation 3: Develop a continuing care staffing strategy to increase staffing system resilience
- Recommendation 4: Formalize centre of expertise for outbreak management
- Recommendation 5: Formalize operational improvements in outbreak testing
- Recommendation 6: Evaluate all existing infrastructure and set a strategy for improving facility infrastructure

Criterion 4:

Alberta Health and AHS should monitor whether facilities are complying with the plans, protocols, and guidance, and enforce action as needed.

Key findings:

- A complete suite of in-person facility inspections began within weeks of the first outbreak and continuously improved.
- Operational outbreak monitoring from AHS zone leadership was effective.
- Detailed epidemiological investigations of outbreaks were critical tools to learn from COVID-19 outbreaks in facilities and make operational improvements, but ceased after wave one.
- System-level monitoring of the response of Alberta Health and AHS to COVID-19 in continuing care facilities was robust, but ceased after wave one.

Recommendations:

- Recommendation 7: Track resident illness and staff absences during communicable disease outbreaks in facilities
- Recommendation 8: Implement recommendations from Alberta Health Services internal reports

Context

COVID-19

COVID-19 is a respiratory disease caused by the SARS-CoV-2 virus. SARS-CoV-2 is a coronavirus in the family of viruses that caused the SARS epidemic in 2003.[2]

Most people infected with COVID-19 experience mild to moderate illness and recover without special treatment. Older people and those with underlying medical conditions are more likely to develop serious illness or die from COVID-19.

COVID-19 was first identified in Wuhan, China in December 2019. By January 30, 2020, the World Health Organization (WHO) declared COVID-19 a public health emergency of international concern. After significant international spread, the WHO upgraded COVID-19 to a pandemic on March 11, 2020.[3]

Ontario identified the first probable COVID-19 case in Canada on January 25, 2020. The national laboratory confirmed the case two days later. On March 6, 2020, Alberta confirmed the first case of COVID-19 in the province. In 11 days, cases grew from one to more than 100. On March 17, 2020, Alberta declared a state of public health emergency.

The characteristics of the disease and the sheer magnitude of COVID-19 caused the greatest challenge ever faced by Alberta's health care system. The entire health system needed to act quickly, make decisions with limited and changing information, and continuously refine its approaches to respond to COVID-19.

Alberta COVID-19 Cases, Deaths and Case Fatality March 2020–December 2020

Age in years	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+
Cases	7,935	11,700	19,503	19,800	16,439	12,285	7,670	3,768	4,143
Deaths	-	-	4	7	16	48	163	309	983
Case fatality[4]	- %	- %	0.02%	0.04%	0.10%	0.39%	2.13%	8.20%	23.73%

[2] For more information see "Learning from SARS: Renewal of public health in Canada – Report of the National Advisory Committee on SARS and Public Health." https://www.canada.ca/en/public-health/services/reports-publications/learning-sars-renewal-public-health-canada.html

[3] See World Health Organization's timeline of their COVID-19 response: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/interactive-timeline#!

[4] A case fatality rate is a common measure of disease severity which asks: "Of those who caught the disease, how many died?"

COVID-19 and Continuing Care

COVID-19 presents significant risk to continuing care facilities[5] and their residents. The disease spreads efficiently in small and crowded spaces, and it can spread before people know they are ill. It presents the most risk of severe illness or death to older people and those with complex medical conditions. This describes most continuing care residents. Residents live communally in these facilities. While many live in private rooms, in early 2020 it was not uncommon to see residents sharing a room. Once the disease gets into a facility, it can spread quickly and cause significant illness and death among its residents.

Across the world, the risk presented by COVID-19 to nursing homes and other congregate care facilities quickly became obvious, sometimes with terrible severity. Canada was no exception. In late May 2020, Canada had the highest proportion of COVID-19 deaths attributable to long-term care across the OECD,[6] at 81 per cent.[7]

Background on Alberta's Wave One and Two Continuing Care Experience

In this report we focus on the response of Alberta Health and AHS to outbreaks in continuing care facilities in the period of March to December 2020 during the first and second waves of COVID-19.

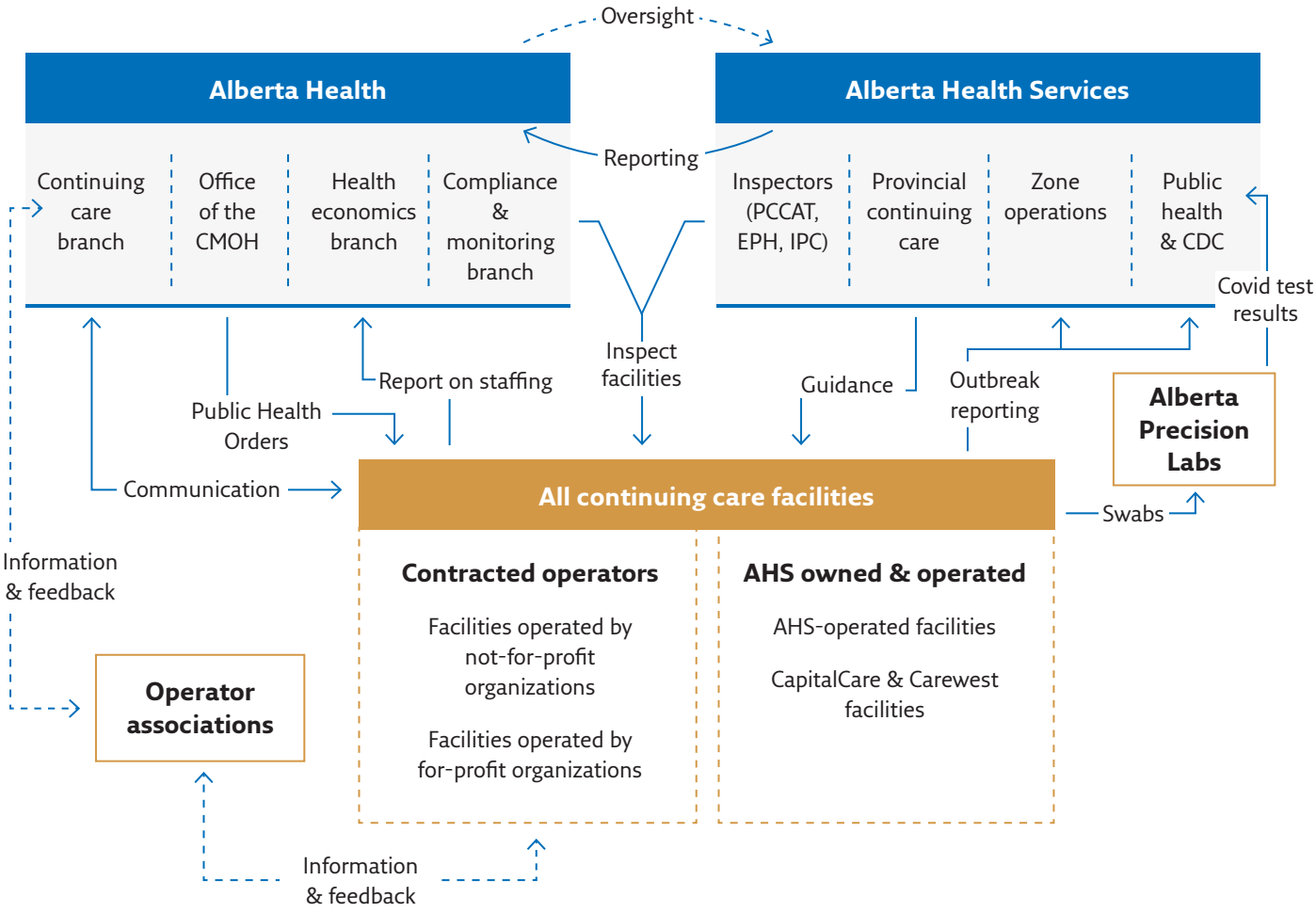
[5] As we define later in the "About This Audit" section, we focus this report on continuing care facilities that receive public health funding to provide designated supportive living (DSL) and long-term care (LTC) services to residents. In this report, we will refer to "continuing care facilities," "facilities," or "continuing care" to refer only to these facilities in the scope of our audit.

[6] The Organization for Economic Co-operation and Development (OECD) is an organization representing 38 developed countries. The OECD countries are a common benchmark for comparing experiences, outcomes, and policy responses between comparable countries.

[7] Canadian Institute for Health Information (CIHI). "Pandemic Experience in the Long-Term Care Sector: How Does Canada Compare with Other Countries?"

Key participants involved in the continuing care COVID-19 response

The response to COVID-19 in continuing care facilities was complicated. It required action from all major participants in the continuing care sector, as well as entities outside the health sector. The continuing care system exists within, and has many key relationships with and dependencies on, the broader provincial health system. The diagram below outlines the main participants that this report focuses on at the highest possible level.



Timeline of Alberta's response to COVID-19 in continuing care facilities

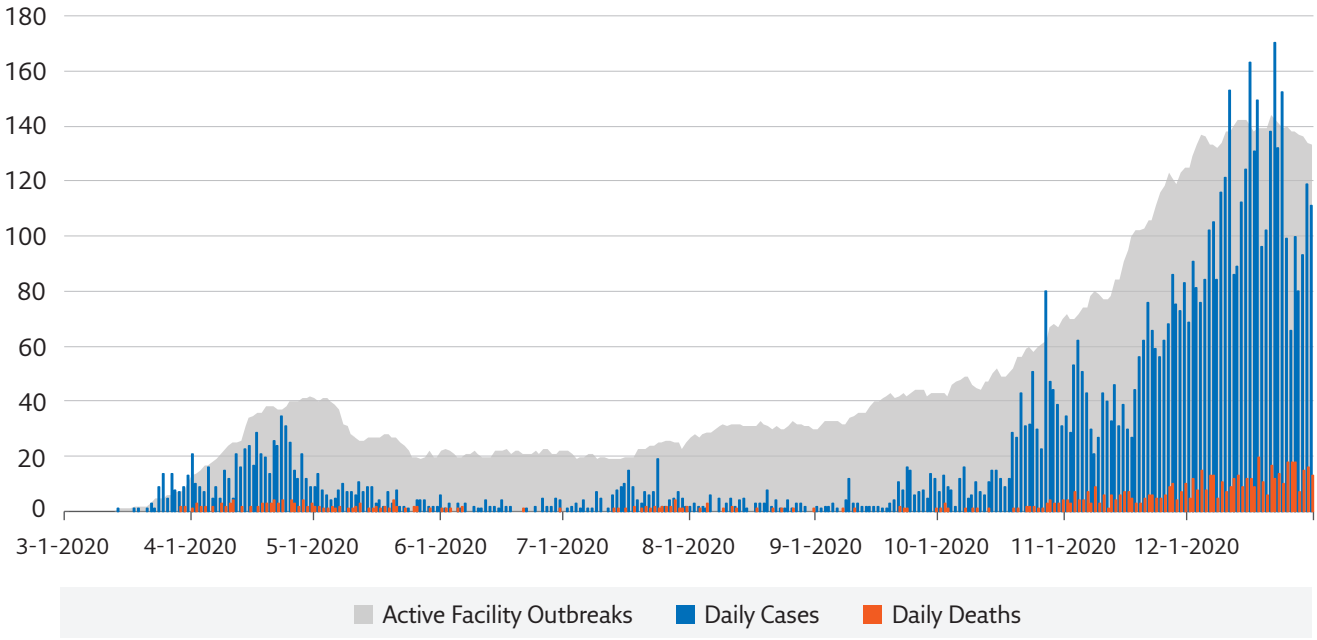
On March 9, 2020, the Chief Medical Officer of Health told family members to avoid continuing care facilities if they were feeling unwell. AHS sent the first guidance to continuing care facilities and operators on March 11. On that same day, the first COVID-19 case linked to an Alberta continuing care facility was suspected. The first outbreak was confirmed on March 14, 2020.

From this point, Alberta's continuing care sector—residents, their families, staff, operators, AHS, and Alberta Health—began a years-long effort to keep residents safe from COVID-19.

We provide a consolidated timeline of Alberta's response to COVID-19 in continuing care facilities in 2020 in Appendix B.

Alberta Continuing Care Facilities Daily Cases, Deaths, and Active Outbreaks

March–December 2020



The goals of the COVID-19 response

In the first section of our report, we describe the many plans that were in place prior to COVID-19 to guide all parts of the health system's response to a pandemic. Each plan describes goals for a pandemic response which guides action. Each plan focuses on certain levels, from system-wide and strategic to increasingly operational. We summarize these goals in Appendix A.

In September 2020, Alberta Health, AHS, and representatives of facility operators developed an additional plan which lays out five goals for the COVID-19 response in continuing care facilities. These goals reflect many of the themes in the existing plans, as well as what was learned from the first wave of COVID-19. They provide a direct and clear idea of what everyone wanted to achieve. They are:

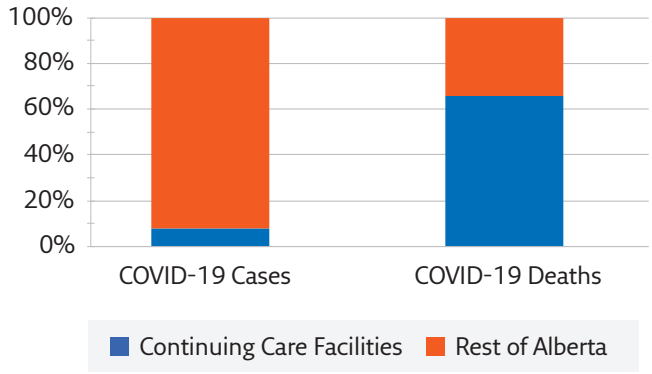
1. prevent the introduction of COVID-19 into [continuing care] sites
2. contain and reduce the spread of virus once at a site
3. meet residents' health needs (care plans met, quality of care)
4. resident mental health, quality of life, social connections, and family caregiver involvement
5. ensure staff are well-trained, prepared and have good quality of work life and mental health

Key facts and figures on Alberta's continuing care experience in COVID-19

Our audit focuses on the activities of Alberta Health and AHS in responding to COVID-19 in continuing care facilities. Their actions took place within the broader context of what happened at individual facilities and across the sector in the first two waves of COVID-19.

COVID-19 Cases and Deaths Continuing Care vs. Rest of Alberta

March–December 2020



In 2020 4,529 residents and 3,785 facility staff got COVID-19 in connection with an Alberta continuing care facility outbreak. A total of 1,042 people connected to continuing care facilities—overwhelmingly residents—lost their lives to COVID-19. While continuing care facilities accounted for eight per cent of COVID-19 cases in the province, they accounted for 65 per cent of deaths.

In Appendix C, we provide analysis of data and key facts about COVID-19 in Alberta's continuing care facilities between March and December 2020.

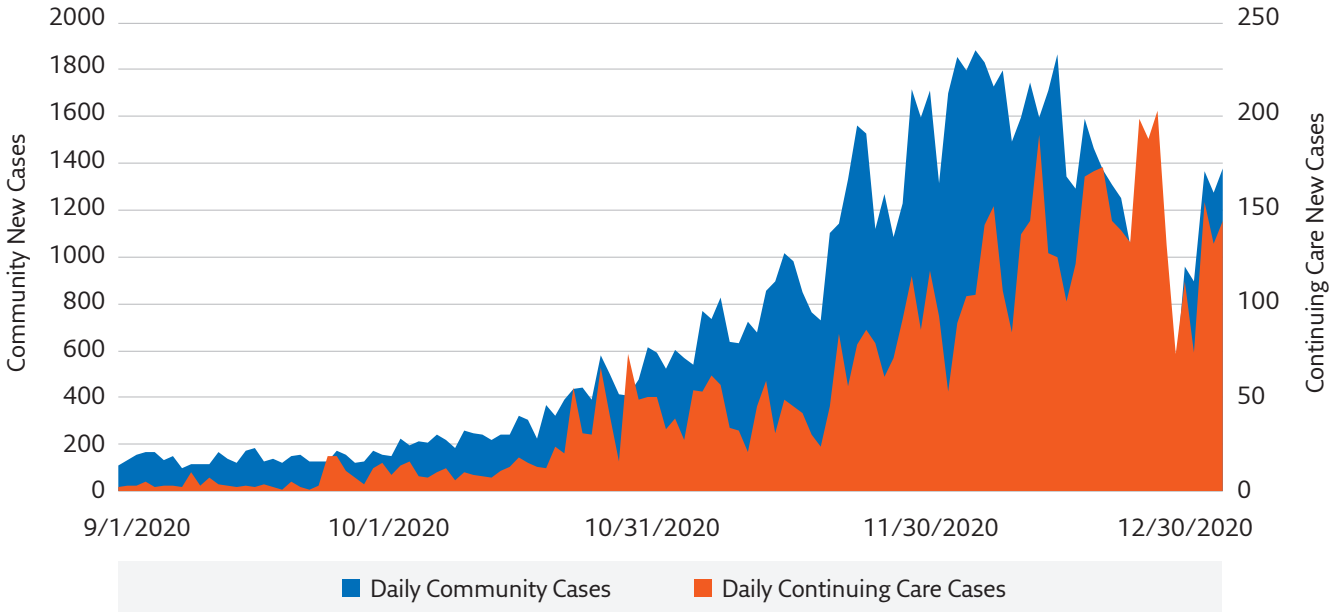
How COVID-19 got into facilities and the implications of community spread

Facility staff, contractors, designated visitors, and residents all come and go between the facility and the outside community. Each of these people presented an opportunity for COVID-19 to enter a facility. In larger facilities this can be hundreds of people every day.

Epidemiologists from Alberta Health and AHS showed that there was a direct relationship between the amount of COVID-19 transmitting in the broader community and cases in continuing care facilities. When community cases began to increase, continuing care cases followed shortly after. It is a relationship that our analysis of the data also demonstrates.

Alberta Daily New COVID-19 Cases Community vs. Continuing Care

Wave Two (September–December 2020)



About This Audit

Objective and Scope

The objective of this audit was to determine whether the Department of Health (Alberta Health) and Alberta Health Services (AHS) effectively actioned a pandemic and outbreak response to COVID-19 in publicly funded continuing care facilities.

We did this audit to identify areas for improvement so that Alberta Health, AHS, and the entire continuing care sector are better prepared for future pandemics and can incorporate learnings from COVID-19 to other more common communicable disease outbreaks, such as seasonal influenza.

Our audit looked at the activities related to the public health response by Alberta Health and AHS to COVID-19 in AHS-owned and operated, as well as contracted long-term care and designated supportive living facilities.[8] At March 31, 2020, there were 355 facilities receiving public health funding to provide these services.

Not included in the scope of our audit were:

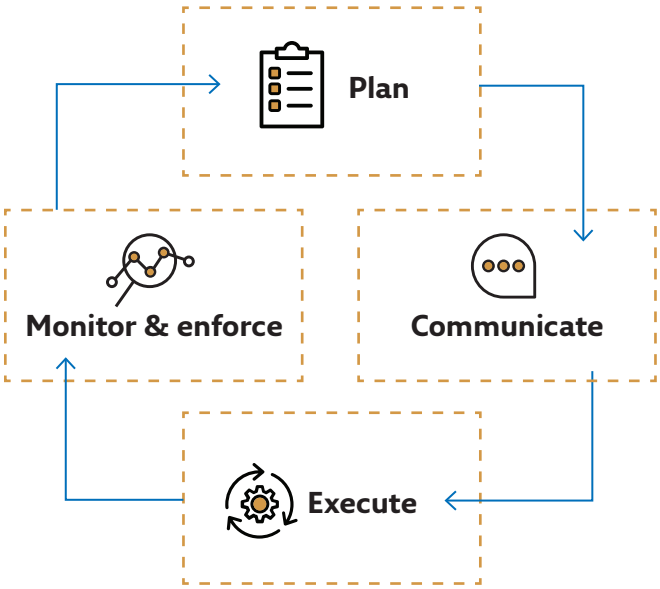
- licensed supportive living, seniors lodges and other types of facilities that AHS does not contract or fund to provide health care services to residents
- home care
- other residential care and treatment facilities for adults (such as residential addictions treatment facilities)

We focused our audit on the activities to prepare for and respond to the first two waves of COVID-19 during the period of March to December 2020.

Criteria

Our audit criteria include four related elements relevant to the roles and responsibilities of Alberta Health and AHS. Alberta Health and AHS should:

1. **Plan:** Have strategies, plans, and protocols ready to guide the facilities' pandemic and outbreak response.
2. **Communicate:** Communicate all relevant plans, updates, guidance, and emerging information to facilities.
3. **Execute:** Assess whether facilities have resources to implement plans, protocols, and guidance.
4. **Monitor and enforce:** Monitor whether facilities are complying with the plans, protocols, and guidance, and enforce action as needed.



We received management's acknowledgment of the suitability of our audit criteria:

- from Alberta Health on December 9, 2020, and
- from AHS on February 11, 2021.

We presented our audit plan and criteria to the audit and risk committee of the AHS board of directors on February 19, 2021.

[8] In this report, we will refer to "continuing care facilities," "facilities," or "continuing care" to refer only to these facilities in the scope of our audit.

What We Examined

The COVID-19 response was complex, novel, urgent, and dynamic. Our criteria framed our audit by focusing on what Alberta Health and AHS did to prepare, communicate, support, and monitor COVID-19 in individual continuing care facilities, and in the continuing care system overall.

To complete our audit, we:

- interviewed staff and management from all involved functional areas of both Alberta Health and AHS to understand their roles, actions taken, and perspectives on the response
- interviewed staff and management from Alberta Precision Laboratories[9] to understand the processes to swab and test continuing care residents and staff for COVID-19
- interviewed senior officials from Alberta Health and zone medical leadership from AHS
- examined all relevant documentation of plans, protocols, processes, guidance, and other direction provided to facilities
- performed detailed reviews of in-scope Orders of the Chief Medical Officer of Health
- performed detailed examinations of all internal reporting on investigations and other detailed reviews of major continuing care facility outbreaks
- obtained data relevant to continuing care facilities and the COVID-19 response, and performed a wide variety of analytic work on data sets ranging from outbreak and case data to compliance and inspection reporting data
- sampled and evaluated information and reporting from or about activities at individual continuing care facilities
- conducted multiple interviews and discussions with industry organizations representing contracted operators, as well as CapitalCare and Carewest leadership, to get the perspectives of the facility operators[10]
- interviewed the Health Quality Council of Alberta, leading academics and other subject matter experts
- obtained data and analytical support from the Canadian Institute for Health Information
- reviewed relevant reports published by academics, think tanks, other legislative auditors and special investigative bodies, and continuing care facility operators, among others

We conducted our fieldwork from February 15, 2021 to February 18, 2022.

