

REVERA PANDEMIC REPORT

A Perfect Storm

The COVID-19 Experience for Revera
and the Long Term Care Sector



This report is dedicated to Revera's employees, residents, their families, and everyone on the front lines of the senior living sector who are working through the worst pandemic in living history.

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Foreword

Thomas Wellner

Chief Executive Officer, Revera Inc.



Early in January 2020, I met with our Senior Leadership Team in the boardroom of Revera’s Mississauga, Ontario head office to prepare for our annual risk management review exercise. Like a corporate fire drill, the review involves an assessment of our readiness in the face of hypothetical events or situations that might impact our business operations – including a pandemic. Little did I realize at the time that just a few weeks later we would kick off our live pandemic preparedness plan in real time.

By mid-February, as the novel coronavirus was taking a brutal toll in Italy, we began holding daily emergency meetings to ensure the stability of the care, support and service we provide to 20,000 seniors in long term care homes and retirement residences in Canada. Based on the COVID-19 experience in Europe, and what we’d learned from SARS nearly two decades ago, we also focused our efforts on doing our part to protect Canada’s hospitals, given the understandable concerns that they might run out of beds, ventilators and overall surge capacity.

As a result, during the initial phase of the pandemic’s first wave, we relied on public health directives and our normal influenza outbreak protocols to both screen and restrict entry into our seniors’ communities. We believed these measures could block the introduction of this new pathogen and control its spread. But they could not. We now know that community spread and asymptomatic transmission had devastating effects.

In the trying months since, we – along with the rest of the world – have learned a great deal about the challenges of containing this highly infectious virus, lessons that have come by way of so much mental and economic hardship, and a tragic loss of life around the globe. In Canada, we now know that most of the country’s COVID-19 deaths occurred

among seniors living in congregate centres. It is a painful reality that has pushed many questions to the forefront, questions I personally feel must be urgently answered to make sure this never happens again.

For this reason, we at Revera (which also provides care and accommodation for 46,000 seniors in congregate homes across the United States and the United Kingdom) felt compelled to review why the pandemic had such a lamentable impact on the lives of our residents and staff in the first wave. Its toll on our frontline care teams, and the grief we share with residents and their families, drove us, as an organization, to take extraordinary steps of self-reflection.

Among these steps was the decision we made in early June to make the unorthodox move of engaging a panel of independent experts from diverse fields of health care to explore what happened in our homes during the first wave, and how we could prevent the pandemic from causing further suffering. With the fight against the virus still fresh in our minds as the second wave loomed, we chose to open our internal files and data to outsiders – almost in real time – so that the solutions they prescribed could be applied immediately to counter the ongoing threat of COVID-19.

To ensure the report findings and recommendations were written in a way that made the panel's findings accessible to the public, Revera employees, residents and their families, the company engaged noted health journalist Carolyn Abraham to draft the report based on the consultations with the experts. Dr. Bell, in his role as Chair of the Expert Advisory Panel, retained final editorial control, working directly with Ms. Abraham to finalize the report.

My hope is that the panel's observations and recommendations offer as much insight as possible to allow us to respond and restore confidence in congregate living as a highly relevant choice for seniors to consider as they age. There can be little doubt about the need for the services assisted living provides: In Ontario alone, more than 39,000 people are currently waiting for one of the 79,000 long term care beds in the province.

The enormous number of seniors waiting for a place in a congregate setting also fuelled our decision to take the unusual step of sharing this report from Revera's External Advisory Panel outside of Revera for the greater good. Our hope is that other operators across the sector may learn from our experience and find value in the panel's recommendations, and that the families of our residents, as well as the broader public, may gain a deeper understanding of how the pandemic affected the long term care sector, and of our determination to improve through the wisdom of hindsight.

From my perspective, the tragic consequences of the pandemic must be regarded as a once-in-a-century opportunity to accelerate changes both inside and outside our residences to better the systems in which the sector operates. After all, I believe we all share the common desire to make sure that the highest quality of life is considered paramount at any age.