[9] Alberta Precision Laboratories is a wholly-owned subsidiary of Alberta Health Services. It provides laboratory medicine services—including lab-based COVID-19 testing—to the provincial health system and Albertans.

[10] In our report, we refer to information coming from our interviews with industry organizations and CapitalCare and Carewest collectively as "continuing care facility operator representatives" or "facility operator representatives." It is important to understand that while the industry organizations we interviewed represent many of the organizations that run contracted continuing care facilities, they do not represent all contracted operators.

Conclusion

Based on our audit criteria, we conclude that Alberta Health and AHS were able to action a response to COVID-19 in publicly funded continuing care facilities, but not all processes were effective and improvements can be made.

Why This Matters to Albertans

Continuing care facilities serve some of the most vulnerable of our society. These are our parents, grandparents, friends—the people who built this province.

During our audit we encountered people across the continuing care system working incredibly hard, rapidly adapting to changing circumstances, transparently identifying problems, and making timely fixes and improvements where possible to try to improve the response continuously and to keep residents safe. We believe that with the same dedication, focus, care, and indefatigable spirit shown by people across the entire system in responding to COVID-19, the system can be better prepared next time. And valuable lessons about preparedness and outbreak management can be applied to other communicable diseases—such as seasonal influenza—which affect Alberta's continuing care facilities every year.

Detailed Findings and Recommendations

PLAN: Pre-COVID Planning and Preparedness for a Pandemic

Context

Provincial health system preparedness and planning

In March 2014, the government published *Alberta's Pandemic Influenza Plan* (APIP). APIP is a strategic plan, developed and owned jointly by Alberta Health, AHS, and the Alberta Emergency Management Agency. It details roles and responsibilities in responding to a pandemic at a province-wide level. It directs both the main owners of the plan, as well as partner organizations within and outside of the Government of Alberta, such as other government ministries, local governments, and AHS-contracted service providers.

The government created the APIP after the H1N1 influenza pandemic of 2009. By its very name, it focuses on pandemic influenza. No other pandemic plan at the provincial level deals with the broader sweep of possible pandemic-causing diseases. These include diseases caused by coronaviruses, paramyxoviruses, pneumoviruses, picornaviruses, and adenoviruses.[11]

The *Alberta Outbreak Response Protocol* (AORP) was jointly developed by Alberta Health, AHS, Alberta Precision Laboratories, and Indigenous Services Canada in December 2018. The AORP guides and coordinates common processes to identify and respond to unusual outbreaks[12] of communicable diseases in Alberta.

The Alberta Emergency Management Agency hosts simulation exercises for emergency and disaster scenarios every year. The simulated disasters range from natural events like fires, floods, and pandemics—to man-made disasters—like terrorism. The aim is to practise Alberta's emergency response plans.

Alberta Health participates in these province-wide simulations every year and uses these exercises as an opportunity to conduct internal exercises of its specific emergency plans.

[11] These are all examples of families of viruses that have the potential to cause pandemics. Examples of human diseases of each include:

- coronaviruses—COVID-19, Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS)
- paramyxoviruses—measles, mumps, and human parainfluenza viruses (HPIV)
- pneumoviruses—cause cold-like respiratory infections
- picornaviruses—common cold, poliomyelitis (polio), meningitis, and hepatitis
- adenoviruses—cause a wide-range of mild to severe respiratory diseases

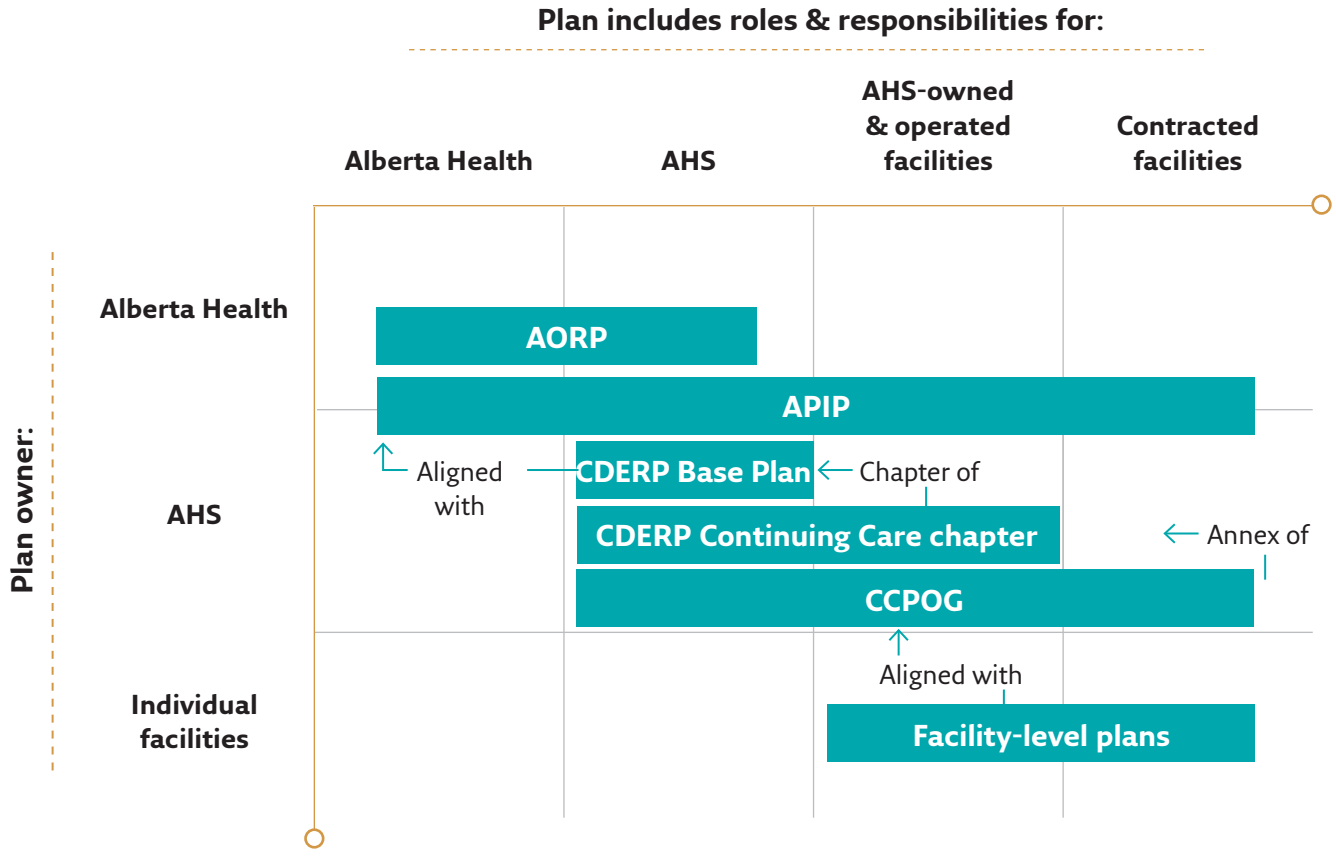
[12] The AORP defines several factors that would classify as an "unusual outbreak," including several that are relevant to COVID-19 in continuing care facilities such as: a novel or emerging pathogen, severe illness or mortality among identified cases, a rapidly expanding outbreak, and an over-represented vulnerable population among cases.

System-wide preparedness and planning at AHS

AHS first organized its existing plans into the *Communicable Disease Emergency Response Plan* (CDERP) in November 2016. The CDERP is a broad and comprehensive plan—several thousand pages in length. The purpose of the plan is to define roles and responsibilities, and to coordinate response strategies and actions of all AHS departments.

The CDERP is not specific to any one pathogen, disease, or situation. AHS designed the plan to cover any emergency presented by a disease that can spread from human to human.

Understanding the Intended Relationships Among Pre-COVID Pandemic Plans



Continuing care preparedness and planning at AHS

The continuing care chapter of the CDERP covers the full sweep of continuing care services—from home care to supportive living to long-term care. It provides guidance and resources for management and staff to respond to a communicable disease emergency. AHS wrote the continuing care chapter of the CDERP for AHS-owned and operated continuing care services, but it notes that contracted service providers are key stakeholders in meeting the objectives of the plan.

A resource provided within the CDERP continuing care chapter is the *Continuing Care Pandemic Operational Guide* (CCPOG). This guide provides a final level of detail from AHS and is distinct from the CDERP continuing care chapter because AHS wrote it for all continuing care facilities in Alberta, including contracted service providers. The plan provides detailed guidance and resources to facilities to help them respond to pandemic situations.

Preparedness and planning at continuing care facilities

Regulated *Continuing Care Health Service Standards* require all continuing care facilities to have facility-specific plans to respond to emergencies, including explicit requirements to plan for pandemics. For contracted facility operators, the contract with AHS includes further requirements for facilities to have sufficient plans. It also requires that contracted operators align their plans with AHS plans and policy. These standards and contracts require that facilities educate their staff on the plans and practise the plans every year.

The *Continuing Care Health Service Standards* set out minimum requirements pursuant to legislative authority[13] for operators of publicly funded continuing care facilities in the province.[14] There are 19 health service standards. Each standard is made up of more detailed sub-requirements. The standards focus on the health care services facilities provide to their residents. They include things like staff training, infection prevention and control, and continuity of health care—all of which would help a facility be prepared to respond to a pandemic. All continuing care facilities are audited to the health service standards at least once every three years.

Criteria

Alberta Health and AHS should have strategies, plans and protocols ready to guide the facilities' pandemic and outbreak response.

Our findings

Key findings:

- Continuing care facilities were not well-prepared for communicable disease outbreaks the magnitude of COVID-19—facility pandemic plans were not sufficient and many facilities did not meet all requirements around infection prevention and control and staff training prior to COVID-19.
- Provincial pandemic emergency plans were in place, but role clarity between major participants was an issue in the first wave of the COVID-19 response.
- Pre-COVID pandemic and emergency preparedness exercises did not practise coordination across the continuing care sector and lacked operational staff involvement.

Facilities were not well-prepared for an event of the magnitude of COVID-19

Initial assumptions about continuing care facility readiness proved inaccurate

From discussions with senior health officials at Alberta Health, we found that in the weeks before COVID-19 entered Alberta they assumed continuing care facilities would be better positioned than other areas of the health system to deal with a communicable disease outbreak. They thought this because continuing care facilities regularly prepare for and respond to outbreaks of communicable diseases like seasonal influenza. With hindsight, the sheer magnitude and characteristics of COVID-19 proved this assumption wrong.

Provincial continuing care leadership at AHS identified the potential risks posed by COVID-19 to continuing care facilities and began developing guidance and updating their continuing care pandemic plans in late February and early March 2020.

[13] Pursuant to the *Nursing Homes General Regulation* under the *Nursing Homes Act*, the *Co-ordinated Home Care Program Regulation*, under the *Public Health Act*, and a Ministerial Directive under the *Regional Health Authorities Act*.

[14] Alberta Health also maintains standards focused on the quality and safety of continuing care and other types of supportive living accommodations in the *Long-Term Care Accommodation Standards and Supportive Living Accommodation Standards*. Alberta Health inspectors also monitor facilities against these standards. For the purposes of our audit, we focused on the health service standards as they speak more directly to resident health and care.

Facility plans were not sufficient

We analyzed pre-COVID compliance audit data from AHS and found that in the two years before COVID-19, 82 per cent of facilities met health service standards requiring them to have a pandemic plan.[15] [16] However, we found the plans that were in place were insufficient to respond to the scale of COVID-19 outbreaks. In reviewing detailed investigations of major COVID-19 outbreaks prepared by AHS, we found that they frequently noted facility plans were unrealistic and lacked details on key things like infection prevention and control. Facilities were also unable to activate the plans as quickly as needed to respond to a COVID-19 outbreak.

When we evaluated a sample of facility plans we also noted:

- pandemic-specific content varied widely, but generally was brief and lacked specificity
- half of the plans we sampled did not show evidence of a recent review or update
- contracted facility plans were not aligned with AHS plans and policy, as required under the contract
- only 50 per cent of the plans discussed any relationship with AHS or provincial pandemic plans, and of those that did, we noted two facility plans where the full extent of the pandemic plan was a reference along the lines of "See AHS plans."
- 30 per cent of the plans were general, corporate-level plans for the organizations that run facilities, and were not specific to the individual facility we sampled, as required in standards

> "Pandemic outbreak plans for staffing are critical. Sites need to have plans in place that include redundancy given issues being seen in other outbreaks with plans not being able to be actualized. All steps need to be taken to ensure that the plan can be activated and implemented within 24 hours' notice as COVID outbreaks can rapidly impact staffing particularly when asymptomatic staff and residents are identified through testing. Supplemental staffing needs to be recruited, trained and readily available."
>
> – AHS outbreak investigation report

The only guidance or expectations for what these plans should include is in the standards and the AHS contract. Neither are specific or detailed. When we reviewed pre-COVID compliance audit processes we found that compliance audits and other monitoring by Alberta Health and AHS prior to COVID-19 did not examine the contents of plans, only whether the facility could produce a plan when requested.

Many facilities did not meet staff training and infection prevention and control standards before COVID

We analyzed compliance audit data from the two years leading up to COVID-19. When we looked at the compliance of sub-requirements under the health service standard for staff training, we found that more than 90 per cent of facilities had training for topics like infection prevention and control, and pandemic preparedness. However, compliance inspectors found that only 67 per cent of facilities met requirements to provide this training to staff within six months of hiring and every two years after hiring. Overall, inspectors found 20 per cent of facilities met all sub-requirements for the staff training health service standard.[17]

Looking at the health service standard compliance for infection prevention and control, we found that more than 80 per cent of facilities met sub-requirements related to hand hygiene, personal protective equipment use, and outbreak prevention. However, only 20 per cent met sub-requirements related to managing the resident care environment—things like cleaning of spaces and non-medical devices. Overall, 25 per cent of facilities met all sub-requirements for the infection prevention and control health service standard.[17]

[15] There is an analogous standard in the accommodation standards—Standard 16(1).

[16] When AHS identifies non-compliance with any standard, they require the facility to fix the problem and follow-up to ensure the facility does so.

[17] The way that the health service standards are structured is such that in order to be considered compliant with a standard, a facility would have to meet every sub-requirement within that particular standard. For example, Standard 9—Staff Training includes 24 sub-requirements that cascade up to the overall standard. If a facility is deficient in any one of these sub-requirements it is considered non-compliant with the standard overall. For this reason, we provide more detailed compliance rates on certain sub-requirements most relevant to our audit.

Existing provincial plans were not utilized to their full intent

Early assumptions about plan suitability led to adaptation away from existing plans

Earlier we describe the many plans that were in place before March 2020. The authors of these plans based them on past experience with pandemics and epidemics.

We reviewed the Alberta Pandemic Influenza Plan (APIP) in detail, spoke with subject matter experts and found that, with the benefit of hindsight, the planning assumptions contained in the plan provide a good approximation of COVID-19. The assumptions foresee things like the possibility of asymptomatic illness and transmission, airborne transmission, multiple waves with particular severity in fall and winter, and heightened risk for a number of specific groups of people, including residents of continuing care facilities.

We found these existing plans were underutilized due to a lack of awareness, particularly among operational management and staff. Our interviews revealed that unless we were speaking to someone in an emergency preparedness role, awareness of these plans and their contents was minimal—even well into the COVID-19 response.

Roles and responsibilities were an initial challenge

The APIP and other pre-existing pandemic plans define roles and responsibilities for the health system response. However, we found that Alberta Health and AHS still had to establish who needed to do what and how to coordinate between themselves, especially in the early days of the response to COVID-19 in continuing care facilities. Alberta Health and AHS continuously worked to establish and clarify roles and responsibilities in the first months of the response.

Through evidence gathered from facility operator representatives we found confusion stemming from a lack of clarity between Alberta Health and AHS. Facilities were not sure who to turn to for what and were getting mixed messages depending upon whom they asked.

In September 2020, Alberta Health, AHS, and facility operator associations jointly developed the “Fall Action Plan.” The plan sets out clear roles and responsibilities for the COVID-19 response among Alberta Health, AHS, and continuing care facilities.

Pandemic and emergency exercises happen in isolation and lack operational staff involvement

Pandemic exercises did not include all stakeholders

We interviewed emergency management specialists from Alberta Health and AHS and reviewed documentation of emergency preparedness exercises and simulations in the 10 years before COVID-19. We found that each organization—Alberta Health, AHS, and facility operators—had practised aspects of their emergency and pandemic response plans in some way, but these exercises were siloed within each organization.

We could not identify any evidence of facility operators ever being involved in pandemic exercises with Alberta Health or AHS. Since the creation of the APIP in 2014, there had never been a full-scale pandemic exercise including all key stakeholders and partners with roles and responsibilities in the plan.

We found that when Alberta Health or AHS tested their pandemic plans, representatives from the other organization would be invited to participate. However, the individuals who attended were limited to the other organization's emergency preparedness team and did not include management and staff from operational units—such as the continuing care management groups.

Pandemic scenario was the focus of a 2019 provincial emergency simulation exercise

In the winter of 2019, the Alberta Emergency Management Agency ran a provincial disaster exercise based on a pandemic scenario. Alberta Health co-led this exercise. An objective of the exercise was to increase awareness of the APIP across the government and to prompt government departments to test and evaluate their own plans for long-term staffing disruptions from a pandemic.

Alberta Health conducted its own internal exercise based on this scenario. We reviewed documentation for this exercise and found that 53 per cent of the staff that Alberta Health identified to participate in the exercise attended. Two staff from the continuing care branch were at this exercise, but neither was still in their role by early 2020.

Alberta Health identified several learnings and potential revisions to the APIP from these exercises, including:

- the need for more guidance on how to prepare for a pandemic situation that started in another country
- the need for increased participation from AHS in Alberta Health disaster exercises

Alberta Health's business continuity team received approval to begin updating the APIP in January 2020, but stopped due to COVID-19.

RECOMMENDATION:
Update and expand a pandemic plan common to entire continuing care sector

We recommend that the Department of Health ensure the development of an up-to-date, comprehensive, continuing care-focused pandemic plan relevant to all key stakeholders—Department of Health, Alberta Health Services and facility operators.

The Department of Health should ensure such a plan for facility-based continuing care:

- sets measurable goals and targets, is aligned with other related plans, and is regularly communicated to operational management and front-line staff across the continuing care sector, including at the Department of Health and AHS
- reflects learnings from the COVID-19 response
- is disease-agnostic and is scalable
- integrates compliance monitoring and other inspection activities
- includes clearly defined escalation pathways, based on established measures or triggers, for outbreak management and resolution
- clearly defines roles, responsibilities, accountabilities, and decision-making structures for all stakeholders

Consequences of not taking action

Precious time and effort may be diverted to preparation and organization in the critical early stages of a pandemic response if appropriate planning is not in place.

RECOMMENDATION:
Exercise and simulate updated plan regularly, with all parties

We recommend that the Department of Health lead periodic pandemic response exercises for Alberta's facility-based continuing care sector across all levels of the system, and involve operational and front-line staff.

Consequences of not taking action

In an emergency situation the facility-based continuing care system must respond seamlessly across multiple organizations. Without periodic exercises including all parts of the system, this cross-organizational preparedness cannot be critically evaluated and continuously strengthened.

COMMUNICATE: Providing Guidance and Communications to Continuing Care Facilities

Context

The importance of clear, consistent communication in a crisis

Fast-moving, risky situations like a pandemic require clear, consistent information sharing across and between all levels of a system. Decisions need to be communicated to front-line staff, who put them into operation. Situational information from the front lines needs to get back to decision makers. Military organizations see this as a key competitive advantage and have it down to a science: observe, orient, decide, act.[18] The faster and more accurately this process happens, the better.

Responding to COVID-19 in continuing care facilities was no exception to this rule, particularly in the first wave of the pandemic. Several hundred individually unique facilities, run by 31,000 staff, caring for 25,000 residents, had to get the information they needed to help them prepare and respond immediately. Those facilities, staff, and residents needed to get information back to decision makers on what was working, what was not, and what they needed.

In the first months of the response, understanding of COVID-19 as a disease, its implications on different groups of people, and how best to prevent infection and spread changed quickly. New evidence and changing information and guidance came rapidly from national and international public health bodies, requiring frequent updates to guidance.

Guiding and communicating with continuing care facilities

Alberta Health and AHS spent considerable time in the first two waves of COVID-19 developing and distributing written guidance for facilities. This guidance took two main forms—Orders of the Chief Medical Officer of Health, and guidance from AHS.

[18] The "OODA loop" (Observe, Orient, Decide, Act) is one of the more famous of such models developed by Colonel John R. Boyd and used extensively in military aviation. Other militaries and branches use similar decision models premised on the same fundamental principles.

Chief Medical Officer of Health Orders

Under the authority of the *Public Health Act*, Alberta Health developed public health Orders from the Chief Medical Officer of Health (Orders) to continuing care facilities and other facilities like seniors lodges and licensed supportive living facilities. These Orders were enforceable under the law.

AHS operational guidance

AHS is normally responsible for providing clinical and operational guidance to continuing care facilities. This responsibility is also consistent in a pandemic under provincial pandemic plans.

AHS publishes guidance materials both centrally and from each of the five AHS zones. AHS guidance also comes from AHS organizational units outside of continuing care—such as infection prevention and control, communicable disease control, and public health—as well as from Alberta Precision Laboratories.

Criteria

Alberta Health and AHS should communicate all relevant plans, updates, guidance, and emerging information to facilities.

Our findings

Key findings

- Because of the novelty of the process and the urgency of the task, Alberta Health did not fully work through the implications of the first few iterations of Orders on facilities—as a result, the Orders caused confusion and frustration at the front lines.
- AHS guidance for continuing care facilities was robust, consistent, and made widely available.
- Alberta Health and AHS quickly established two-way communication channels with facility operators.

First few iterations of Orders caused significant confusion and frustration

Initial Orders came without notice, causing confusion and strain

There were two main series of Orders with direct relevance to continuing care facilities: the outbreak management series and the visitor policy series. Outbreak management dealt with specific, incremental direction to facilities to prepare for, prevent, and respond to a COVID-19 outbreak. Alberta Health issued six iterations of the outbreak management Orders in 2020. The visitor policy series provided facilities with rules governing visits to residents. Alberta Health issued four iterations of the visitor policy series in 2020.

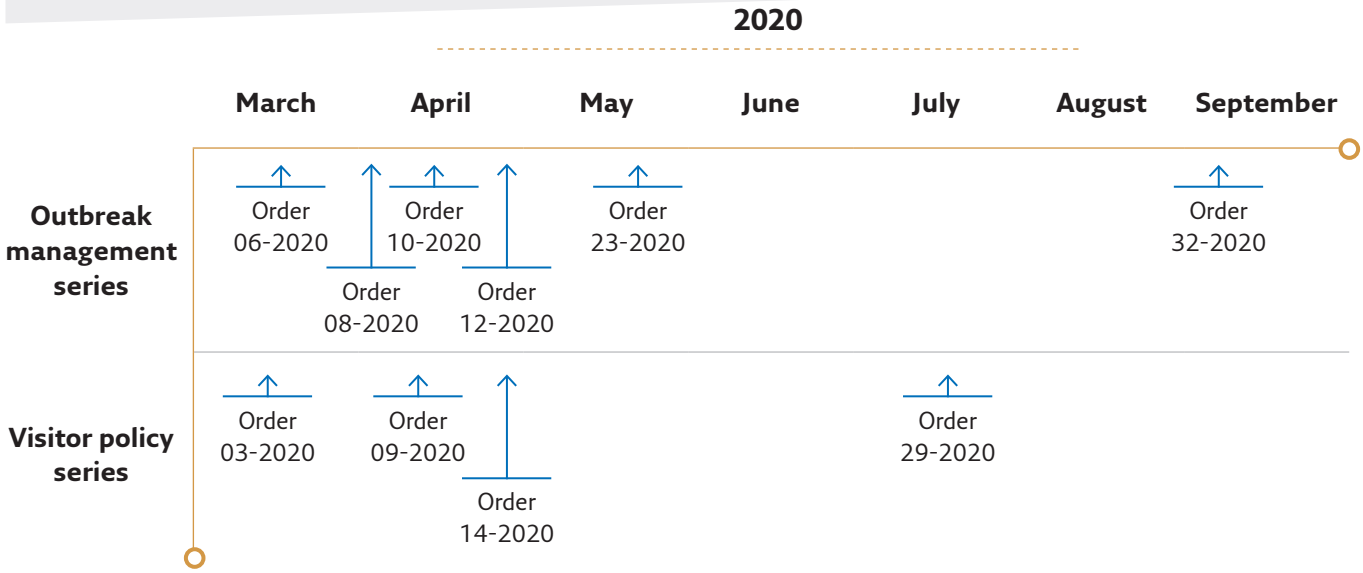
On April 10, 2020, the Chief Medical Officer of Health announced Order 10-2020. The Order contained what came to be called the "single-site staffing order"—rules that required continuing care staff to work at only one continuing care facility.

We examined the processes to develop and communicate the Orders. Due to the urgency of the situation, we found Alberta Health developed the early iterations of the Orders with minimal, if any, direct input from operators. For the first few iterations, facilities first heard about these rules when they were announced at press conferences. These early Orders were also in effect the same day as the Chief Medical Officer of Health announced them.

As a result, facility operators learned about new rules the same way as all Albertans—while watching a press conference. They needed to quickly but carefully go through pages of information to figure out what they needed to do. Finally, the operators needed to explain the new requirements to facility staff, which could involve hundreds of staff across multiple shifts.

Our interviews with facility operator representatives revealed that this situation was a predicament for the outbreak management series but became a real problem for the visitor policy series. It fell to facilities to enforce these Orders—managing confused and angry families, visitors, and residents as rules changed.

Chief Medical Officer of Health Orders Relevant to Continuing Care Facilities in 2020



We found that Alberta Health changed and updated the Orders frequently as understanding and information needs rapidly changed in the first two months of the COVID-19 response. Between March 20 and the end of April 2020 there were seven new and updated Orders directly applicable to continuing care facilities—more than one a week.

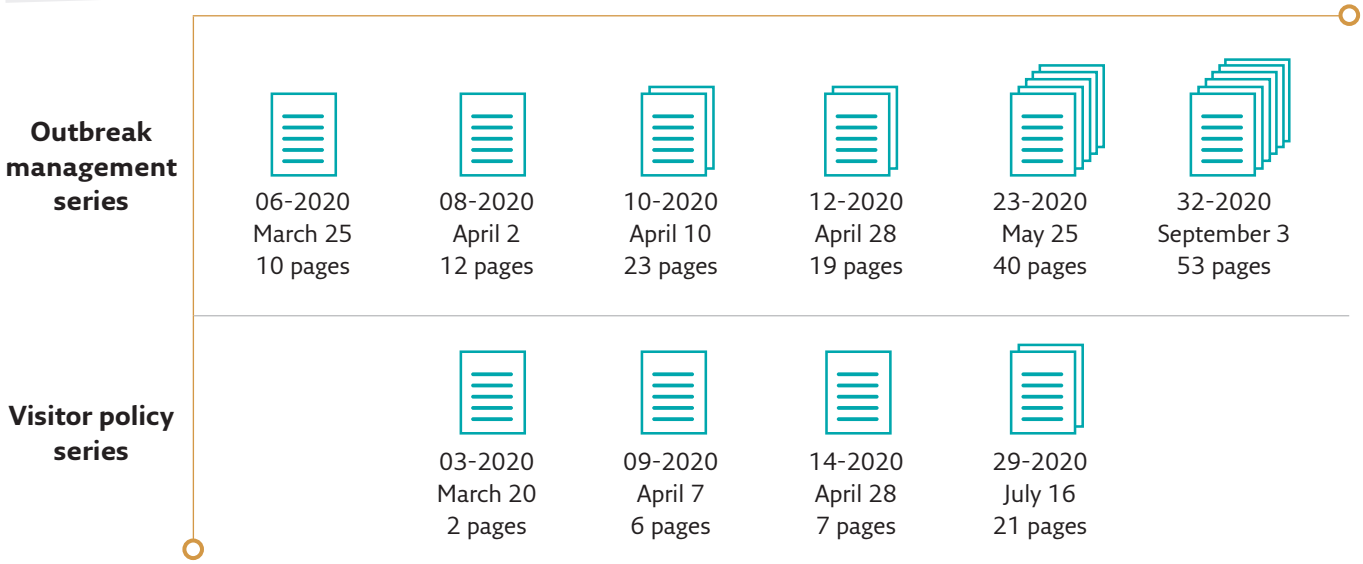
When we examined the process to develop Orders, we found that Alberta Health made improvements to the way it did this. Processes to consult with operators, as well as giving facilities notice of upcoming changes, improved over time.

Orders were increasingly lengthy, detailed, and complex for facilities

As Alberta Health revised and updated Orders, they became lengthier, more detailed, and complex.

When we interviewed facility operator representatives, we learned that facilities struggled with the length and complexity of the Orders. They also noted that some of the language in the Orders caused differences in practice and disputes with compliance inspectors over interpretation.

Length of Relevant Chief Medical Officer of Health Orders in 2020



We reviewed each Order in detail. We found that the length and the complexity of the Orders increased substantially over time. It was not just the page length but also the additional materials referenced in each Order that built length and complexity to the task of understanding and complying with them. For example, Order 12-2020 is 19 pages and contains 19 unique hyperlinks referencing other materials and guidance. Together, these additional references total 159 pages, which themselves reference 69 unique hyperlinks out to further sources of guidance. Our analysis suggested that the task of fully understanding an Order could easily balloon into many hundreds of pages.

When we analyzed the language of the relevant Orders declared in 2020 in detail, we found that 42 per cent of the language used was suggestive ("may" and "should") rather than obligatory ("must" and "will"). This can further confuse interpretation and application.

Operational implications not fully worked through for initial Orders

The Orders required significant changes in how facilities conducted their normal business. For example, the continuous wearing of masks became mandatory and facilities needed to screen everyone coming into facilities for COVID-19. In March and April 2020 continuing care operator associations sent letters to explain implications and outline what incremental support and resources—financial, staffing, and supplies—facilities needed to meet the requirements of the Orders.

The need to develop the type of Orders necessitated by COVID-19 had never been seen before. As a result, Alberta Health management responsible for developing the Orders did not have a pre-established process to follow. They needed to work quickly and with limited information to develop and update the first iterations of the Orders. Their most important goal with the first few Orders was to keep residents safe from COVID-19, period. For the first few Orders, we found Alberta Health was not able to fully work through the implications of Orders on facilities' ability to implement them with existing resources and capabilities.

Single-site order was complicated and not fully implemented by all facilities

The Chief Medical Officer of Health announced Order 10-2020 on April 10, 2020. It contained what came to be known as the "single-site staffing order" requiring all continuing care staff to work at only one continuing care facility. Facilities were supposed to implement the Order by April 23, 2020. On that day, the Chief Medical Officer of Health announced that facilities needed more time to implement the single-site order.

From this point, it is unclear when or whether all facilities fully implemented the Order.[19] Responsibility for enforcing the Order ultimately fell to AHS zone continuing care management, but they told us they were never clear who was accountable for facilities implementing the Order. AHS reported that 95 per cent of the facilities it directly operates were compliant with the Order by May 11. All zones had asked facilities to meet the requirements of the Order by the end of May 2020.

Reporting out of AHS later suggested the first date of full implementation of the Order was October 16. But after we completed a detailed review of staffing data maintained by Alberta Health, we found that at the end of December 2020 at least 523 people were working at more than one continuing care facility.[20] While it is possible that some of these 523 identified workers were granted an exemption to the Order by the Chief Medical Officer of Health, Alberta Health did not have enough detail or a process to cross-reference exemption tracking data with the single-site staffing data.

[19] Here we take the common, dictionary definition of the verb "to implement": to give practical effect to and ensure the actual fulfillment by concrete measures. In this case, the actual fulfillment would be the direction of the single-site order being complied with: that all staff in continuing care facilities work only at one site, unless granted an exemption by the Chief Medical Officer of Health.

[20] We use the words "at least 523" because the reporting and data that supported this information was only about three-quarters complete. We discuss this matter in greater detail in the section of the report discussing facility staffing, below.

April 2 → Chief Medical Officer of Health says restricting workers creates risk to care at press conference

April 10 → Single-site order announced; M.O. 22/2020 amends labour laws

April 17 → M.O. 625/2020 requires reporting of employee data

April 23 → Single-site order implementation delayed

April 24 → M.O. 026/2020 further amends labour laws

May 11 → AHS says 95% of staff at its facilities working at single site

May 31 → All AHS Zones expect facility compliance

June 13 → First exemption granted by Chief Medical Officer of Health

October 16 → AHS asserts single site is fully implemented

End of December → Alberta Health identifies at least 523 multisite workers

AHS guidance was robust, consistent, and made widely available

We obtained and conducted extensive reviews of AHS guidance documentation. We found that AHS published its first COVID-specific guidance for continuing care facilities on March 11, 2020. On March 24, 2020 AHS also published an updated version of its Continuing Care Pandemic Operational Guidelines, with updates specific to COVID-19. From that point, it published over 100 guidance and explanatory documents relevant to continuing care facilities on topics ranging from outbreak management and swabbing residents for COVID-19 to how facilities needed to handle resident laundry and assist residents with showering during COVID-19. AHS also published numerous tools, signage, and checklists to aid in operational matters like COVID-19 screening.

AHS normally publishes some guidance that is available only to its facilities, as well as to physicians and clinical staff. However, we found that AHS ensured that all COVID-19 guidance was available to everyone by moving as much content as possible onto its public-facing website and opening access to its "Continuing Care Connections" website to anyone who requested it.

We compared AHS guidance to other available guidance from AHS, Orders, and other information from the same time. Across hundreds of documents and thousands of pages we found only one instance of contradictory guidance. This inconsistency was corrected within two days with an update to the corresponding Order.

In our analysis, we also noted the care with which AHS published its guidance—adapting it, where necessary, to different audiences in the sector. For example, to communicate one particularly complicated piece of guidance, it prepared three different documents, one for facility operators, one for facility managers, and one for facility staff with specific clarity on aspects most relevant to each audience's role and focus.

Channels were developed for regular two-way communication with senior decision makers

Regular touchpoints provided formal and informal guidance to facilities

Continuing care management groups from each AHS zone played a critical role in communication between facilities and the broader health system. Zone management is the main relationship holder with facilities in their zone—both AHS facilities and contracted facilities. We found zone management involvement with facilities was comprehensive and support for facilities was near daily. Zone management was a critical conduit of information and also provided their own resources to help facilities.[21] Across our audit, the many groups we interviewed were consistent in recognizing the efforts of zone management, particularly in the area of communication.

When a facility had an active outbreak they were involved in daily status calls with AHS zone management, zone medical leadership, and public health. In more serious outbreaks AHS sent management, administrative, and sometimes clinical staff to support the facilities. There were also four discrete groups from both Alberta Health and AHS conducting in-person inspections at facilities.[22] All these touchpoints provided opportunities for management and staff from the facilities to ask specific questions of representatives of Alberta Health and AHS.

Weekly meetings with operator representatives

The Assistant Deputy Minister responsible for continuing care at Alberta Health started holding regular meetings with operator representatives on April 15, 2020. We found that for a time these meetings happened as regularly as daily and consistently happened at least weekly through the end of 2020. Senior management from Alberta Health, AHS, and the operator associations attended these meetings. The purpose of the meetings was to facilitate two-way communication, giving the operators a conduit to identify issues and ask questions directly with decision makers at Alberta Health and AHS.[23]

Town halls with the Chief Medical Officer of Health

The Chief Medical Officer of Health hosted two sets of town hall meetings[24] with continuing care operators, residents, and their families starting in June 2020. These meetings provided a unique opportunity in the COVID-19 response for senior officials and senior management of Alberta Health and AHS to hear directly from residents and their families.

Why we are not making recommendations regarding guidance and communications:

There were some initial problems with providing guidance to facilities, particularly around issuing Chief Medical Officer of Health Orders. We have determined it is not necessary to make a recommendation to Alberta Health in this area because the issues we identified in the processes to develop and communicate early iterations of the Orders were resolved by Alberta Health. Our audit work, including conversations with stakeholders and AHS, corroborated this fact.

[21] The provision of AHS staff to facilities is discussed in greater detail on page 33.

[22] Explained further in the section on facility monitoring.

[23] We found there were countless other meetings that took place between March and December 2020. The meetings established by the Assistant Deputy Minister stood out to us because, compared to other meetings, these were formal, happened regularly, and took place consistently across the time period covered by our audit.

[24] Each set of town halls was comprised of multiple meetings. A further two sets of town hall meetings were hosted in 2021, outside the time scope of our audit.

EXECUTE: Assessing Resource Needs to Support Outbreak Prevention and Management

Context

Resources needed to prevent and respond to COVID-19

Continuing care facilities needed additional resources to prevent COVID-19 from getting into facilities, and to respond to outbreaks when they started. The need for more resources came from the loss of facility staff to illness and isolation during outbreaks, the additional requirements of Orders and AHS guidance, and the sustained pressure of lengthy and complex outbreaks.

We identified five main classes of resources that directly affected a facility's ability to respond. We focused our audit work on what Alberta Health and AHS did to understand and support facilities in these areas.

Contracted continuing care facilities and those run by AHS subsidiaries—CapitalCare and Carewest—receive set health care funding for the care services they provide. They also receive revenue from monthly, regulated accommodation charges paid by residents. These facilities are responsible for procuring their own resources and are expected to maintain outbreak response supplies.

Staff

Estimates of facility staffing at the beginning of 2020 were that 31,600 people worked in continuing care facilities—of those, 85 per cent worked part-time or fewer hours. Many of these staff worked at two or more facilities in a week.

Having enough trained staff to provide care to residents was an existing challenge for facilities before COVID-19.[25]

COVID-19 testing

Laboratory testing is a common and essential process to manage a disease outbreak. For COVID-19—which infects and spreads before symptoms present in a person—knowing who has the disease is critical to stopping outbreaks. The faster that this information is in the hands of the facilities, the better they can respond and interrupt further spread. There is a significant body of academic literature proving what is intuitively clear: delays in getting test results leads to more disease spread.

Alberta Precision Laboratories (APL) did all COVID-19 testing for continuing care facility residents and staff by using polymerase chain reaction (PCR)[26] swab testing. At this same time, APL was also completing substantially all COVID-19 testing in the province—from outbreak testing for health care and other settings, to symptomatic and asymptomatic testing of the public. This amounted to between 10 and 20 times their normal daily volumes and coincided with global shortages of testing supplies.

Five Types of Resources Impacting Facility Response

[25] This issue has been a central focus of evaluations of facility-based continuing care stretching back more than 20 years; and was a focus of our past work on long-term care in 2005 and 2014. See *Report of the Auditor General of Alberta—May 2005* and *Report of the Auditor General of Alberta—October 2014*.

[26] Polymerase chain reaction (PCR) allows a laboratory to copy a genetic sequence it is interested in examining and use that copy to create enough of that genetic material to allow it to be analyzed. In the case of COVID-19 testing, the goal would be to analyze whether a sample taken from a person, generally via a swab, contained genetic material from the SARS-CoV-2 virus that causes COVID-19—indicating that person was infected with the virus and so considered COVID-19 positive.

Facility infrastructure

At March 31, 2020, there were 355 individual continuing care facilities which received public health funding to provide continuing care services to residents. The physical buildings in which continuing care facilities operate had major impacts on the COVID-19 response. Facility layout, use of shared rooms, and insufficient HVAC systems[27] became some of the most common issues in COVID-19 outbreaks and by far the hardest to resolve quickly or without considerable cost.

Criteria

Alberta Health and AHS should assess whether facilities have resources to implement plans, protocols and guidance.

Our findings

Key findings:

- Having enough staff to provide safe care during an outbreak was a persistent, systemic problem.
- Facilities experienced major delays in getting the results of COVID-19 tests for residents and staff.
- Shared rooms and aspects of facility infrastructure featured prominently in the most severe COVID-19 outbreaks.
- Alberta Health and AHS provided over $250 million in incremental funding to facilities in 2020.
- PPE and supplies were a critical constraint for the first month, but rectified after mid-April 2020.

[27] Heating, Ventilation, and Air Conditioning.

Having enough staff to provide care was a persistent, systemic weakness

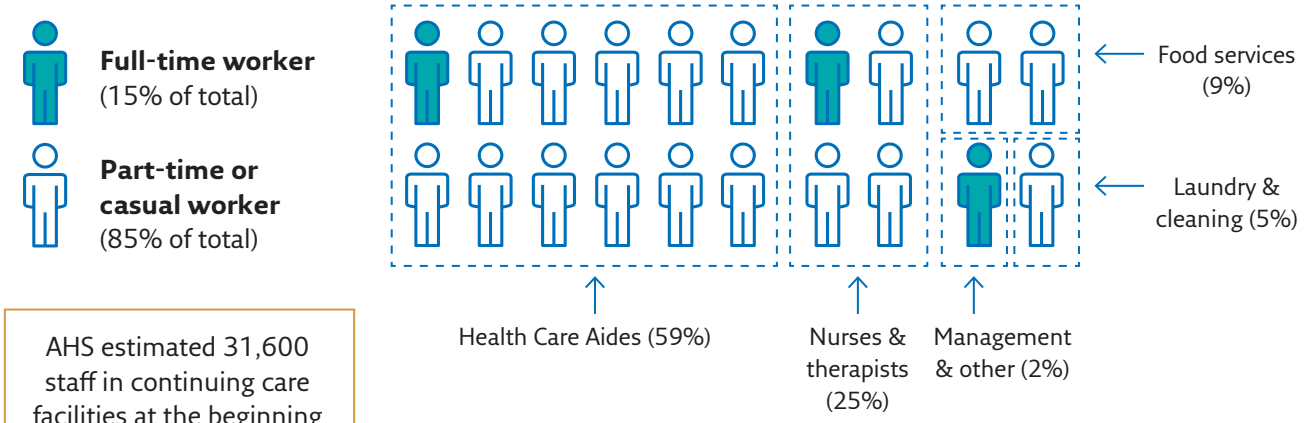
The importance of having enough staff, particularly during an outbreak, is hard to overstate. Facilities must have enough staff to provide, at a minimum, essential safe care for residents during an outbreak.

We analyzed outbreak investigation reporting prepared by AHS, as well as the results of facility compliance inspections. Facilities not having enough staff was, by far, the most common issue identified.

Pre-COVID understanding of staffing was limited

Alberta Health and AHS did not have a complete understanding of staffing at facilities prior to COVID-19. AHS derived estimates of the number and types of staff at facilities in April 2020 from financial reporting. This information was obtained from facilities for the fiscal year ended March 31, 2019.

Understanding Continuing Care Facility Staffing



AHS estimated 31,600 staff in continuing care facilities at the beginning of 2020

Single-site order created significant operational challenges

The requirement of the Chief Medical Officer of Health Order 10-2020 that staff work at only one facility was universally viewed as a necessary measure, but presented an administrative and operational challenge to all levels of the continuing care sector.

Before the single-site order, Alberta Health and AHS suspected that staff regularly working at more than one site allowed COVID-19 to move between facilities. We analyzed how COVID-19 outbreaks clustered geographically before and after the single-site order.[28] We found that the degree of clustering decreased noticeably after the single-site order—suggesting that the Order had the desired effect of reducing spread between facilities.

The biggest impact of the single-site order on facility staffing was that it was estimated[29] to have reduced the total pool of continuing care staffing by about one-third. Requiring one individual to work at only one facility eliminated the pool of part-time and casual staff who normally filled shifts at more than one facility.

> "Operators faced difficulties in responding immediately to staffing shortages which were significantly exacerbated by the CMOH single-site restriction staffing order. As a result of the restriction of staff to single sites there was a limited pool of casual or agency staff available to address shortages. This led to CMOH order exemptions for certain sites to ensure adequate staffing was available for outbreak sites."
>
> – AHS outbreak investigation report

Single-site order monitoring system was quickly deployed but not all facilities reported data

We found that Alberta Health quickly purchased an information system that allowed it to monitor whether facilities were following the single-site order. The system cost about $670,000 to build and maintain, and Alberta Health was able get the system working within about four weeks. The system required every employer[30] to report staff information for anyone working at a continuing care facility on a secure website each pay period. The system worked by comparing unique staff information and flagging anyone who had hours recorded at more than one site. Alberta Health would then investigate as many of these instances as it could.