This pandemic has caused us all to re-examine what we value and prioritize in our lives. I lost a grandmother myself during these past months, and the emotional void of being unable to comfort her in person as she passed, or to celebrate her life together with others, has been painful. Our family hopes to gather with her ashes in Fortune, PEI, next year, to pay tribute to her.

My own experience of this personal loss has added to the empathy and huge respect I have always had for the frontline staff who support and comfort the seniors who call Revera home, especially during this year of relentless stress. In conversations that I've had with several staff members, it's clear that one of the toughest aspects of the pandemic has been the mental toll of the measures taken to boost infection control. Lockdowns and beyond have impeded the ability of staff to connect with residents and their families as they usually do, hampering even the opportunity to grieve together in person. In normal times, the comfort and support we provide our residents is through touch of hands and arms, and through visible smiles. Our care teams across the Revera network are the backbone of the intimate relationships we share with our residents.

I would like to take this opportunity to thank our staff for their selfless efforts as they continue to support our residents and their families, and also to express deep gratitude for the time, energy, insight and guidance that our panel experts freely gave in preparing this report. I would also like to acknowledge our residents and their families and thank them for their support during their difficult time.

Through the eyes of an operator that experienced the COVID-19 fight head-on, within the context of the healthcare and social systems in which we all exist, my sincere hope is that readers will find this report illuminating and helpful as the pandemic rages on. We appreciate the recommendations made here and look forward to implementing them.

Be well. Be safe. Don't forget to wash your hands.

Tom Wellner

Introduction

Dr. Bob Bell

Chair, Expert Advisory Panel

My mum spent the last years of her life cared for at Revera's Leaside Retirement Home. Sadly, she had suffered a series of strokes that left her bedridden and with grave difficulties communicating. My dad tried heroically to keep her at home with home care, but she needed two people to help her in and out of her bed and wheelchair. She clearly required the congregate living assistance that an organization like Revera could offer.

Dad moved across the street from the Leaside home so he could visit her twice daily without fail. On weekends we would push her wheelchair to the local coffee shop, where Mum would enjoy watching her family chat even though she could not contribute much to the conversation.

My dad also spent the last months of his life in the Leaside home as he went through the final terrible stages of Lewy body dementia. We were surprised that he passed away before Mum, but she left us not long after, with her family around her bed as she died.

When COVID-19 struck a devastating blow to the Canadian seniors' congregate living sector, several personal reflections surfaced for me. How difficult the visitor restrictions would have been for Dad, as they would have put a stop to the daily visits that defined his last years and expressed his love for his wife. How frightened Mum would have been, missing Dad and finding herself isolated in her room and seeing caregivers wearing masks.

But most of all, I thought about how terrible it would have been for Grace (a pseudonym), the care leader of the team on Mum's floor. Grace and her team cared for their residents with personal conviction. The thought of being unable to provide the best care for her residents – without provincial testing and without support from the barricaded health system surrounding her – would have devastated Grace.

So when Tom Wellner, Revera's CEO, asked me to help organize an Expert Advisory Panel (EAP) to review the Revera experience during the first Canadian wave of COVID, it was easy to say yes. We were fortunate to recruit national and international experts in public health, infection prevention, infectious disease, geriatric care, labour/management principles and architectural design to serve on this EAP.

These esteemed panel members did their jobs well. They demanded transparency from Revera's team, and they got it. Revera's governing board was well represented at panel meetings. The board's representative insisted that the panel should push management for everything the panel needed to critically evaluate the Revera experience during the first wave of this pandemic.

When, after nearly three months of investigation, the experts presented their advice in the dry, clinical and scientific prose that we would expect, Revera commissioned a respected journalist and author to create this document: an accessible report that is mainly for the families of seniors who had been so isolated from their loved ones while COVID-19 turned all our lives upside down.