The system was the only certain way Alberta Health had to ensure facilities were following the single-site order, but its usefulness suffered because not all facilities uploaded their data as required. Between March and December 2020, at most 76 per cent of facilities uploaded their data—meaning at least 7,500 facility staff[31] were not in the system.

Even with incomplete data, Alberta Health still consistently identified many workers who had hours at multiple sites in a pay period. While the number continued to decline over time, in the last pay period of December 2020 Alberta Health still identified 523 'multi-site workers.'

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28 We used the geographic area of the City of Calgary and the North Zone as test areas for our analysis. We used geographic information to plot the locations of outbreaks over the first six weeks of both wave one (before the single-site order) and wave two (after the single-site order). We compared the degree of spacial clustering of new COVID-19 outbreaks between both.

29 No systematic study of this effect had been completed by any party we spoke to during our audit. The estimate of about 30 per cent reduction in the staffing pool was common among facility operator representatives, subject matter experts, and our discussions with and documentation from Alberta Health and AHS.

30 During COVID-19 outbreaks, this included facility operators, but also a considerable number of staffing agencies who provided their employees to facilities.

31 Because the data is incomplete and the pre-COVID understanding on staffing numbers were estimates based on payroll data, and so did not take into account contractors, agency staff, and others in facilities during COVID-19, this exact number cannot be known with certainty. 7,500 is the minimum based on the estimate of 31,600 continuing care staff developed by AHS based on financial data from March 31, 2019. However, this data does not include other sources of personnel in facilities such as agency staff. Other ways of estimating this number based on the single-site staffing database and comparing the number of workers reported in the single-site worker database to the response rate give estimates as high as 14,000 people working in facilities that were unaccounted for.

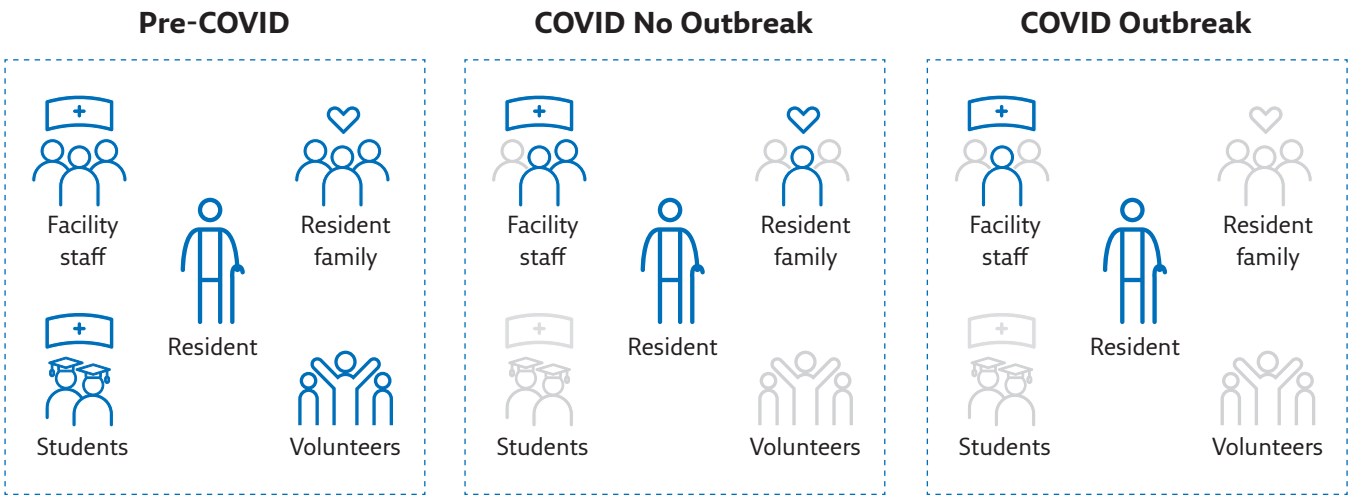
Facility staff had more to do with fewer people to do it, especially in outbreaks

The COVID-19 response meant facility staff had much more work to do than normal. We found that even without an outbreak, the workload for staff increased because the resident family members, volunteers, and students that they relied on to help with resident care were restricted from facilities. The Orders and AHS guidance required staff to do extra cleaning and infection prevention and control work, as well as conduct screening of residents, other staff, and visitors many times a day. Existing staffing was already strained by the impacts of the single-site order, increased resignations, and a general staff absenteeism problem that facility operators estimated at more than 20 per cent at times.[32]

We found that when an outbreak started, the situation faced by facility staff went from bad to worse. Their workload grew much more. In addition to all the incremental outbreak prevention work, staff now needed to safely care for ill residents, meet additional outbreak rules, do their own contact tracing, swab residents for COVID-19 testing, respond to concerned family members, facilitate inspections, and provide daily reporting to Alberta Health and AHS. At the same time, an outbreak would cause 20 to 50 per cent of the remaining facility staff to be off due to illness, isolation requirements, or absenteeism due to fear of contracting COVID-19.

When we analyzed outbreak investigation reporting prepared by AHS, we found that issues related to staffing shortages were the most common identified, occurring in every major outbreak studied.

Impacts of COVID-19 on Resident Care Providers*



* Note that over time rules around caregivers evolved to allow a designated resident family member to visit, under additional safety protocols, even during COVID-19 outbreaks later in 2020.

[32] While no systematic study of this situation was available, we identified this fact consistently across our audit, both in review of documentation from Alberta Health and AHS, as well as in discussions with facility operator representatives. The reasons for this were health and safety concerns, stress and burnout, but also the implications of the federal income support program CERB, which did not represent a significant drop in income for workers making little more than the minimum wage.

Staffing agencies were an imperfect stopgap

Facility emergency plans rely on the use of staffing agencies to stopgap critical staffing shortages during emergencies. COVID-19 proved the assumptions underlying this as a pandemic contingency plan wrong.

First was the assumption that agencies would provide staff at all. When we analyzed outbreak investigation reporting we found instances where agencies refused to send their staff. When agencies were willing, some agency staff would not report for duty, or fail to come back after a day or two.

Second was the assumption that agency staff were suited to the work required. While some agencies could offer staff with relevant skills and training—including nurses and health care aides—many agency staff did not have these skills. Outbreak investigation reporting we analyzed notes repeated incidents of agency staff not understanding or following basic infection prevention and control protocols or not understanding cleaning techniques required for a healthcare facility. Where agency staff had relevant medical training, their lack of familiarity with the residents could cause them to miss the development of symptoms.

Finally, there was the assumption that critical staffing shortages would be rare and isolated occurrences. The plans did not anticipate a situation where the demand for agency staff would be coming from multiple facilities in a geographic area simultaneously.

Provincial responses to staffing shortages met targets

The main staffing initiative from Alberta Health was the health care aide funding initiative. This included a two dollar per hour wage top-up for health care aides, increased funding to allow facilities to hire more aides, and paid practicums for health care aide students. The initiative aimed to increase staffing by a total of 2,000 health care aides working in the system.

We found the initiative met its goal—adding just under its target of 2,000 aides. These additional workers represented about 11 per cent of the health care aides in the system at the beginning of 2020.[33]

AHS holds ultimate accountability for safe resident care

Any operator of a health facility—whether that operator is AHS, an AHS-subsidiary, or a contracted service provider—has an obligation to provide safe care in their facilities and to meet any applicable legal requirements. AHS is ultimately accountable for safe care in the province. And, as we and others have pointed out in past reports on the continuing care system, safe and effective care starts and ends with facilities having enough of the right staff providing care.

We found that none of the AHS pandemic plans directly considered a scenario in which they would need to regularly send their own staff to support their subsidiaries and contracted facility operators with outbreaks. After eight months of navigating the situation case-by-case, AHS developed a plan for when and how it can provide AHS staff to support continuing care outbreaks.

The plan formalized AHS' position that it would redeploy its staff to other facilities when facilities had exhausted all other options. The position reflects the fact that facilities hold the primary obligation under their contract with AHS to have sufficient staff to provide safe resident care, and that they have plans to ensure sufficient staffing in emergencies. In evaluating the AHS plan, we found there were three main barriers that would hinder AHS staff freely working in other facilities—the single-site order, the need of AHS to staff its own facilities and the entire provincial health system, and collective agreements.

[33] Recognizing the need for more staff in facilities, AHS began planning for another method of providing additional staffing to facilities in November 2020. As we note in Appendix F, on December 30, 2020, AHS contracted a major staffing agency to recruit and deploy 1,600 personnel to fill non-clinical support positions called "Comfort Care Aides." These staff began rolling out to facilities in 2021.

Barriers to Sending AHS Staff into Other Facilities

Whole health system responsibility:

- Numerous other critical patient care areas AHS is responsible for—acute care, public health, COVID-19 assessment centres, among others
- Largest staffing need was for health care aides, which AHS has fewer of in its operations

Single-site order:

- Cannot send staff already working in an AHS continuing care facility
- Acute care staff are not restricted by the Order but were in low supply and high demand, particularly in wave two

Collective agreements:

- Agreements with unions do not allow sending staff to other employers
- Each instance would need to be agreed with unions
- Risk of labour grievances and complaints

We found that where AHS provided other facilities with its staff, it varied in type and intensity depending on the severity of the outbreaks and the needs at the facility. It ranged from coordinating and administrative roles, consultative services to facility management, assessment and support with specific non-care tasks, all the way to resident care providers—like nurses and health care aides. We saw frequent evidence in major outbreaks of AHS zone management providing administrative and management support,[34] but fewer instances of staff who directly provide resident care.[35]

[34] These non-clinical staffing resources were more freely available because they were typically management or exempted staff who were not subject to collective agreements.

[35] This excepts the two situations where AHS took over operations of facilities from operators.

AHS began work early to clear a path for staff re-deployment with major unions

AHS expended significant effort in the first two months of COVID-19 to clear a legal path with the three main unions who represent its employees. AHS wanted flexibility to redeploy staff to other facilities when needed. On April 24, 2020, AHS formalized an agreement to permit redeployment, but only until June 29. After that time, when AHS needed to redeploy staff, it could only do so if a staff member volunteered and it notified the union.[36]

We found this effort to sort out labour relations as evidence of AHS trying to find solutions, but also as another example in the COVID-19 response of foundational matters not being anticipated or in place prior to a pandemic.

Delays in COVID-19 testing results for facilities hampered outbreak management

Facilities experienced major delays in getting the results of swabs taken at facilities

We reviewed guidance from AHS, Alberta Precision Laboratories (APL), and Orders to find concrete expectations for how long it should take for a facility to get COVID-19 test results from swabs of its residents and staff. The clearest articulation we identified was one piece of AHS guidance to facilities on COVID-19 testing suggesting facilities would have swab results within 96 hours (four days) of the site notifying AHS of a possible outbreak.

Every facility operator representative we interviewed detailed problems getting timely results of swabs for their residents and staff. Most gave us some estimate of the delays ranging from five to more than seven days for resident results from the time they sent the swabs back to APL.[37] For staff results, the wait was even longer. This happened at a time when an Albertan, even without symptoms, could go get a swab from an AHS site and generally receive their results within a day or two.

> "Large outbreaks Alberta sites experienced to date have reinforced the importance of [...] early identification and isolation of symptomatic persons and those with known exposure to COVID-19 [and] swift access to testing and results ..."
>
> – Chief Medical Officer of Health Order 32-2020; September 3, 2020.

One of the reasons for delay was a system-wide backlog driven by increasing numbers of swabs from across the health system and from asymptomatic swabs for the public. This reached a peak on September 7, 2020, when the time for APL to get swab results reached 234 hours—almost 10 days.[38] [39] This backlog affected the entire system.

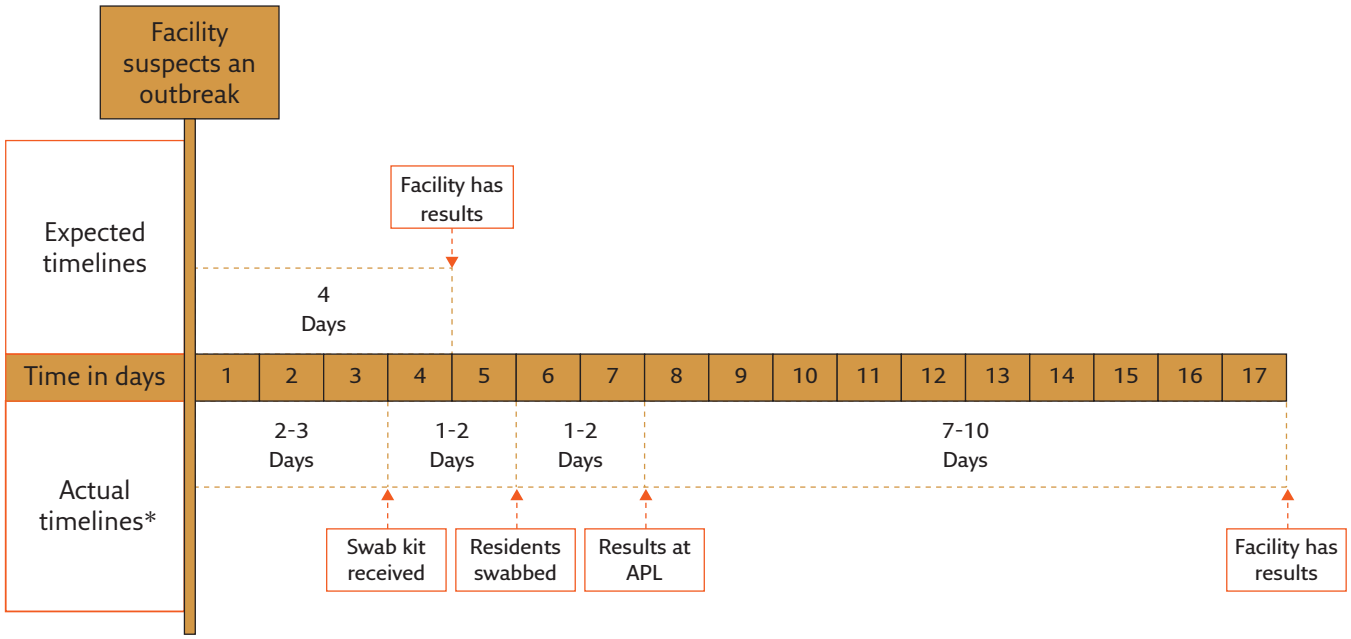
[36] Even when a union member volunteered and AHS notified the union, AHS was still technically offside of its authority under the collective agreements. We did not identify evidence of the unions objecting when this happened in 2020.

[37] As we discuss below, it generally took two or three days for facilities to receive swabbing supplies, and then a further one to two days to complete the swabbing of residents and ship swabs back to APL for testing. Meaning it would be at least three days from the point an outbreak was suspected to send swabs to APL for testing.

[38] This figure is reported at the "80th percentile." What this means is that, in this particular case, if you had 10 swabs, eight of them would take 234 hours or less, two of them would take more than 234 hours.

[39] While not the focus of this audit, we noted that APL introduced process improvements and brought the time it took to process swabs down to within its target of 24 hours quickly after this peak.

COVID-19 Testing Timelines for Continuing Care Facilities



* Actual timelines are based on our documentation review, data analysis, and supplemented by discussions with APL management.

We found APL has robust administrative data on testing volumes and the time it took to test a swab. However, because APL's administrative data does not track outbreaks, no one had complete testing data on continuing care facility outbreaks. No one could say with certainty how long it took for APL to generate results for continuing care outbreaks.

APL's data and administrative measures stop at the point they have the result—positive or negative—for the swab in their lab information system, which normally then pushes the results to other information systems at AHS and Alberta Health. There was no tracking of how long it took to get the results of COVID-19 swabs into the hands of facilities so they could start acting on them.

Delays in getting results to facilities stemmed from weak process and errors in requisitions

We compiled process descriptions based on what each of three main parties—AHS, APL, and facilities—had to do to get a facility's residents and staff tested and the results back to the facility from the point when a facility suspected it had a COVID-19 case. Our analysis found that the process encompassed over 50 discrete steps and sub-steps, crossing the three separate organizations. It involved five different functional areas within AHS itself. Each organization and functional area had complicated steps, and many steps had key dependencies on previous steps being done right.

We found that the biggest driver of delays in results was due to errors in completing the swabbing process at facilities. Despite the process for taking samples and sending to the lab for testing being almost identical to pre-COVID lab testing processes, APL regularly found swabs from facilities had problems with labelling and documentation. Forms and labelling were incomplete, missed key identifying information like full legal name, personal health number, or date of birth, and did not note an ordering physician.[40]

This meant that before APL could send the results back to each facility, they needed to find this information for each of the hundreds of swabs and then spend hours cleaning up the data to ensure swab results were linked to the correct individual. We found that, for a time, the backlog caused by these errors and the process to resolve them manually became so problematic that APL needed to pull medical microbiologists away from testing swabs to aid in clerical data-cleaning tasks. Without this, APL's information system could not transmit COVID-19 test results to the other key information systems used to notify AHS, Alberta Health, and get test results to facility management.

APL management told us that these issues with continuing care swabs created a situation where the lab would have results for the swab within two days of receiving the sample, but they estimated it would take between seven and 10 additional days to get the results properly identified, the lab information system data cleaned, and test results sent out.

As APL saw this issue worsening, they took steps to correct the problem. We found they worked with AHS and facilities to develop manual workarounds to get facilities results as soon as possible. They hired additional clerical staff to help with data entry and cleaning. We also saw evidence in late fall and winter of 2020 of APL staff spending significant efforts to educate facilities on proper labelling and documentation for swabs.

The issue with testing result delays was known to Alberta Health and AHS as early as May and June 2020. Issues with testing and getting results feature prominently in an AHS outbreak investigation from an outbreak that ran from April until June 2020. We also found email correspondence from Alberta Health to facility operator representatives on June 23 responding to questions from facility operators on COVID-19 test result delays. The email notes the importance of accurate and complete labelling and documentation.

Until mid-October 2020, facilities had to wait for swabbing supplies when an outbreak started

We found that when a facility suspected a COVID-19 outbreak they would need to order swabbing supply kits from APL. The order and shipping process normally took between two and three days, even for facilities in major urban centres.

Once facilities received the supplies, they began the process of swabbing residents and shipping completed swab samples back to APL labs in Edmonton or Calgary. From our review of outbreak reporting prepared by AHS, swabbing residents and shipping the swabs back to APL could take several days.

Together, this meant that from the date facilities suspected a COVID-19 case it would normally take at least four days before swabs could enter APL's testing queue.

We found that in mid-October, APL worked with Edmonton and Calgary zone continuing care management from AHS to develop a solution that saw APL provide facilities with swabbing kits large enough for facilities to complete two full swabbing sweeps of all residents and staff before they would need to order further supplies. This solution cut days out of the COVID-19 testing process.

[40] Knowing who, exactly, a swab actually was taken from is intuitively important, but it is also a legal requirement under Alberta's health information legislation.

Continuing care facility swabs were not specifically prioritized for testing

We found that between March and December 2020, swabs from continuing care facilities were not prioritized differently than other settings with outbreaks—such as other healthcare settings like hospitals, as well as outbreaks at private businesses or events.

In August, as the large amounts of asymptomatic public swabs continued to put pressure on the system, APL began taking steps to prioritize swabs from some individuals and settings, including COVID-19 outbreak investigations and healthcare workers.

Testing was optional for facility staff and had structural barriers to getting timely results

When a facility suspected it had a COVID-19 case, facilities were required under Chief Medical Officer of Health Orders to "recommend" staff be tested for COVID-19. But even in the context of an outbreak staff could refuse to be tested.[41] If a facility suspected a resident had COVID-19, and that resident did not consent to swabbing, the facility could still take steps to reduce the risk of transmission. It was much more difficult to isolate an ill staff member who refused to be tested if they did not show symptoms, were not caught by screening, or were not known to be exposed to COVID-19.

Until Order 32-2020 was announced on September 3, 2020, Orders barred facilities from swabbing their staff on site, even if staff were willing to do so. This requirement meant that facilities had to depend entirely on each individual staff member to complete their own testing, outside of work and on their own time. This separate testing process for staff often caused individual staff COVID-19 test results to not be linked to a facility outbreak—sometimes taking days or weeks for AHS public health or the facility management to manually link.

During our interviews with facility operator representatives, we found that it could take weeks to hear back about staff results—either from AHS public health or from the staff themselves.

Shared rooms and aspects of facility infrastructure consistent in the most severe COVID-19 outbreaks

Pre-COVID understanding of facility infrastructure was limited

Before COVID-19, Alberta Health and AHS had a limited understanding of the buildings that continuing care facilities operate in Alberta. Alberta Health funds and sets the policy and mandatory guidelines governing facility construction, and AHS deals with the contracting of new facility capacity. Both can also set additional specific requirements for new facility construction.[42] We found that neither had a complete understanding of existing facility design or condition across the province.

In 2018, AHS compiled the most complete listing of continuing care facility infrastructure in the province. AHS based this list on its understanding of the infrastructure it owned, as well as results from a survey of all contracted operators. AHS did not intend to gather a complete architectural assessment of all facilities. The information was limited to details such as the date the facility was built, number of beds and rooms, number of shared rooms, and which building code the facility was built to.

Neither Alberta Health nor AHS had a complete understanding of other aspects of facility infrastructure that proved important, such as room size, ability to control movement to and from the building, HVAC, states of disrepair, ability to isolate or quarantine rooms or sections of a building, and use of common dining and recreation areas.

[41] The concept of patient consent for any medical procedure is a foundation of modern health care. A patient can refuse any treatment or procedure, no matter how strongly a medical professional feels about it. This principle does not extend to employer-employee relationships for health care workers.

[42] The distinction as to whether Alberta Health or AHS set any additional requirements depends upon whether grant funding for capital is required or not.

Facility infrastructure was a common problem in major outbreaks

In our analysis, we found AHS regularly noted problems stemming from facility layout, condition, and use of shared rooms in major outbreak investigation reporting and compliance inspections. Common features included:

- large facility size (200 or more beds)
- use of shared rooms and shared bathrooms
- small, congested communal areas used by all residents[43]
- old HVAC systems—poor air circulation and no air conditioning
- old buildings and maintenance issues
- building layouts preventing cohorting COVID-19 positive residents[44]
- number of facility entrances made screening staff and visitors challenging

> "[Analysis found] statistically significant higher rates of outbreaks:
>
> - for sites with higher percentage of shared accommodations and bathrooms.
> - at older facilities. Attributes that may have impacted this include shared accommodation, narrow hallways, older HVAC, lack of air conditioning and higher use of fans."
>
> – AHS outbreak investigation report

We reviewed analysis prepared by AHS on wave one outbreaks and completed our own further analysis combining outbreak data from both waves with facility data from the 2018 AHS listing. What we found was consistent with analysis of wave one outbreaks by AHS: facilities with outbreaks were typically older and had a larger number of rooms with more than one resident. This effect was even more pronounced in facilities with outbreaks larger than 40 cases.

One-third of facilities do not meet current requirements

Alberta Health sets the minimum building requirements for continuing care facilities in its *Continuing Care Facility Design Guidelines*. These requirements are made up of building code classification requirements, and some content adapted from the AHS *Infection Prevention and Control Facility Design Recommendations*.[45]

Continuing care facilities operating in Alberta were built to one of three building code classifications: Group B2, B3, or C.[46]

[43] For example: one dining room for the whole facility.

[44] Cohorting refers to the placing of individuals exposed to or infected with the same disease in the same space, separate from those not exposed or infected. Cohorting is an important outbreak control tactic, but can be challenging if facility design is not conducive to it. It is particularly important in facilities where residents with more advanced cognitive decline sometimes tend to wander—potentially moving from or into rooms or parts of the facility with COVID positive residents.

[45] AHS infection prevention and control specialists publish and regularly update this guidance on how to design and build health facilities to prevent and manage infections. We found that this guidance has slowly lost authority in the years leading up to COVID-19.

[46] National Building Code (Alberta Edition) Group B, Division 2—Treatment Occupancy; Group B, Division 3—Care Occupancy; and Group C—Residential Occupancy.

Building Code Classification of Alberta Continuing Care Facilities

Building code classification	Group B Division 2 (B2)	Group B Division 3 (B3)	Group C (C)
Application to continuing care facilities	Minimum standard until 2018	Minimum standard from 2018 to present	Legacy
Intended occupancy	Medical treatment for occupants	Care services for occupants	Occupants not receiving medical care or treatment
Example building uses	Hospitals	Continuing care facilities	Apartment buildings, hotels

We found that 119 facilities, more than 30 per cent of facilities in the province, were Group C—a classification not approved for medical treatment or care occupancy.[47]

There is no data on the extent to which existing continuing care facilities meet the current required infection prevention and control design requirements.

There were no requirements to upgrade existing facilities to current standards

Continuing care facilities were originally built to the standards in place, including the building code, at their time of construction. However, we found one-quarter of the buildings, representing about 33 per cent of all beds, in operation at the time of the 2018 AHS survey are more than 40 years old.

We found that there are no requirements for older facilities to renovate or make improvements to meet current design requirements or building code classifications.

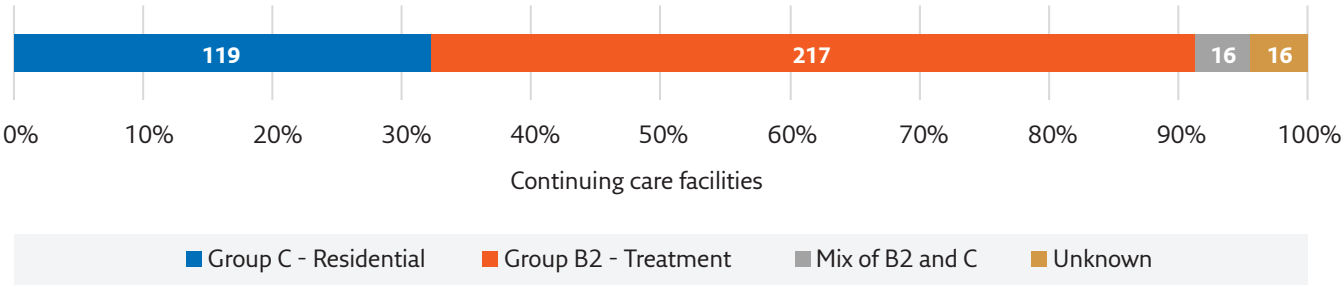
Current building code requirements do not align with expectations of facilities under pandemic plans

In March 2018, the Minister of Health approved the adoption of building code classification Group B3 as the new minimum building code requirement for continuing care facilities, replacing the previous requirement of Group B2.

One of the key directions to continuing care facilities in existing pandemic plans is for them to "care and treat in place." If facilities are being built to provide care, but not medical treatment,[48] then these foundational expectations of continuing care facilities in pandemics may need to be re-evaluated.

Alberta Continuing Care Facilities By Building Code Classification

As of 2018



[47] The definition of Group C in the National Building Code (Alberta Edition) is: "the occupancy or use of a building or part thereof by persons for whom sleeping accommodation is provided *but who are not harboured or detained to receive medical care or treatment* or are not involuntarily detained." [emphasis added]

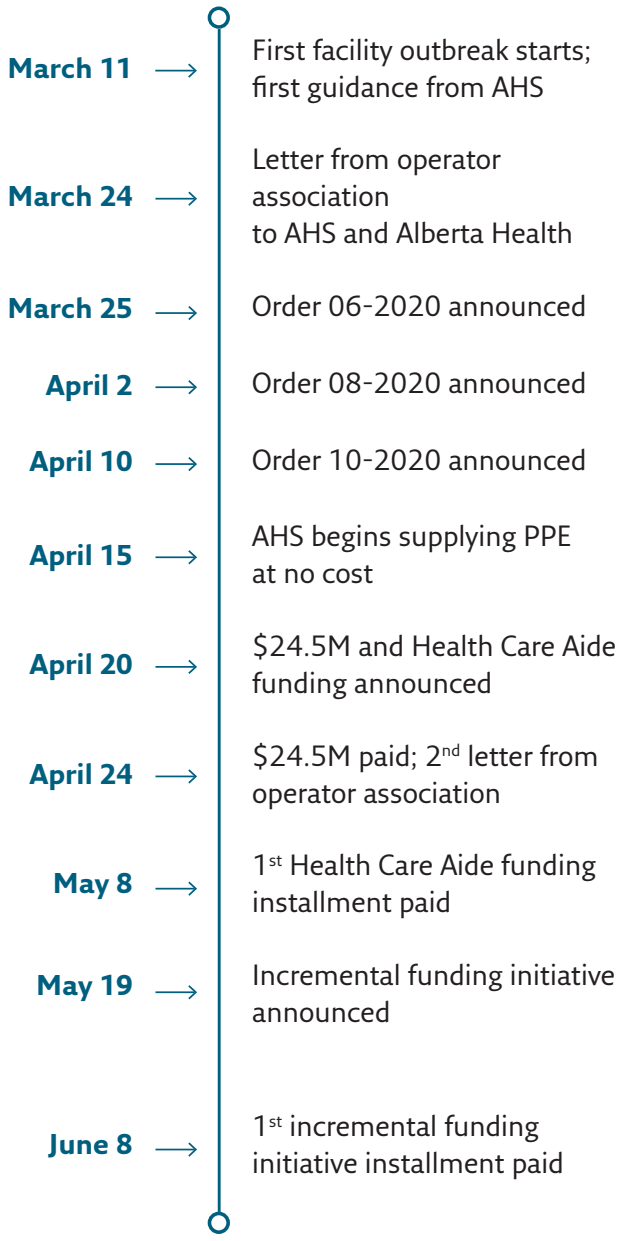
[48] The National Building Code (Alberta Edition) defines treatment as: "The provision of medical or other health-related interventions to persons, where the administration or lack of administration of these interventions may render them incapable of evacuating to a safe location without the assistance of another person."

Significant incremental funding provided starting six weeks after first outbreak

The need for additional funding quickly became apparent. Following discussions in late February and March, we found that facility operator associations began formally lobbying for funding to cover growing expenses from incremental supply and staffing requirements and lost revenues.

In response, Alberta Health and AHS developed and deployed three main funding envelopes, totalling $251 million.

We found that the funding started to flow six weeks after the first outbreaks started, and at a point when some operators were reaching dire cashflow shortages. The initial funding support of $24.5 million from AHS represented the quickest solution possible under its authority while Alberta Health developed other, larger funding solutions.



Incremental COVID-19 Funding for Continuing Care Facilities March–December 2020

Funding envelope	Developed by	Amount	Date announced	Date first paid	Funding type
March 2021 monthly funding advance	AHS	$24.5 million	April 20, 2020	April 24, 2020	One-time advance
Health Care Aide Initiative	Alberta Health	$91.0 million	April 20, 2020	May 8, 2020	Monthly installments
COVID-19 Incremental Funding Initiative	Alberta Health	$135.6 million†	May 19, 2020	June 8, 2020††	Monthly installments
Total:		**$251.1 million**			

† Note that the COVID-19 Incremental Funding Initiative is often quoted at $170 million. This is accurate, but imprecise to the scope of our audit as it includes about $34 million contributed by the Ministry of Seniors and Housing and paid to licensed supportive living and seniors lodges, which are not part of our audit scope.

†† The COVID-19 Incremental Funding Initiative payments were made retroactive to March 15, 2020.

PPE and supplies were a critical constraint for the first month

In the early days of the COVID-19 response, the guidance on the use of PPE and masks was frequently changing. We found that Alberta Health and AHS followed the guidance of the Public Health Agency of Canada, which aligned with the US Centers for Disease Control and Prevention, and the World Health Organization.

AHS told us that facilities should have maintained a stockpile of PPE. Other than as an example of best practice, we could not identify any direct requirement for facilities to do so. Because there was no requirement for this, neither Alberta Health nor AHS inspected for or otherwise had understanding of facility PPE and supply stockpiles prior to March 2020.

> "Early in the pandemic, the plan to supply contracted operators with PPE from AHS was not in place and continuing care operators encountered an insufficient stock of PPE, hand sanitizer and cleaning supplies."
>
> – AHS outbreak investigation report

Until April 15, 2020, contracted facilities needed to procure their own PPE and supplies. At this time, global demand spiked the average costs of PPE by an average of 4.2 times pre-2020 costs[49] and facilities struggled to source PPE. Incremental requirements for more and more masking, PPE use, and cleaning across late March and early April exacerbated this problem—culminating on April 10 with the continuous masking requirement in Order 10-2020.

[49] UK National Audit Office, "The supply of personal protective equipment (PPE) during the Covid-19 pandemic." 25 November 2020.

Several facilities experienced critical supply shortages which AHS outbreak investigations note contributed to the severity of some early outbreaks. However, we did not see evidence of any complete depletions of key supplies being reported.

As early as March 19, 2020, AHS confirmed it was prepared to supply contracted facilities with PPE. On April 11, 2020, AHS was instructed to begin shipping PPE and ventilators to other Canadian provinces. Approval from Alberta Health to supply facilities came on April 15, 2020, and we found that AHS immediately began supplying continuing care facilities with PPE and critical supplies at no cost—resolving the PPE and supply constraints to facilities through the remaining scope of our audit.

- **March 11** → First guidance from AHS
- **March 19** → AHS confirms it can supply contracted providers
- **March 24** → Letter from operator association to AHS and Alberta Health
- **March 25** → Order 06-2020 announced
- **April 2** → Order 08-2020 announced
- **April 10** → Order 10-2020 announced; continuous masking
- **April 11** → AHS told to ship PPE and ventilators to other provinces
- **April 15** → AHS approved to supply PPE at no cost to continuing care sector

RECOMMENDATION:
Develop a continuing care staffing strategy to increase staffing system resilience

We recommend that the Department of Health work with Alberta Health Services and facility operators to develop and implement a staffing strategy for facility-based continuing care.

This strategy should build on efforts already underway focused on staffing hours and staff mix from the response to the *Facility-based Continuing Care review* recommendations, and consider other factors that contributed to staff vulnerability during COVID-19 such as:

- the costs and benefits of maintaining a largely single-site staffing model
- appropriateness of primarily part-time and casual staffing model use in the care of vulnerable elderly residents
- mandatory benefits—particularly paid sick leave
- minimum staff training
- staff quality of work and life
- staff mental health, wellness, and post-traumatic support

A staffing strategy should determine what the Department of Health wants to achieve in these areas, and determine what it can accomplish with existing and potential future resources.

Consequences of not taking action

Insufficient resources to care for residents during COVID-19 reinforced the importance of continuing care facility staff to safe resident care, outbreak response, and facility operations.

RECOMMENDATION:
Formalize centre of expertise capacity for outbreak management

We recommend that Alberta Health Services formalize multi-disciplinary outbreak response and support systems tasked with providing centre of expertise services, monitoring and tracking, and post-outbreak debriefing and reporting for communicable disease outbreaks at continuing care facilities.

Consequences of not taking action

Without established teams of specialists prepared to support outbreak response and debrief them, outbreak response can be hampered and valuable lessons in disease-specific and general outbreak management may be lost.

RECOMMENDATION:
Formalize operational improvements in outbreak testing

We recommend that Alberta Health Services work with Alberta Precision Labs to review, identify, and formalize process improvements and streamlining during COVID-19.

Considerations should include other process improvements that could prevent human errors, facilitate linking samples to outbreaks, build redundancy and resiliency into the critical outbreak testing processes, and ensure timely delivery of results to continuing care facilities.

Consequences of not taking action

Alberta Precision Labs, along with AHS zone and provincial management, worked tirelessly to find the best solution possible to every challenge they faced. If APL and AHS do not capture and formalize these process improvements, the invaluable testing system will not be able to optimally support continuing care facility outbreak management.

RECOMMENDATION:
Evaluate all existing infrastructure and set a strategy for improving facility infrastructure

We recommend that the Department of Health develop a priority list and strategy for improving existing buildings, where necessary.

This priority list and strategy should be based on a comprehensive assessment of all continuing care facilities in the province to be completed by Alberta Health Services for:

- whether the building meets the mandatory requirements of current facility design guidelines, and its capacity for upgrading to current minimums if necessary
- the adequacy of their HVAC and filtration systems
- the size of resident rooms and extent of shared accommodations
- the capacity of the building to permit adequate isolation practices
- the extent of building entrances and exits and their ability to be secured

An infrastructure strategy should determine what the Department of Health wants to achieve and determine what it can accomplish with existing and potential future resources.

Consequences of not taking action

Without a strategy for making informed, priority-based decisions to improve facility infrastructure where necessary, some of Alberta's continuing care facility infrastructure will continue to challenge the best responses to communicable disease outbreaks.

MONITOR and ENFORCE: Monitoring Performance and Enforcing Compliance at Facilities

Context

Compliance monitoring via in-person inspections

Periodic, in-person facility inspections are important to ensure that facilities are meeting their obligations. Where they are not, this needs to be flagged for the facility management and for AHS and Alberta Health, who have accountability and oversight responsibilities. When inspectors find problems, they need to follow up to ensure facilities resolve them quickly.

Public health and outbreak investigations

The general processes for outbreak response and monitoring for Alberta Health and AHS are outlined in the Alberta Outbreak Response Protocol (AORP) An important part of this process is ensuring that epidemiologists and public health experts in Alberta Health and AHS have up-to-date data on who is ill and how the disease is progressing during an outbreak.

To facilitate understanding of outbreaks, AHS public health specialists can prepare highly detailed epidemiological investigations. These investigations look at all aspects of an outbreak—pre-outbreak conditions, how the disease got in, how it spread, the results of inspections before and during the outbreak, and how structural and operational factors affected the facility's response. These investigations can provide critical and constructive evaluations of complex outbreaks.

Escalating and acting on risk to residents

AHS is ultimately accountable for resident care, and Alberta Health oversees the continuing care system. When the reasonable expectations of safety come into question in any facility, Alberta Health and AHS need to get information, increase their involvement, and act quickly. This requires that both Alberta Health and AHS have systems to escalate concerns and get key information to senior decision makers and to escalate their involvement as outbreaks evolve and as risk increases.

In extreme cases the Minister can revoke a facility operator's contract and place AHS in charge of the facility.

Monitoring system-level performance

System-level performance monitoring is different from monitoring compliance and activity at individual facilities. It involves Alberta Health and AHS monitoring and critically evaluating their own performance, as part of the broader continuing care system. System-level performance monitoring for the whole continuing care system means measuring performance against set goals and targets.[50]

[50] This is related to a concept our Office has spoken to in many audits over the past decades. We refer to such a system, generally, as a "results management system." See page 24 of our July 2014 public report for a reference guide on results management. See *Report of the Auditor General of Alberta—July 2014*.

Criteria

Alberta Health and AHS should monitor whether facilities are complying with the plans, protocols and guidance, and enforce action as needed.

Our findings

Key findings:

- A complete suite of in-person facility inspections began within weeks of the first outbreak and continuously improved.
- Operational outbreak monitoring from AHS zone leadership was effective.
- Detailed epidemiological investigations of outbreaks were critical tools to learn from COVID-19 outbreaks in facilities and make operational improvements, but ceased after wave one.
- System-level monitoring of the response of Alberta Health and AHS to COVID-19 in continuing care facilities was robust, but ceased after wave one.

A complete suite of in-person facility inspections began within weeks of the first outbreak

COVID-specific, in-person facility inspection programs were rapidly developed and deployed

Alberta Health and AHS each had compliance audit and inspection programs that evaluated facilities against health service and accommodation standards prior to COVID-19. We found that both quickly appreciated that COVID-19 presented unique risks to residents and that compliance needs changed as Orders began placing additional legally enforceable requirements on facilities.

We found that both Alberta Health and AHS rapidly halted their pre-COVID-19 compliance programs and developed inspection[51] programs specific to COVID-19. Each quickly trained and redeployed their facility inspection resources to start conducting in-person COVID-19 compliance inspections.

[51] We note that neither Alberta Health nor AHS used the word "inspection" or described their compliance teams who went to facilities as "inspectors." We use this term because we believe it is simple, generalizable, and understandable in reflecting what these groups did at facilities—all of these teams observed facility operations closely and critically, and undertook their work in an official capacity.

March 11 → First facility outbreak starts

March 15 → AHS halts all routine compliance audits

March 25 → 1st Order on outbreak management

March 31 → 1st AHS Quality Monitoring Visit inspection

April 1 → 1st AHS Environmental Public Health inspections

April 8 → M.O. 621 gives Alberta Health inspectors powers

April 14 → 1st Alberta Health executive officer inspection

May 15 → 1st AHS Site Preparedness Assessment inspection

July 24 → Alberta Health inspection results in direction to AHS

July 30 → AHS completes at least one inspection at each facility

As the Chief Medical Officer of Health announced new Orders, the inspectors needed to update their inspection checklists and tools. We found that they normally managed to do this within a week, and were able to keep pace with changing guidance.

By March 31, 2020, AHS had inspectors in facilities across the province. Alberta Health inspectors began their inspections on April 14, after putting in place the legal requirements to give their inspectors additional enforcement powers under the *Public Health Act*.[52] By the end of July 2020, AHS had completed at least one inspection at every continuing care facility in the province. Between March and December 2020, we counted more than 1,400 inspections or follow-up visits from Alberta Health and AHS inspectors at continuing care facilities in the scope of our audit—an average of four for every facility in Alberta.[53]

Inspections improved safety

Our analysis of inspection data, documentation and interviews with inspectors found that they regularly flagged significant problems with resident safety and care during outbreaks. In some of the most severe outbreaks, facility inspectors found:[54]

- Resident care concerns—including dangerous levels of dehydration, insufficient meal services, inadequate resident pain management, residents not receiving hygiene services, and resident rooms which had not been cleaned for days.
- Facility staffing problems—including a few instances of staffing shortages in excess of 50 per cent, staff working 16 hours a day or more, and facility staff in severe emotional and psychological distress.
- Issues stemming from facility infrastructure—including inability to physically distance residents, and dangerously high interior temperatures due to lack of air conditioning and poor air exchange.
- Deficient PPE and infection prevention practices—including incorrect and insufficient PPE use, deficient cleaning practices, and limited familiarity with infection prevention and control best practices.

[52] On April 8, 2021, Ministerial Order 621/2020 granted Alberta Health's compliance and monitoring inspectors who focused on continuing care facilities executive officer powers. "Executive officer powers" gives inspectors power under the *Public Health Act* to issue legally enforceable orders for compliance.

[53] Both Alberta Health and AHS conducted many additional inspections at facilities such as licensed supportive living, lodges and residential facilities for adults living with disabilities, among others.

[54] The Health Quality Council of Alberta's "COVID-19 Continuing Care Study" includes another view on resident experiences during the first wave of COVID-19 and is based on resident and family surveys. See: https://hqca.ca/reports/covid-19-continuing-care-study/

All of these problems create risk to resident wellbeing and safety. Facility inspections brought needed attention to these problems in facilities during outbreaks—both at facilities, and equally at Alberta Health and AHS. By flagging and ensuring the resolution of these problems, inspectors improved resident safety.

No specific pre-existing pandemic plans considered facility compliance monitoring

The task of rapidly deploying a facility inspection program for COVID-19 was complicated. Pre-existing pandemic plans did not consider the role compliance inspections should play in a pandemic response. Both Alberta Health and AHS needed to develop their programs at a time when the COVID-19 situation was evolving rapidly.

Coordination of compliance inspection efforts was initially challenging

In total, we found five distinct in-person, COVID-19 specific inspections.[55] AHS developed four distinct types of inspections across three functional areas. Alberta Health's compliance and monitoring branch developed the fifth type of inspection. All five of these inspection types worked with continuing care functional areas in both Alberta Health and AHS.

We found that until the fall of 2020, the suite of inspections was being done with limited coordination between inspection groups. When we analyzed facility inspection data from across the different inspection activities, we found several hundred instances where visits from different inspection functions happened within three days of each other. We found 74 instances where different inspectors visited facilities on the same day[56]—including one instance where two different inspection teams from AHS and the Alberta Health inspectors all visited the same facility on the same day. When we asked for evidence that a sample of these same-day visits were coordinated in advance, less than half could show evidence of pre-visit coordination.

The different compliance functions recognized this problem and continuously worked to improve their coordination.

In the fall of 2020, AHS brought together its functional groups involved in facility inspections, and the provincial continuing care management of AHS to formalize its current COVID-19 compliance practices into a single guiding document. The document covered key topics such as roles and responsibilities, common risk assessment tools, inspection triggers, timelines for inspections, and how the different inspections relate to and coordinate with each other under what AHS calls the continuing care "Quality Monitoring Program."