Although I've worked in the Canadian health system for more than 40 years as a surgeon and an administrator, I nonetheless learned a tremendous amount from chairing this panel of wise experts, who gave their time generously and provided Revera with important advice. The panel met bi-weekly and it was always difficult to complete our agenda in the time allotted, since every member completed their homework between meetings and came ready to contribute.

The answers as to how this COVID tragedy occurred in Canadian seniors' congregate settings, and specifically in long term care homes, are complex – but the reasons for why it happened are clear. In the health system's preparations for COVID, seniors' homes were forgotten in the push to ensure that our hospitals were not overwhelmed. Our public health response was fragmented and confusing – especially in Ontario, where our Revera panel focused most of its attention. The province did not initiate testing of residents and staff in our homes until months following COVID's arrival, after most of the deaths in seniors' home had already, tragically, occurred.

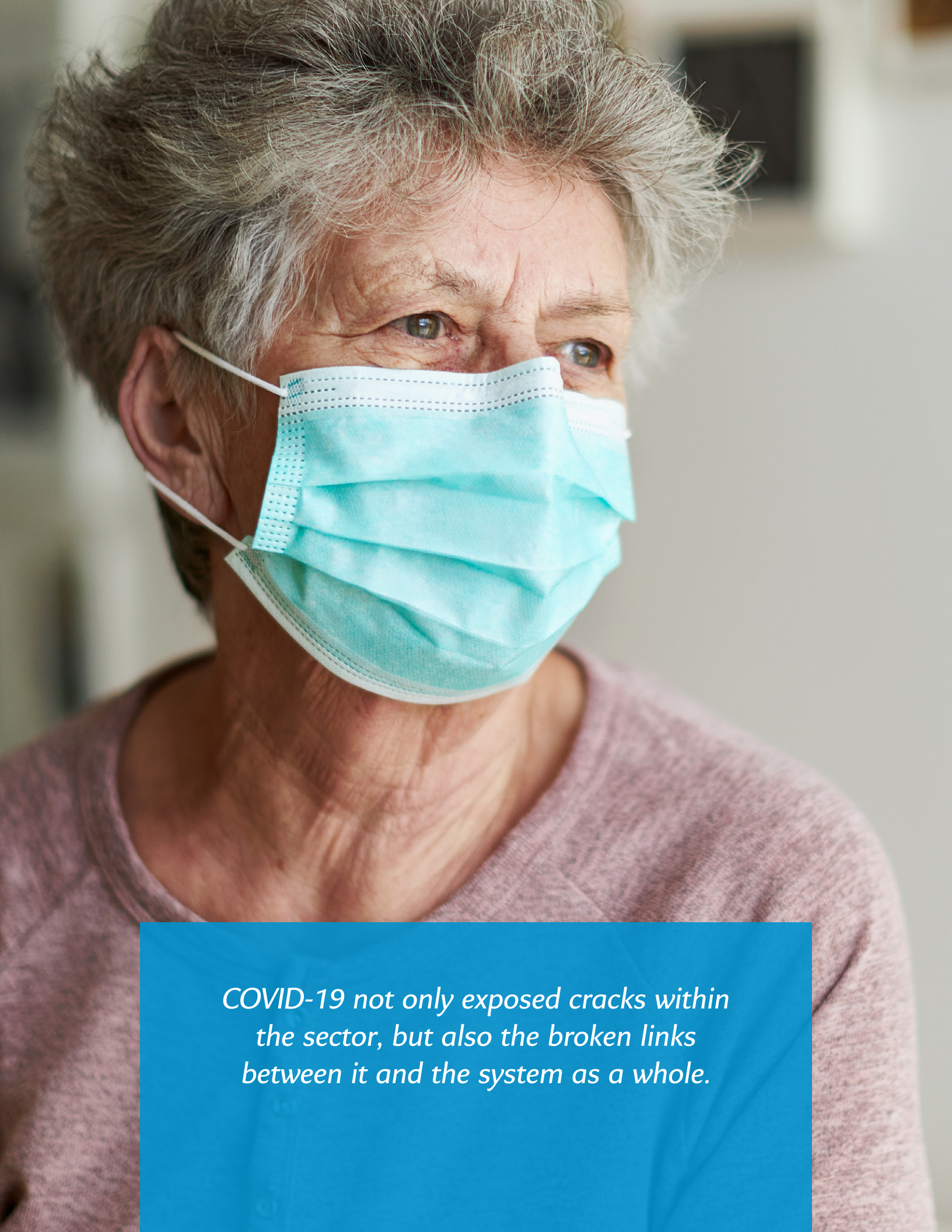
Finally, COVID exposed longstanding weaknesses in Canadian seniors' care. Some homes suffer from shortages of personal support workers and nurses, and many of our buildings were proven to be unsafe for congregate care. Managing an insidious virus that spread, often asymptotically, both in the communities where personal care staff lived and in the four-bedded rooms where some residents slept, was an impossible task.