Inspections had overlapping responsibilities and focuses, gave different interpretations

Each inspection program had slightly different mandates and triggers for when to conduct an inspection, but we found there were significant overlaps between what each looked at. Of the five different inspections, we found three looked at compliance with the Chief Medical Officer of Health Orders.

Facility operator representatives often received inconsistent interpretations of requirements from inspectors, particularly with the requirements in the Orders. Facility operators found the inspections were important but put a further strain on already stretched facility resources—particularly as inspectors tried to be on the ground in the first few days of an outbreak. Inspections became problematic for facilities when they experienced duplication, had more than one inspector looking at the same things on the same day, and especially when they received mixed messages from different inspectors.

Only one type of inspection was regularly unannounced

Only Alberta Health's executive officer inspection team regularly conducted unannounced inspections.

We found that in one major outbreak, Alberta Health inspectors conducted an unannounced visit shortly after several other types of inspectors had been in the facility. They found many resident safety risks, PPE issues, and major staffing concerns that were not identified during announced inspections just days earlier. While all inspections improved safety, unannounced visits gave the most accurate picture of what was happening day-to-day at facilities.

[55] See Appendix D for an overview of the AHS and Alberta Health COVID-19 continuing care inspection programs. We also note the Ministry of Labour and Immigration's Occupational Health and Safety inspectors conducted a sixth type of in-person inspection at facilities during 2020.

[56] This count does not include same-day inspections from AHS Infection Prevention and Control and AHS Environmental Public Health "COVID-19 Controls Inspections" because these inspections were designed to be conducted simultaneously, when resources allowed.

Inspection results, data, and information flows were siloed

We found that each inspection had developed its own distinct tools and data systems. There was not a process to accumulate and consolidate the detailed results from all inspections. This required significant manual effort to bring together results across inspection types, and limited the ability of Alberta Health and AHS to efficiently analyze data for broader trends in compliance.

AHS partially remedied this by introducing a common risk-scoring tool for all its inspectors to use and share.

We also found that inspection information only flowed in one direction: from AHS to Alberta Health. Two-way sharing of the findings and results of inspections would allow for better coordination of effort and situational awareness—particularly for AHS which has responsibility for ensuring safe care in facilities.

Operational outbreak monitoring from AHS zone leadership was effective

Common system to notify AHS and get direction was established quickly

In the first month of COVID-19, operators would use different processes to notify AHS of suspected outbreaks depending on the zone they operated in. On April 2, 2020, AHS launched the *COVID-19 Coordinated Response Line* for all congregate living setting operators—including continuing care facilities. The response line allowed facilities to make a single call to notify AHS of a suspected outbreak and get essential, consistent guidance on the immediate next steps they needed to take.

Daily outbreak monitoring provided critical information

AHS zone continuing care management would become closely involved in monitoring and supporting every facility in an outbreak. Facilities sent a daily email to AHS zone management summarizing their current COVID-19 status and cases and how these were changing. Each facility would also attend daily outbreak meetings with zone management, zone medical leadership, and other AHS public health specialists.

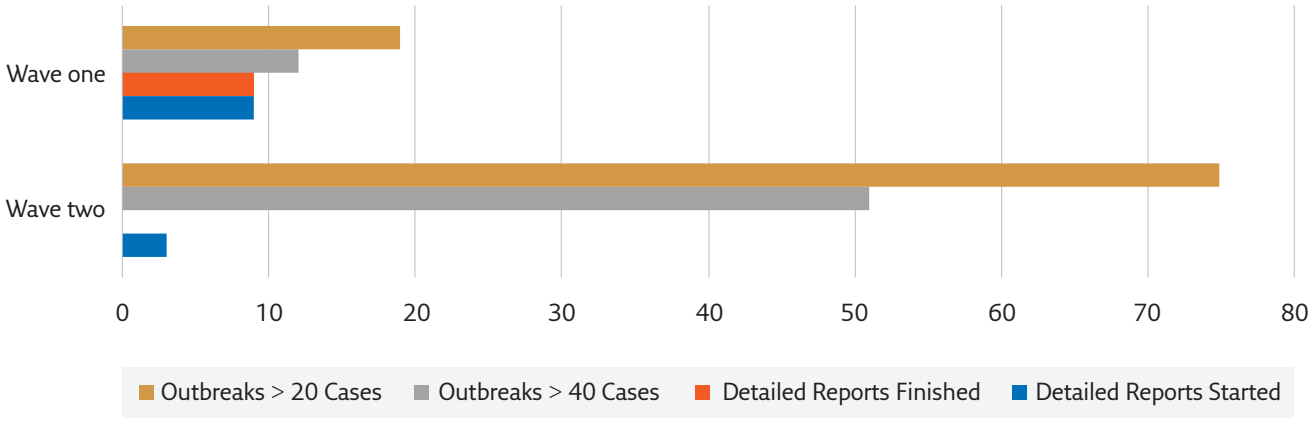
These monitoring activities were critically important and another example of the effort of AHS zone management.

Detailed epidemiological outbreak investigations virtually ceased after wave one

We found that detailed epidemiological outbreak investigations happened regularly for continuing care outbreaks in wave one, but functionally stopped in wave two. There are no direct requirements for completing these types of detailed epidemiological studies—it is at the discretion of public health and zone medical leadership.

In evaluating what happened with these investigations, we found that, at first, AHS decided that it would do a detailed investigation of any "large" outbreak. They defined this as 20 cases or more. Over time, they expanded this definition to 40 cases or more. As the enormity of wave two became understood, they removed any notion of case number thresholds and relied on the judgment of zone medical officers of health to decide whether or not to complete a detailed outbreak investigation report.

Alberta Continuing Care Outbreaks
Epidemiological Investigations on Large Outbreaks (>40, and >20 Cases)
Wave One vs Wave Two



In total, we found that AHS started 12 detailed investigations on continuing care outbreaks. Nine were completed for wave one outbreaks. Only three were started from wave two outbreaks. At the time we completed our audit in early 2022, none were finished.

AHS told us that the decision to do fewer of these reports in wave two was because the wave one studies told them much of what they needed to know. We found that continuing care management teams across AHS used the details in the nine reports from wave one outbreaks to great effect in studying, analyzing across outbreaks, and making suggestions for changes from wave one outbreaks. These reports provided details beyond what could be captured by compliance inspectors alone, they helped understand how COVID-19 was getting into facilities, how it spread, and the impacts that key factors like facility infrastructure and staff had on outbreak response. The absence of these detailed reports for wave two was a missed opportunity to continuously learn from wave two outbreaks.

System-level monitoring of Alberta Health and AHS response was robust, but ceased after wave one

Decisions to take over facilities were based on operator responsiveness and compliance history

We found that Alberta Health and AHS both have defined pathways to escalate situations where resident safety is in question, or where they identify other major risks at continuing care facilities. Pathways involve increasing levels of each organization's leadership—from continuing care management, up to executive leadership and organization heads. They involve cross-consultation with functions like legal counsel and risk management.

There were two well-publicized instances where escalation of resident safety concerns during COVID-19 outbreaks ultimately resulted in the Minister of Health terminating contracts with operators and placing AHS in charge of facilities: Manoir du Lac in the North Zone and Millrise Place in Calgary Zone. We found that there were several other large outbreaks where escalation pathways raised COVID-19 outbreaks up to similar levels of decision making, but where the decision was made not to terminate contracts because other solutions—such as staffing support from AHS or securing agency staff—were possible.

From our review of documentation and our interviews with Alberta Health and AHS management, the ultimate decision came down to the judgment of Alberta Health and AHS. We found there were common criteria that distinguished facilities that were taken over by AHS from those that were not, namely:

- whether the leadership of facility operators were responding quickly and completely to resident safety concerns
- the recent history of compliance and responsiveness to other resident safety issues and compliance concerns

AHS outbreak analysis and reporting from wave one was robust

AHS completed three detailed reports analyzing system-level performance in evaluating the response to COVID-19 in continuing care facilities between April and September 2020. We found these reports were good examples of analysis and reporting to inform system-level monitoring.

The first was dated late April 2020. It focused on the first few outbreaks and the main actions taken by AHS to that date. It made 33 recommendations and considerations[57] to AHS in improving its response at that time.

The second report was originally finished in August but was subject to further editing and modification after AHS provided the report to Alberta Health. This report focused on one major outbreak from wave one. It goes into considerable detail and analysis, and fully debriefs the outbreak. The report contains 26 "lessons learned" and makes 41 strategic and operational recommendations.

[57] The report does not define what a "consideration" is or how it is distinct from a recommendation.

The third report was written in September. The report provides a comprehensive study of nine large outbreaks[58] from March through July 2020. It integrates data, detailed outbreak investigations, the results of inspections and other monitoring, and other information to analyze and determine commonalities and differences in these outbreaks. The report makes 25 recommendations which it further breaks down into short-, medium-, and long-term focus, as well as who within AHS and Alberta Health is responsible for each.

We have organized and summarized these recommendations in Appendix E.

No evaluation of system-level response against goals and plans

The Fall Action Plan developed jointly among Alberta Health, AHS, and facility operator representatives in September 2020 contained five goals[59] and detailed numerous specific actions for each of Alberta Health, AHS, and facility operators.

We found that in February 2021, Alberta Health completed a brief update report on the Fall Action Plan. The report detailed several specific actions and steps taken since September 2020. However, we found the report did not:

- include a complete evaluation of whether all planned actions described in the plan were done by each party
- consider or evaluate whether the actions that were undertaken were successful
- evaluate performance or progress against the five goals

When we spoke to Alberta Health and AHS about this, they indicated that they viewed the goals in the plan as aspirational and as a framework under which they could organize the actions. As of the completion of our audit, we were not aware of any further evaluation against goals articulated in the Fall Action Plan or other existing pandemic plans.

Evaluation of outcomes by operator type

We found that both Alberta Health and AHS had performed some analysis of COVID-19 outcomes among different continuing care operator types. Their analyses identified that contracted for-profit operators experienced proportionally more outbreaks, more cases, and more deaths compared to facilities run by contracted non-profit operators and AHS. Based on its analysis from wave one outbreaks, AHS included for-profit operators as a possible risk factor for large outbreaks.

A larger proportion of facilities run by contracted operators exist in the two large urban zones of Edmonton and Calgary, and this is where most COVID-19 cases in the community were happening during waves one and two—this fact can skew analysis at a provincial level. We analyzed this effect focusing only on Edmonton and Calgary zone facilities in Appendix C.

[58] The report defines a major outbreak as having five deaths, more than 20 resident cases, and more than 30 combined cases in residents and staff.

[59] As described in the context section of this report, the goals were to:
1. Prevent COVID-19 getting into facilities
2. Contain and reduce the spread, once at a facility
3. Meet resident health needs
4. See to resident mental health, quality of life, social connections, and family involvement
5. Ensure staff are well-trained, prepared, and have a good quality of work life and mental health

Significant statistical and qualitative analysis, beyond the scope of this audit, would be required to fully evaluate this question. Such analysis, led by Alberta Health, may help better understand COVID-19's impact on different operating models and help better prepare the system for future pandemics.

RECOMMENDATION:
Track resident illness and staff absences during communicable disease outbreaks in facilities

We recommend that Alberta Health Services develop or adapt a surveillance system to track all resident cases and deaths, as well as information on staff absences, during any communicable disease or outbreak in facilities.

Consequences of not taking action

Without regular, complete tracking of both resident and staff impacts from communicable disease outbreaks, AHS may miss these important indicators of resident care, staff well-being, and overall facility risk.

RECOMMENDATION:
Implement recommendations from Alberta Health Services internal reports

We recommend that Alberta Health Services accumulate, evaluate and action recommendations, lessons learned, and other required actions identified in its own internal summary reports on continuing care outbreaks. Any recommendations not adopted should be rationalized.

We have organized and summarized these recommendations in Appendix E.

Consequences of not taking action

Through considerable analysis and effort, AHS identified many important recommendations and suggestions for how it, Alberta Health, and facilities can make improvements. If not actioned, the system may not be better prepared for future pandemics, and other smaller communicable disease outbreaks such as seasonal influenza.

Appendix A: Summary of Pandemic and Communicable Disease Plan Goals

Plan	Owner(s)	Level of focus	Goals
Alberta's Pandemic Influenza Plan (APIP)	AEMA, Alberta Health, AHS	Strategic/ provincial	The objective of pandemic planning is to provide guidance and direction for activities aimed at: • controlling the spread of influenza disease and reducing illness (morbidity) and death (mortality) by providing access to appropriate prevention measures, care, and treatment • mitigating societal disruption in Alberta through ensuring the continuity and recovery of critical services • minimizing adverse economic impact • supporting an efficient and effective use of resources during response and recovery
Communicable disease emergency response plan (CDERP)—base plan	AHS	Strategic/ system-wide	The goals of the CDERP are to minimize: • serious illness and overall deaths through appropriate management of Alberta's health system resources • societal disruption in Alberta as a result of a communicable disease incident or emergency
CDERP—continuing care chapter	AHS	Whole continuing care system	The Continuing Care CDERP objectives are to: • care and treat in place • manage surge capacity • prioritize services • facilitate decanting from Acute care (if necessary) • prioritize admissions • apply Infection prevention and control practices within Continuing Care • manage Continuing Care Human Resources • provide Alternate Care Centers (ACC)

Plan	Owner(s)	Level of focus	Goals
Continuing Care Pandemic Influenza Operational Guide (CCPOG)	AHS	Operational Requirements for Continuing Care	The goal of pandemic planning is to provide guidance and direction for issues such as: • controlling the spread of disease and reducing illness (morbidity) and death (mortality) by providing access to appropriate prevention measures, care, and treatment • mitigating societal disruption in Alberta through ensuring the continuity and recovery of critical services • minimizing adverse economic impact • supporting an efficient and effective use of resources during response and recovery
CCPOG—COVID-19 update **[Published March 24, 2020]**	AHS	Operational Requirements for Continuing Care	The Strategic Preparedness and Response Plan for COVID-19 aims to: • slow and stop transmission, prevent outbreaks and delay spread • provide optimized care for all patients, especially the seriously ill • minimize the impact of the epidemic on health systems, social services and economic activity The goal of pandemic planning is to provide guidance and direction for issues such as (same as above): • controlling the spread of disease and reducing illness (morbidity) and death (mortality) by providing access to appropriate prevention measures, care, and treatment • mitigating societal disruption in Alberta through ensuring the continuity and recovery of critical services • minimizing adverse economic impact • supporting an efficient and effective use of resources during response and recovery

Appendix B: Timeline of COVID-19 in Continuing Care Response in 2020

Continuing Care Active Outbreaks, Total Cases and Deaths	Date	Event
	January 25	Health Canada reports first probable case of COVID-19 in Canada
	January 29	AHS activates provincial Emergency Coordination Centre
	January 30	World Health Organization declares COVID-19 a public health emergency of international concern
	March 5	First confirmed COVID-19 case in Alberta
	March 9	CMOH advises families to avoid facilities if they feel unwell
	March 10	Government of Alberta activates Emergency Operations Centre
	March 11	First facility outbreak starts; first guidance from AHS
	March 11	World Health Organization defines COVID-19 a global pandemic
	March 17	Alberta declares state of public health emergency due to COVID-19
	March 20	CMOH Order 03-2020: implements strict visitation restrictions to health care facilities
	March 24	Letter from operator associations to AHS and AH requesting resources; AHS updates CCPOG

Continuing Care Active Outbreaks, Total Cases and Deaths	Date	Event
At March 31 Outbreaks: 11 Cases: 86 Deaths: 5	March 25 →	CMOH Order 06-2020: additional facility outbreak management practices
	March 31 →	First in-person COVID inspection from AHS
	April 2 →	CMOH Order 08-2020; AHS launches COVID-19 Coordinated Response Line
	April 7 →	CMOH Order 09-2020: Further visitation rules
	April 10 →	CMOH Order 10-2020: Single-site order; continuous masking for facility staff
	April 11 →	Ministerial order 624/2020: protects staff who are absent due to single-site order
	April 15 →	Health Assistant Deputy Minister begins weekly operator and AHS meetings
	April 15, →	AHS begins supplying contracted facilities with PPE and supplies at no cost
	April 20 →	$24.5M monthly advance and $91M Health Care Aide Initiative funding announced
	April 22 →	AH sends letter to operators to delay implementing SSO until further direction
	April 24 →	AHS formalizes agreement with unions to permit staff redeployment to other facilities
	April 24 →	CMOH Order 14-2020: eases some visitation restrictions
At April 30 Outbreaks: 39 Cases: 624 Deaths: 72	April 28 →	CMOH Order 12-2020: additional COVID symptoms, testing, and IPC requirements
	May 1 →	CMOH acknowledges lack of consultation/ notification to operators for visitor changes
	May 19 →	AH announces $170M COVID-19 Incremental Funding Initiative
	May 20 →	Ministerial order 22/2020: Delays annual accommodation charge increase
	May 25 →	CMOH Order 23-2020: recreational activities for non-isolating residents permitted

Continuing Care Active Outbreaks, Total Cases and Deaths	Date	Event
At May 31 Outbreaks: 19 Cases: 792 Deaths: 110	May 29 →	All Albertans eligible for asymptomatic COVID-19 testing
	June 5 →	CMOH states that isolating seniors is negatively impacting their health
	June 13 →	AH grants first SSO exemption
	June 23-24 →	Alberta Health Town Halls: CMOH discusses visitor policy with operators, residents and families
	June 29 →	AHS agreement with staff unions expires
At June 30 Outbreaks: 21 Cases: 854 Deaths: 118	July 2 →	CMOH acknowledges the single-site order has negatively impacted some staff livelihoods
	July 16 →	CMOH Order 29-2020: further eases visitation restrictions
At July 31 Outbreaks: 23 Cases: 1,036 Deaths: 145	July 30 →	AHS has conducted at least one inspection at all publicly funded continuing care facilities
	August 17 →	AHS completes a major outbreak report, includes 41 recommendations
At August 31 Outbreaks: 28 Cases: 1,169 Deaths: 159	September 3 →	CMOH Order 32-2020: Eases various continuing care restrictions
At September 30 Outbreaks: 40 Cases: 1,331 Deaths: 168	September 30 →	Fall Action Report developed outlining five desired outcomes
	October 10 →	Alberta Precision Labs begins prospectively providing swabbing kits to urban continuing care sites
	October 13 →	CMOH states limiting community cases one of best ways to prevent facility outbreaks
	October 20 →	Asymptomatic testing no longer available for Albertans with no known COVID exposure
At October 31 Outbreaks: 68 Cases: 2,066 Deaths: 205	October 29 →	CMOH recommends Calgary zone operators to only permit designated visitors

Continuing Care Active Outbreaks, Total Cases and Deaths	Date	Event
	November 12 →	CMOH acknowledges there are continuing care staffing shortages
	November 16 →	CMOH states most common point of entry of COVID into continuing care is through staff
	November 20 →	CMOH states SSO exemptions granted for sites with significant staff shortages
At November 30 Outbreaks: 120 Cases: 3,834 Deaths: 383	December 3 →	CMOH states staffing levels are very challenging at outbreak continuing care sites
	December 8 →	CMOH Order 41-2020: mandatory indoor masking
	December 14 →	Alberta receives first shipment of Pfizer vaccine
	December 18 →	Rapid COVID testing pilot project expanded to continuing care facilities
At December 31 Outbreaks: 124 Cases: 7,955 Deaths: 798	December 29 →	Alberta receives first shipment of Moderna vaccine
	December 30 →	AHS to recruit 1,600 Comfort Care Aides for facilities; 1st resident receives Moderna vaccine

Appendix C: Key Facts and Figures on COVID-19 in Continuing Care Facilities

Caution on using data from our report to compare COVID-19 outcomes between jurisdictions

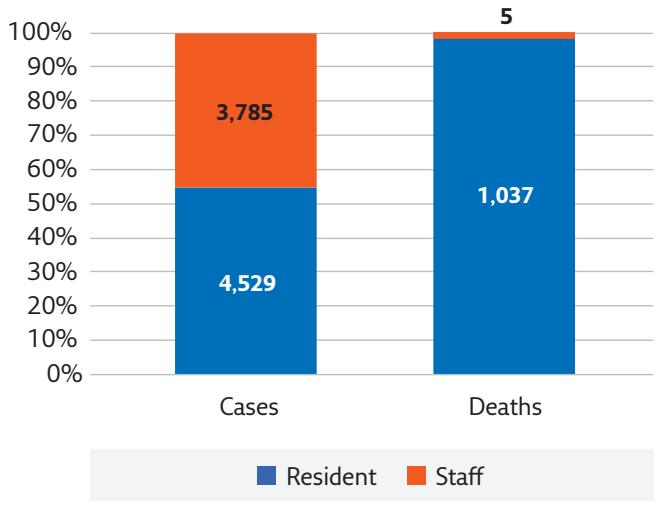
The organization of facility-based continuing care varies significantly across the country. There are different legislative frameworks, delivery models, and ways of defining continuing care service levels. There are also crucial differences in how jurisdictions define simple but important terms like "outbreak" or "COVID-19 death."

For readers interested in comparative information, the Canadian Institute for Health Information (CIHI) published a comparative report titled *"The Impact of COVID-19 on Long-Term Care in Canada, Focus on the First 6 Months,"* as well as other selected comparative information about long-term care on its website. The reader should understand that long-term care reflects only about half of the facilities considered in our report.

Illness and Death

Alberta's continuing care facilities accounted for 8,314 COVID-19 cases and 1,042 deaths in outbreaks that started between March and December 2020. Cases were almost evenly split between residents and facility staff. Residents accounted for the large majority of deaths from COVID-19.

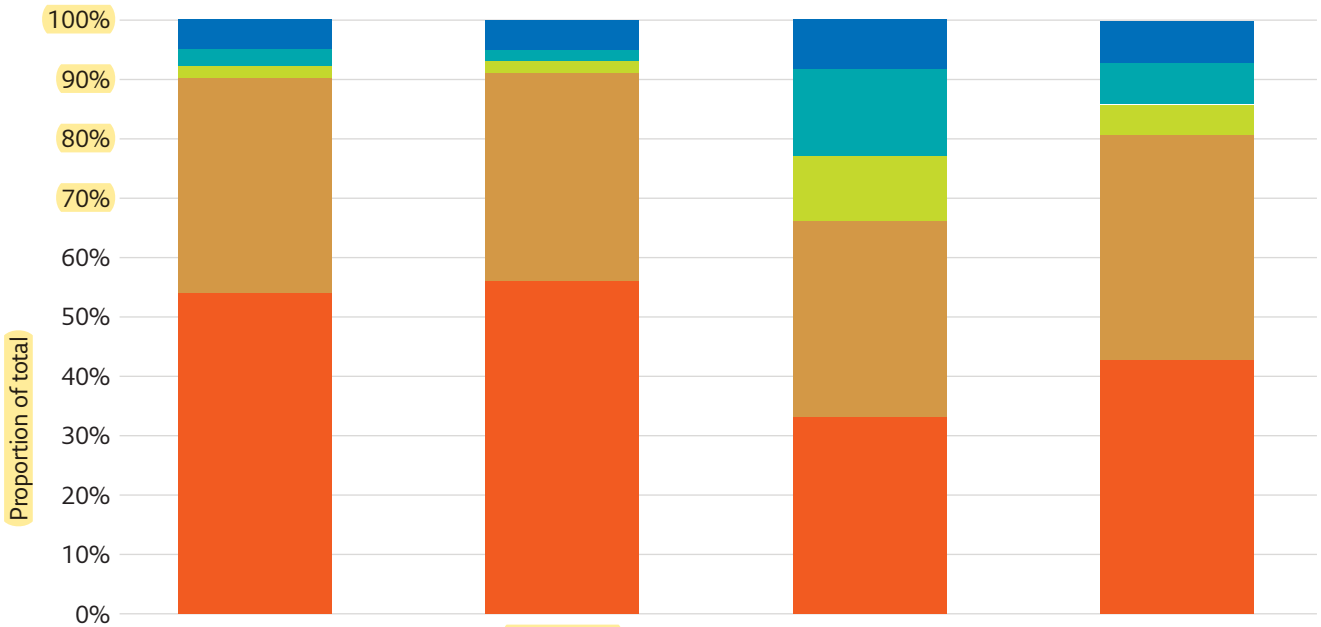
COVID-19 Cases and Deaths
Continuing Care Residents and Staff
March–December 2020



COVID-19 was the most severe in the large urban zones of Calgary and Edmonton. Together these zones accounted for more than 90 per cent of continuing care cases and 91 per cent of deaths. This trend reflects the proportion of all COVID-19 cases in the community—Calgary and Edmonton accounted for 82 per cent of all COVID-19 cases in the same period.

COVID-19 Continuing Care Cases and Deaths
Proportion of Totals by AHS Zone, with Comparative Information

March–December 2020



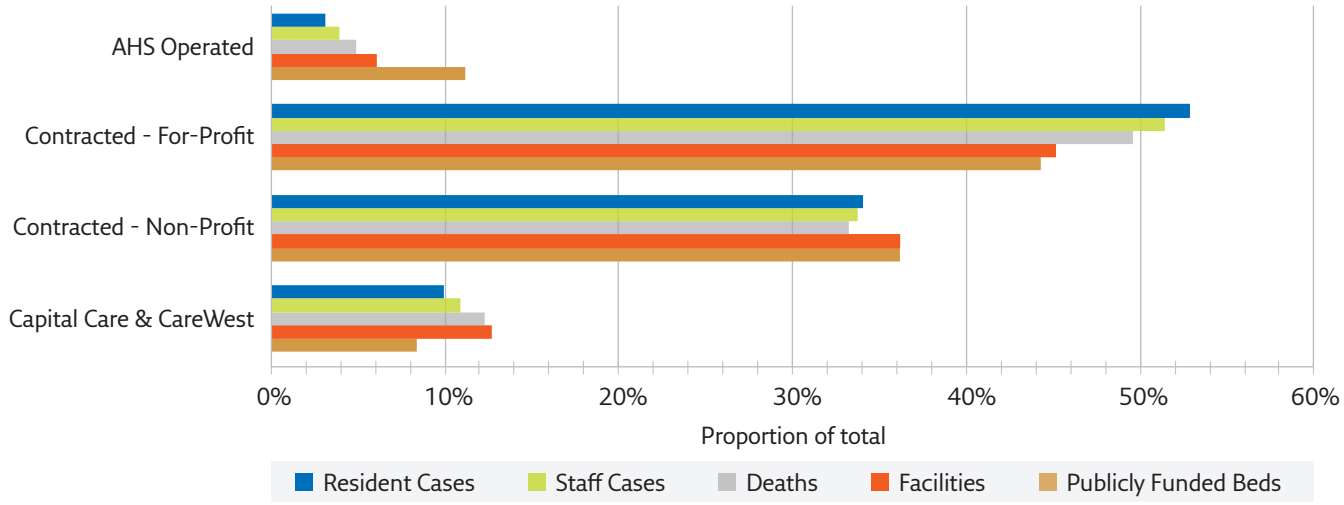
	Continuing Care Cases	Continuing Care Deaths	Publicly Funded Continuing Care Beds	COVID-19 Community Cases
North	5%	5%	8%	7%
Central	3%	2%	15%	7%
South	2%	2%	11%	5%
Calgary	36%	35%	33%	38%
Edmonton	54%	56%	33%	43%

While rural and remote continuing care facilities experienced fewer COVID-19 cases and deaths, outbreaks in these smaller communities and facilities presented significant challenges. Many facilities in rural zones do not have access to the depth of resources that larger operators in larger areas do.

The analyses of COVID-19 outcomes by operator type prepared by Alberta Health and AHS noted several relevant factors which complicate any simple of analysis of results by operator type. They note facility size, age, and design as complicating factors, as well as the important relationships between community spread and facility operator type. We analyzed this data looking just at the Edmonton and Calgary zones.

COVID-19 Continuing Care Cases and Deaths[60]
Proportion of Total Facilities and Beds to Proportion of Total COVID-19 Cases and Deaths, by Operator Type
Edmonton and Calgary Zone Only

March–December 2020



[60] In this graph, we provide information on COVID-19 outcomes along with the number of facilities and publicly funded beds as a comparator to give the reader a sense of proportionality. We note that some contracted facilities have additional spaces within their facilities beyond just the publicly funded ones reported in this data, which may skew an understanding of proportionality on this basis.

A case fatality rate is a common measure of how severe a disease is by asking: "Of those who caught the disease, how many died?" We compared case-fatality rates between continuing care residents and different proportions of the broader population in Alberta for the period of March to December 2020.

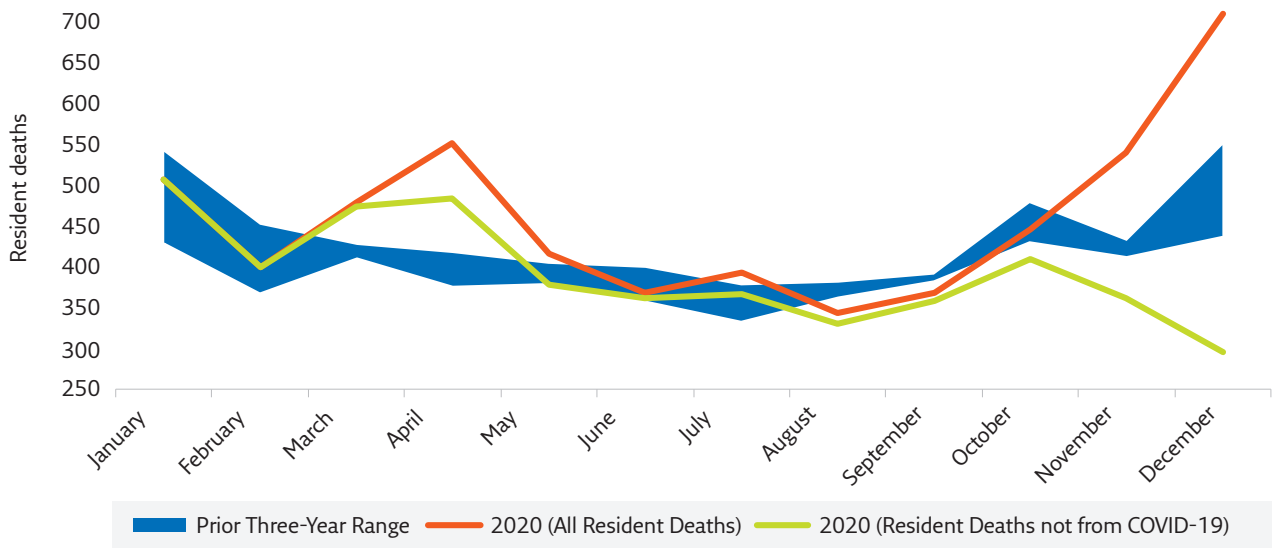
Alberta COVID-19 Cases, Deaths and Case Fatality
March–December 2020
Continuing Care vs. All of Alberta

	Continuing care residents	All of Alberta			
		80 and over[61]	70 and over[61]	Under 70	All ages
Cases	4,529	4,143	7,911	95,332	103,243
Deaths	1,037	983	1,292	238	1,530
Case fatality	22.90%	23.73%	16.33%	0.25%	1.48%

Looking at what is called "excess mortality" is another common measure of the impacts of a pandemic on a defined population. It compares all deaths in a period to an average or a range from previous, normal periods. As we expected, in Alberta we saw that during waves one and two there were more deaths than in the prior three-year range. However, when we adjusted the total deaths to remove known COVID-19 deaths we found that, after the first two months of COVID-19, deaths not directly caused by COVID-19 in facilities were often below the prior three-year range.

All Continuing Care Resident Deaths in Facilities

2020 vs. Prior Three-Year Range



[61] We include the sub-populations of "80 and over" and "70 and over" from the overall Alberta population as comparators. We include 80 and over because approximately half of continuing care residents in Alberta were 80 years of age or older in 2020. We include 70 and over because nearly 90 per cent of continuing residents in Alberta were 70 years of age or older in 2020. The reader should understand that these comparative sub-populations *include* continuing care resident illness and death within them. It is important to remember that residents in continuing care facilities need to be cared for in facilities in the first place because they have cognitive impairment, are too frail, or are otherwise unable to safely care for themselves or be cared for in the community. These factors increase their risk of COVID-19 causing mortality.

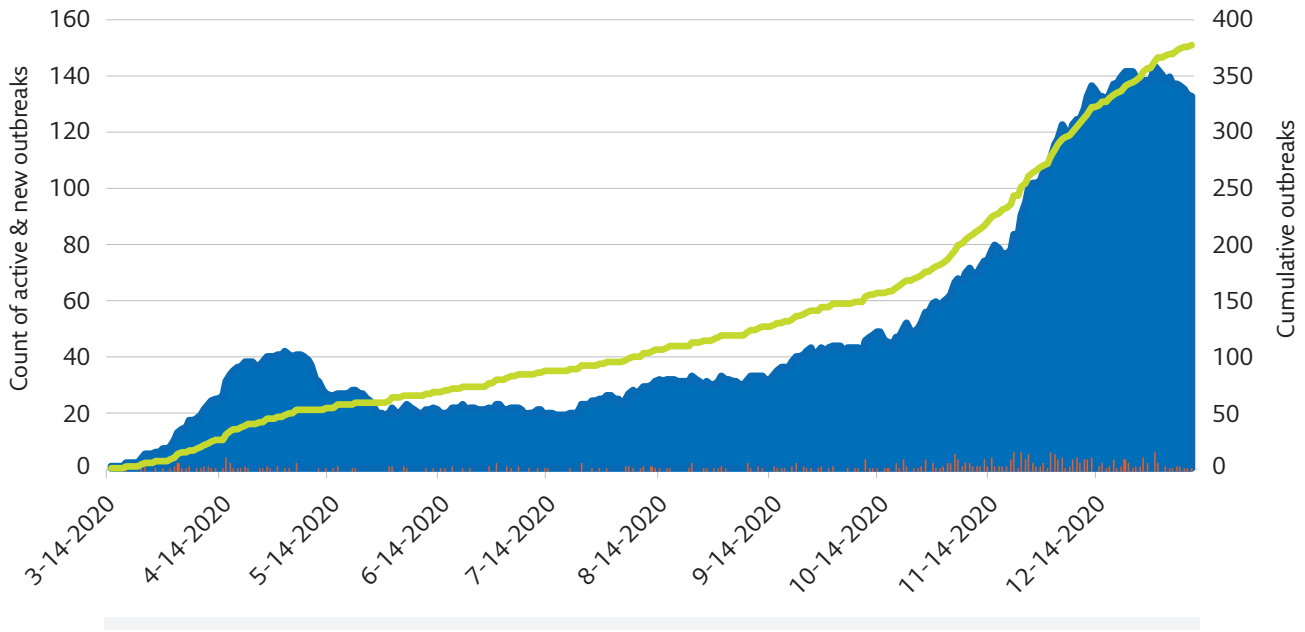
Facility outbreaks

Alberta Health began publicly reporting COVID-19 outbreaks in Alberta on April 21, 2020. The public-facing reporting defined an outbreak as two or more COVID-19 cases linked to a location. Internally, Alberta Health defined a COVID-19 outbreak for continuing care as any one case linked to a facility. For our report we used Alberta Health's internal definition and data reflecting an outbreak as one or more cases linked to a facility.

379 continuing care facility outbreaks started between March and December 2020. For a 44-day period between October 22 and December 4, 2020 there was at least one new continuing care outbreak starting each day.

COVID-19 Outbreaks in Continuing Care Facilities

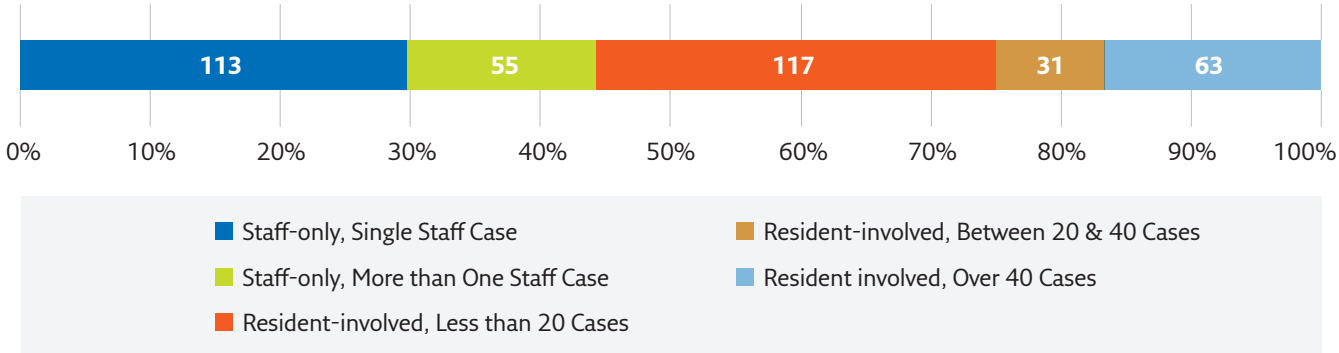
March–December 2020



Because Alberta Health defined even one case to be an outbreak, many of the 379 outbreaks were relatively small scale—nearly half impacted a few facility staff and did not involve residents.

COVID-19 Outbreaks in Continuing Care Facilities
Outbreaks by Staff vs. Resident Involvement and Scale

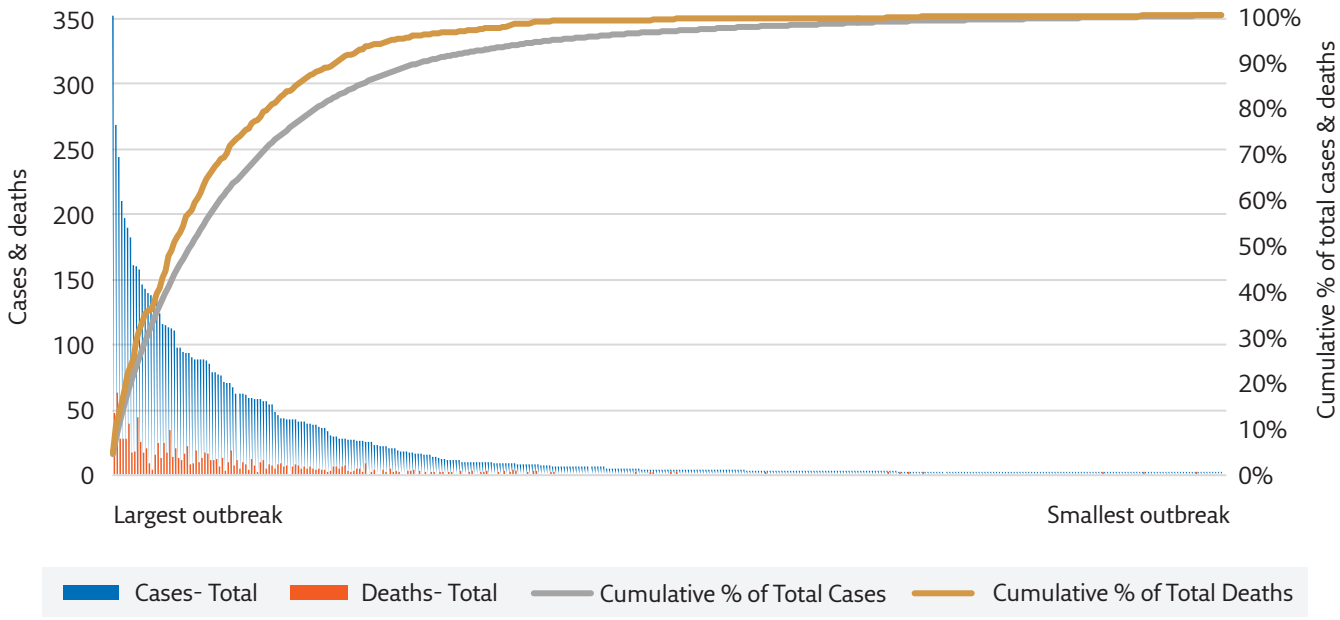
Outbreaks Starting March–December 2020



A small number of large outbreaks were responsible for most of the COVID-19 cases in continuing care facilities. The 25 largest outbreaks caused half of all cases and 54 per cent of all deaths.

COVID-19 Outbreaks in Continuing Care Facilities
Impact of Large Outbreaks on Total Cases and Deaths

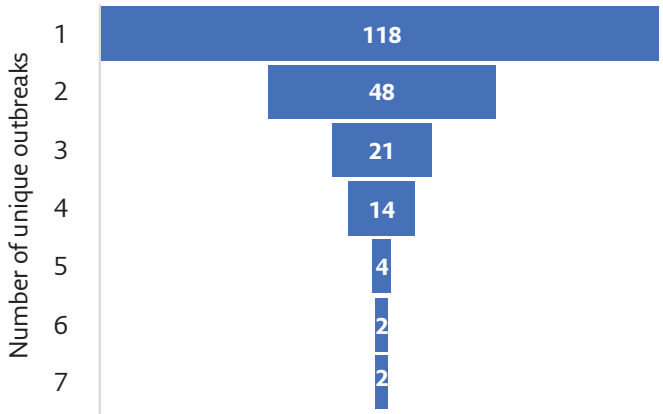
Outbreaks Starting March–December 2020



Of the 355 continuing care facilities operating at March 31, 2020, 209 experienced at least one outbreak between March and December 2020. Just over half of these 209 facilities experienced only one outbreak. 22 facilities experienced four or more separate outbreaks. Two facilities experienced seven unique outbreaks in the 10 months between March and December 2020.

COVID-19 Outbreaks in Continuing Care Facilities
Facilities with Outbreaks by Number of Unique Outbreaks Experienced

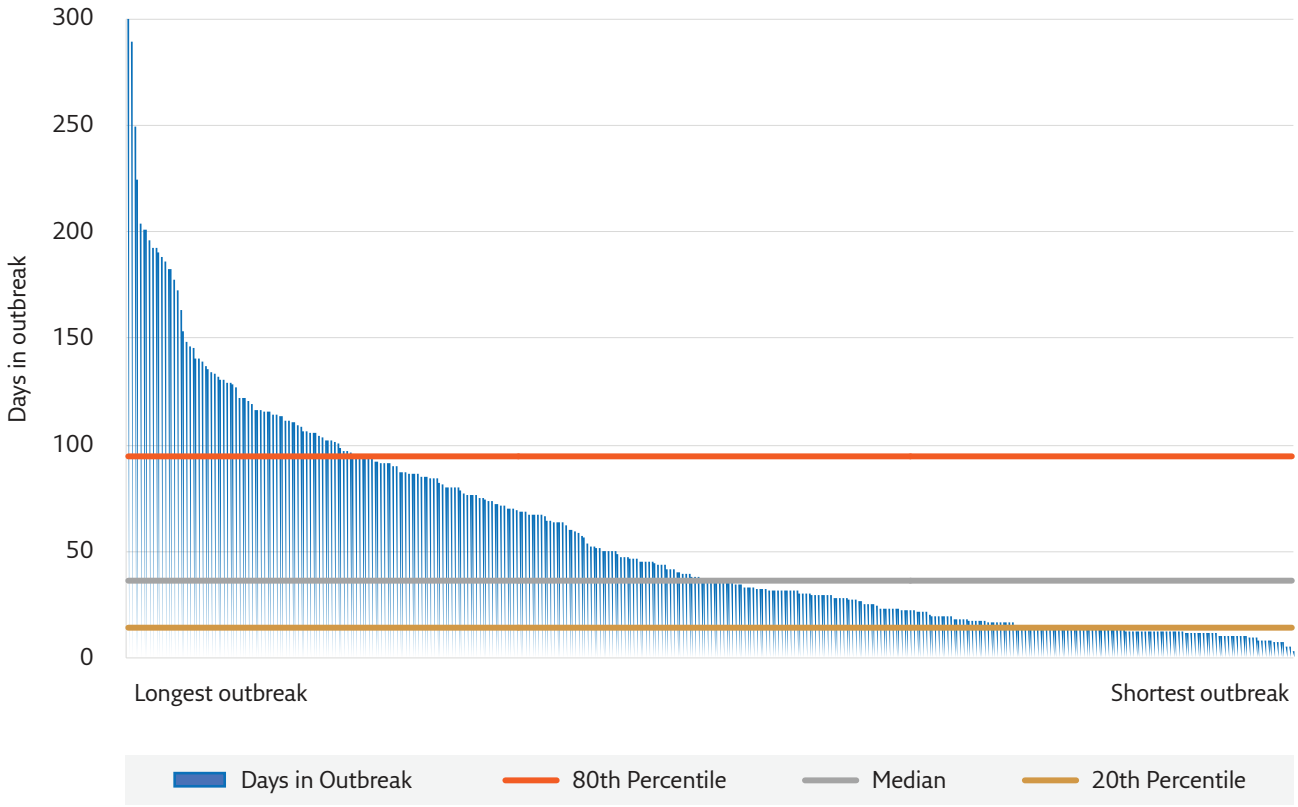
March–December 2020



Alberta Health considered an outbreak to be active until 28 days after the last person diagnosed with COVID developed symptoms.[62] Half of the outbreaks lasted 36 days or less. Four out of five outbreaks lasted less than 94 days. The longest COVID-19 outbreak lasted 300 days.

COVID-19 Outbreaks in Continuing Care Facilities
Outbreak Durations

Outbreaks Starting March–December 2020



Between March 14 and December 31, 2020, Alberta continuing care facilities spent a total of 13,863 days on outbreak status. If all of these outbreak days occurred at a single facility, the outbreak would have lasted 38 years.

[62] In situations where the outbreak comprised a single staff member, the outbreak could be declared over as early as 14 days after they last worked at the facility.

Appendix D: Continuing Care Facility COVID-19 Compliance Inspections

AHS and Alberta Health COVID-19 Facility Inspections

Organization	AHS	AHS	AHS	AHS	Alberta Health
Inspection program	Site Preparedness Assessments (SPA)	Quality Monitoring Visits (QMV)	COVID-19 Controls Inspections	Infection Prevention and Control (IPC) Immediate Response	Executive Officer Inspections (EO)
Umbrella program	AHS Continuing Care Quality Monitoring Program				N/A
Functional area responsible	Environmental Public Health	Provincial Continuing Care Audit Team	Environmental Public Health	Provincial Infection Prevention and Control	Compliance and Monitoring Branch
Personnel specialty	Public health inspectors	Continuing care health service standards	Public health inspectors	Infection prevention and control clinical specialists	Clinical auditors and inspectors
Evaluates compliance against	Custom checklist on preparedness for COVID-19 outbreak	Select health service standards, CMOH Order requirements, and IPC requirements	CMOH Orders	IPC guidelines and best practices	CMOH Orders
Focus areas	Preparedness, resident care	CMOH Order compliance, resident care, outbreak management	CMOH Order compliance	IPC practices and outbreak management	CMOH Order compliance
Inspection trigger[63]	Facility not covered by other inspection, lower risk	Elevated risk score, may or may not be in outbreak	COVID-19 outbreak	COVID-19 outbreak	Higher risk, COVID-19 outbreak

[63] We note there are many possible risk-based triggers for inspections, and this row represents the most common or distinct trigger. AHS zone management was critical in funneling information to inspection groups to identify potential risk and triggers.

AHS and Alberta Health COVID-19 Facility Inspections

Inspection announced in advance?	Yes	Yes	Yes	Yes	No
Formal follow-up on findings	No, feeds into risk scoring and other inspections	Yes	Yes	No, follow-up possible if determined necessary	Yes

Appendix E: Recommendations from AHS Internal Reviews

Below we provide all recommendations made in the three 2020 outbreak analysis reports completed by AHS.

Wording is verbatim unless we needed to abridge for length. Abridged recommendations are denoted with an asterisk (*).

April 2020 report	August 2020 report	September 2020 report
Theme: Pandemic Plans		
R1. Apply the COVID-19 Congregate Settings Report findings, recommendations, high priority considerations and additional considerations to the operational processes of how AHS supports and responds to all preparedness and outbreak activities within congregate sites. C3. Implement a standard COVID-19 preparedness checklist including information for families. * C20. Consideration should be given to developing and implementing a COVID-19 EMS Assess Treat and Refer (ATR) Response for all sites that phone 911. * C21. Additional considerations for inclusion in the COVID-19 care pathway such as increased safety checks for residents taking potentially harmful drugs, identifying resident care equipment, maintaining same staff, etc. * C28. Further to Consideration 21, there is a need to understand and recognize the health impacts on families and loved ones as it relates to COVID-19 CMOH Orders, including impacts of social isolation and visitation restrictions.	R1. Pandemic staffing plans should include redundancy and contain strategies to respond to several outbreak scenarios and varying levels of staffing requirements including staffing above baseline. R2. Pandemic plans should be modified to more clearly address the key risks related to COVID. * R3. Assurance that pandemic staffing plans can be activated on short notice and that staffing levels are monitored closely at the site prior to and throughout any outbreak is required.	P1. Provincially, identify all required foundational elements of a site preparation plan for COVID-19. Site plans to be assessed against these elements to ensure that appropriate preparations are made in case of an outbreak at a site. P2. Each zone to create a step-by-step plan for outbreak management for sites in their zone that identifies tasks, roles and responsibilities based on the standardized foundational elements as per Edmonton Zone example. IP2. A standing policy should be established that AHS always stock sufficient PPE to supply contracted operators and that we rapidly resupply these operators when they have supply issues. IP3. Implement increased high touch cleaning requirements for all sites or units with dementia residents and/or semiprivate spaces.

April 2020 report	August 2020 report	September 2020 report
Theme: Pandemic Plans		
C29. Consider the sustainability of the dedicated operator liaison through all phases of the pandemic. C30. In the 'post wave 1 strategy' consider changes to the existing home care and social support models to enable a sustained and quality response through all waves of the pandemic and into the future (as per recommendation 2). R31. Create a task force dedicated to addressing financial impacts for all parties (Government, AHS, Providers, and Residents) to inform the development of recommendations for AHS and government supporting, response, recovery and sustainability.		
Theme: Proactive planning		
R10. Improve the availability and transparency of data including comparator data with other provinces. Where possible, utilize AHS analytic resources to improve the accuracy, timeliness and analysis of data related to the current state and modelling. C11. Consider the impact of the suspended programs on subsequent phases and plan for expansion of replacement activities (virtual socialization, groups with reduced numbers, volunteer phone calls) that some sites are already providing. C14. Consider restricting access to facility immediately on notification of COVID-19 presence in community i.e. disease screening, one visitor policy, suppliers deliver to outside docks only, etc. * C15. Reconsider the visitor restrictions in light of continuous masking and future impacts. Ethics involvement should be considered.	R4. Proactively hire and train comfort care aides. * R5. Cohorting all staff as much as possible in advance of an outbreak assists with reducing transmission and includes care, dietary and housekeeping staff. R6. Implementing a staffing model with consistent resident assignments prior to an outbreak is essential. This will enable staff to identify subtle changes in resident condition and streamlines the contact tracing process. R7. Develop a proactive resident-centered plan to reduce medication administration burden in the event of decreased staffing levels due to COVID. *	IP1. Increase Infection Control Professional resources to enhance IPC practices, provide PPE mentoring, and participate in monitoring reviews, (including contracted and partner sites). IP4. AHS should maintain pandemic stock (e.g., PPE, hygiene, cleaning supplies) at all times.

April 2020 report	August 2020 report	September 2020 report
Theme: Proactive planning		
C22. Remodel the COVID -19 wave specific to congregate care environments – Examine what the new probable reality may be and pivot thinking to meet the needs of clients/residents during a potential "slow burn" scenario. Following this, develop a 'post wave 1 strategy' with a focus on seniors and vulnerable populations. Additionally, consider changes to the existing home care and social support models to enable a sustained and quality response through all waves of the pandemic and into the future. * C23. Need to re-assess if limiting home care is the right approach now that the projection models show a "slow burn" vs a "high peak" for AB. This may have longer term negative consequences post wave 1. C24. Develop Restorative/Respite/ Recovery Community Support Space operational/staffing/logistics plans as part of Surge Capacity strategy. *	R8. Visual Care Plans should be developed and available in the event of an outbreak to assist staff who may or may not be familiar with residents provide safe, quality care. R9. Resident Goals of Care Designations should be reviewed for all residents at a site to ensure they are current and resident wishes are known should an outbreak occur.	
Theme: Testing		
C8. Consider pro-active testing for all residents entering the facility as more information becomes available on the utility of swabbing asymptomatic individuals. C9 Consider putting a proactive plan in place for point of care testing if/ when technology becomes available.	R10. Providing on-site asymptomatic staff testing during outbreaks at regular intervals increases the accessibility for staff, ensures more timely access to testing results and an overall increase in the number of staff who are tested. R11. Obtaining consent for asymptomatic resident testing should be completed once, ensuring the consent is for the entire length of the pandemic. R12. Additional staff resources may be required to assist with resident and staff testing to manage the significant workload and increase the timeliness of testing.	M3. Implement routine swabbing of asymptomatic staff, students, physicians and residents in an outbreak. Frequency TBD based on risk assessment. M4. Continue 14 day additional precautions/isolation and asymptomatic testing of new residents as per CMOH Orders M6. Expedite and fully resource testing and contact tracing for seniors care environments. M7. Provide on-site asymptomatic staff testing during outbreaks to increase accessibility for staff and an overall increase in the number of staff who are tested.

April 2020 report	August 2020 report	September 2020 report
Theme: Testing		
	R26. As the incubation period for the elderly is not well understood, there may be value in including time intervals (i.e. every 1-10 days) for asymptomatic screening during COVID-19 outbreaks where cases continue to be detected in the outbreak guidelines for future outbreaks.	
Theme: Compliance monitoring		
	R13. Communication between operators, AHS, and Alberta Health needs to be streamlined to ensure higher risk sites are identified. * R27. All stakeholders need to understand the triggers for escalation of concerns, an approach to respond to concerns on a timely basis and to report on sites of concern and actions required. R28. Audits, inspections, and follow-up visits need to be completed on a timely basis. * R29. Audits, inspections and onsite supports at outbreak sites need to be revisited when there is a significant increase in positive residents and staff. * R30. Alberta Health and AHS need to work closely together to ensure that the two organizations are exchanging and jointly reviewing audit, inspection and monitoring information (outbreak status and response) in a timely and consistent manner.	M1. Analyze first round of SPA/QMV assessments, make needed modifications to the assessment forms, conduct consecutive rounds of assessments, including staffing timesheet audits.

April 2020 report	August 2020 report	September 2020 report
Theme: Staffing		
C12. Consider the impact and costs of new staffing models and interventions in long-term care facilities. Engage IPC to lead and coordinate efforts to safely introduce additional supports including volunteers and non- healthcare staff to support the response. C19. Ensure plans have adequate staffing strategies that may include review and documentation of unexplained absences, assigning COVID-19 suspected or confirmed staff to non-people contact, and restricting AGMP to one location in facility only and fewest staff as possible. * C25. Use of volunteer resources in facility guidelines should be developed, currently significant limits of essential visitors has resulted in volunteer resources restrictions	R14. Continuing care operators must inform AHS operations proactively of staffing issues that are anticipated, and immediately when unanticipated staffing challenges are experienced. R15. Enhanced housekeeping staffing is recommended to complete the additional environmental cleaning that is required during a pandemic. * R16. Active physician involvement on site is required to effectively support resident care during the outbreak. * R17. Enhance education and communication to staff about asymptomatic testing and minor symptoms. * R31. Alberta Health should remind all service providers/operators that staffing shortages affecting continuation of service delivery/care must be reported to Alberta Health and AHS. R32. AHS needs to develop zone-based plans for staffing supports that can be readily mobilized. R33. Consideration should be given to Alberta Health and Alberta Labour having discussions with unions to create agreements for 12 hour shifts during outbreaks.	S1. Operators to develop pandemic staffing plans prior to an outbreak based on the phase of pandemic/ outbreak response to manage resident care and ensure sufficient staff are available to provide safe, quality care. This will include a requirement for an outbreak supplemental staffing plan including redundancy that is ready to implement if staffing is suddenly impacted. S2. Zones to review and ensure that site pandemic staffing plans are reasonable, actionable and will support needs should a site have an outbreak. S3. Review staffing issues and models, especially position types, compensation, education, etc for HCAs. S4. Work with contracted providers using a multi-skilled worker staffing model to ensure site is providing sufficient staffing levels for both care and accommodation (e.g., housekeeping, laundry, and dietary activities). Ensure support functions are resourced appropriately outside of care funding.

April 2020 report	August 2020 report	September 2020 report
Theme: Infrastructure		
	R18. Facilities with a high percentage of semiprivate rooms that do not allow for safe physical distancing should have reduced occupancy. Alternatively, an external location to relocate the first positive case immediately may be advantageous. * R19. Consider designating private room(s) at each site as a temporary quarantine location for new admissions. R35. Eliminate shared occupancy beginning immediately with 3-4 bed ward rooms followed by a risk based approach to all double occupancy.	IS1. Eliminate fan use at outbreak sites. IS2. Eliminate shared occupancy for rooms of 3+ residents, followed by a risk-based approach to eliminating all double occupancy. Review option of capacity RFEOI with an initial focus on reducing shared occupancy rooms on secure (dementia) units where more active residents may pose challenges for IPC. IS3. Proactively eliminate fan use at all sites.
Theme: Outbreak management		
R2. Focusing central leadership and improving coordination of all quality-of-care activities (multiple government and AHS teams) occurring to ensure sites are supported effectively and resident risks related to poor health outcomes (not just COVID-19 specific) are identified with integrated strategies implemented to reduce/prevent harm. * C4. Consider the impact of this new policy (Continuous Masking) on the previous visitor restrictions. With this in place consideration should be given to understand if visitor restrictions be reduced further, and could volunteers be re-introduced into the sites to help reduce social isolation and assist care staff as appropriate. C13. Consider additional guidance related to transitions and movements including ensuring a COVID appropriate evacuation process is in place, restricting movement to essential diagnostic therapeutic only, etc. *	R20. Reinforcement of Enhanced Cleaning Processes as standard practice as mandated by CMOH Order 23-2020. R21. Those sites with higher percentage of semi-privates and the high-risk populations described above should have high touch cleaning standards increased to a minimum of 6 times per day and this should be in place at all times, not only when the site is on outbreak. R22. Those sites with higher percentage of semi-privates and the high-risk populations described above should have consideration of resident screening proactively completed twice daily. R23. Ensure that all staff on all shifts, including care and support staff (housekeeping, laundry, dietary, etc.) receive ongoing education regarding IPC and PPE required practices.	P3. Implement single occupancy temporary isolation rooms for new admissions. P5. Reassess visitation within the parameters of CMOH Orders and identified site specific risk. IP5. Reinforce Enhanced Cleaning Processes as standard practice as mandated by CMOH Orders. Need to assess the ability within current resources to ensure this occurs. M2. Increase AH and AHS care monitoring, and AHS leadership and response oversight/support as needed to identified at risk sites, whether ongoing or during outbreaks to follow-up on various audit results (e.g. AH, CCHSS Audits, SPA visits, Quality Monitoring Visits, IPC Audits) and increase support for outbreak management in all continuing care settings.

April 2020 report	August 2020 report	September 2020 report
Theme: Outbreak management		
C17. During an outbreak or potential outbreak, and if not already in place, treat all residents as COVID-19 positive until swabs prove otherwise. R18. Ensure capacity of new outbreak response site team cross all geographies in the province to support multiple sites at one time. Expand scope and reach of teams with virtual technology and phone when possible.	R24. Consider the use of cloth reusable gowns to reduce PPE demand and waste. R37. Communicate to operators about the funding decisions regarding outbreak costs to encourage them to make proactive decisions to be ready for an outbreak. * R38. Each zone develops and implements a collaborative plan for outbreak management. R39. Continuing care contact tracing must be fully and appropriately resourced.	
Theme: Specific considerations for residents with cognitive impairment		
C26. Establish a system of calls/ skype etc. to isolated seniors from family and friends or "pen pals". C32. AHS to encourage all seniors 85+ and vulnerable populations who do not have an AHS case manager (CM) to contact AHS continuing care coordination offices. Consider AHS to take these people on as home care clients, so that they have direct access to a CM in case they have symptoms or they need help. This would include disabled adults who may be dependent on a caregiver who could become ill. *	R25. Develop a comprehensive, pragmatic strategy for management of residents with dementia once an outbreak has been declared. This will require significant input from operations and likely require additional resources to implement.	M5. Develop detailed guidance for cognitively impaired residents with appropriate mitigation of infection risk including at the site and unit level for this population.
Theme: Staff supports		
C27. An increase in distress, feelings of loss, grief, guilt, and depressed mood will be felt by healthcare professionals, especially in sites where there is a higher number of residents/staff who acquire COVID-19 and die. Enhanced supports and safety measures should be considered to be developed and implemented.	R34. A plan is required for supports for staff to help deal with anxiety/ fear, and physical and emotional toll of caring for residents during an outbreak to keep staff well and able to work. *	

April 2020 report	August 2020 report	September 2020 report
Theme: Communication		
C6. Ongoing communication around the Continuing Care connection website, single email and the single point of contact for operators. C7. Consideration be given that every congregate site be risk assessed and that higher risk sites be appointed an AHS contact that works daily with screening—Opportunity to reduce call volumes to the 1844 line. R16. Optimize the operations of the 1-844 line and promote a culture of patient safety and transparency.	R36. Timely sharing of information amongst operators, AH, AHS needs to be reinforced.	P6. Share timely and detailed information amongst operators, AH, AHS.
Theme: Leadership and risk management		
C5. Implement ongoing monitoring of the impact of this policy (Single Site) on the overall workforce and ensure the outcomes continue to reduce overall risk inclusive of the care risks due to availability of staff. *	R40. The unique risks related to COVID in the continuing care sector along with potential risk mitigation strategies should be shared amongst operators, Alberta Health and AHS to enhance the ability of all sites to respond to an outbreak. R41. Consider options for management of issues that arise in the absence of a declared Public Health Emergency and strategies required to put necessary supports in place.	P4. Conduct in-depth epidemiological studies to measure the risk of illness or death in an exposed population compared to that risk in a matched, unexposed population. Refinement/revision of prospective risk assessment tool based on this retrospective analysis of outbreak data.
Theme: Other		
C33. Ensure a comprehensive approach is in place for protecting correctional facilities and work camps.		

Appendix F: Major Events and Developments After the End of Our Scope

December 14, 2020 →	Alberta receives the first shipment of Pfizer Vaccine
December 17, 2020 →	Rapid testing expanded to LTC facilities, rural hospitals, and homeless shelters
December 30, 2020 →	AHS contracts Manpower Staffing Services to recruit and deploy 1,600 "Comfort Care Aides" to facilities
December 30, 2020 →	First COVID-19 vaccine administered to LTC resident
January 4, 2021 →	Government of Alberta opens Facility Based Continuing Care review (FBCC) survey
January 18, 2021 →	First COVID-19 vaccine dose provided to all publicly funded LTC/DSL residents
February 9, 2021 →	Rapid testing expanded to asymptomatic LTC staff
February 19, 2021 →	Second COVID-19 vaccine dose provided to all publicly funded LTC/DSL residents
February 24, 2021 →	Active COVID cases in LTC drop 92% compared to December
March 3, 2021 →	GoA Budget 2021 includes $154M budgeted for new Continuing Care Capital program – aimed to increase continuing care capacity
March 3, 2021 →	GoA Budget 2021 increases Continuing Care budget by $200M
March 15, 2021 →	HQCA releases "COVID-19 in Continuing Care" study. It reports resident/family LTC/DSL experience during March – July 2020
March 30, 2021 →	AH provides AHS $20M grant to modernize select AHS and AHS subsidiary continuing care facilities
April 8 & 9, 2021 →	Town hall with CMOH, DSL/LTC staff, residents, families to discuss easing COVID-19 restrictions in Continuing Care
April 22, 2021 →	GoA introduces *COVID-19 Related Measures Act* (shields operators/AHS from COVID-19 related lawsuits)
May 10, 2021 →	Continuing care COVID-19 restrictions relaxed: indoor social visits permitted, outdoor social visits expanded

May 31, 2021 →	GoA contracted firm MNP releases the Facility Based Continuing Care (FBCC) review report, 42 recommendations issued
June 17, 2021 →	*COVID-19 Related Measures Act* receives royal assent
June 29 & 30, 2021 →	Town hall with CMOH, DSL/LTC staff, residents, families to discuss lifting continuing care COVID-19 restrictions
July 1, 2021 →	Almost all COVID-19 restrictions lifted per GoA Open for Summer Plan
July 1, 2021 →	Alberta Health halts admissions to continuing care rooms where there are already two residents
July 13, 2021 →	Additional continuing care COVID restrictions lifted (visitors, dining, recreation, screening)
August 21, 2021 →	Alberta Health reports only five multi-resident rooms remain in publicly funded continuing care sites
August 30, 2021 →	Third vaccine dose begins for continuing care residents
August 31, 2021 →	AHS requires all employees to be fully vaccinated by October 31
October 19, 2021 →	Masking for continuing care facility visitors re-implemented
October 22, 2021 →	AHS extends employee vaccination deadline to November 30
November 24, 2021 →	Continuing care experiences fourth COVID-19 wave: more than 1,400 cases report but lower mortality
December 9, 2021 →	Alberta Health releases phased plan to end single-site order by February 16
December 20, 2021 →	AHS increases restrictions for visitors/support persons at continuing care facilities
December 23, 2021 →	CMOH reports omicron variant cases doubling every 2 – 3 days
January 10, 2022 →	Due to limited testing capacity, eligibility criteria for PCR testing made stricter to only permit specific groups for testing
January 14, 2022 →	Continuing care experiences fifth COVID-19 wave: highest active cases to date; but milder sickness & lower mortality
February 8, 2022 →	GoA removes Restriction Exemptions Program and other restrictions as part of staged plan to remove all COVID-19 measures
February 16, 2022 →	Alberta Health lifts the single-site order. Staff are now permitted to work across multiple LTC or DSL facilities

Appendix G: Audit Responsibilities and Quality Control Statement

Management of Alberta Health and Alberta Health Services is responsible for the health system response to COVID-19 in continuing care facilities.

Our responsibility is to express an independent conclusion on whether Alberta Health and Alberta Health Services has done so.

All work in this audit was performed to a reasonable level of assurance in accordance with the Canadian Standard on Assurance Engagements (CSAE) 3001—Direct Engagements, set out in the CPA Canada Handbook—Assurance. The Office of the Auditor General applies Canadian Standard on Quality Management 1, which requires the Office to design, implement and operate a system of quality management, including policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. The office complies with the independence and other ethical requirements of the Chartered Professional Accountants of Alberta Rules of Professional Conduct, which are founded on fundamental principles of integrity and due care, objectivity, professional competence, confidentiality, and professional behaviour.

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