This report was being finalized as Canada heads into a second COVID wave and outbreaks are returning to seniors' homes. We hope this report will be useful to Revera and other operators, and we know that the excellent team at Revera will continue to learn and improve day by day in the company's continuing response to COVID. We understand that no management team can prevent this virus from getting into a seniors' home if the disease is already highly prevalent in the communities where staff live. We hope the report will be useful to residents and families in understanding the challenges that COVID has presented.

But most of all, I hope this report is read by Revera staff and all the healthcare workers who put their lives on the line caring for our loved ones during COVID. The vast majority of these people went to work worried for their health and their families' health. Having experienced how Grace's team looked after my parents with such personal commitment, I am also sure that their fears were magnified by the moral distress they would experience when they could not adequately protect their residents.

We need to do better for our parents and grandparents. We also need to do much better for the people who look after them. From my perspective, this report is dedicated to all staff in Canada's seniors' homes, the residents they care for each and every day, and the families that support them. Thank you for what you do.

Dr. Bob Bell
December, 2020



COVID-19 not only exposed cracks within the sector, but also the broken links between it and the system as a whole.

CHAPTER ONE:

A Perfect Storm

COVID-19 made its international debut in the early weeks of 2020. First impressions can be powerful, and North America's initial sense of the mysterious new coronavirus came by way of images half a world away. They depicted hospitals utterly overwhelmed – infected patients clogging emergency departments, filling intensive care units, forcing health officials to find ever more beds to treat the sick. In Wuhan, China, where the pathogen first emerged, cameras captured the rapid construction of a hospital in just 10 days in January. In Italy, northern area hospitals ran out of beds, life-saving medical equipment and morgue space to house the dead.

From Milan to Madrid, and then from Manhattan, pictures told the chilling story of a crisis to come and indelibly shaped Canada's pandemic response. Coast to coast, the Canadian health system rallied and reorganized to preserve the capacity of its hospitals. It cancelled elective surgeries, sequestered personal protective gear for hospital staff, stockpiled ventilators for hospital patients, emptied wards and waited in fear for a crush of patients. But the crush never materialized – at least not in the hospitals.

While efforts had been singularly focused on preparing hospitals for the worst, the virus was silently spreading unchecked through Canada's long term care and retirement homes, where deaths among seniors would dwarf mortality in the rest of the Canadian population.

According to the National Institute on Ageing, between March and September, COVID-19 killed more than 7,000 seniors living in long term care homes and retirement residences, accounting for nearly 80 per cent of the country's deaths – a proportion far higher than other wealthy nations in the Organisation for Economic Co-operation and Development. During the pandemic's first wave, 16 long term care staff members also lost their lives.

The catastrophic toll has sparked a national reckoning on the state of long term care in Canada, driven in part by the pressing need to understand all that went wrong. Why was it that the frail elderly, some of society's most vulnerable members, were least protected? Why were long term care residents and staff so hard hit by this terrible contagion?

In an effort to answer these questions, Revera Inc. – one of the country's major operators of long term care homes and retirement residences, a company privately owned by a federal public service pension plan – assembled an independent panel to investigate the circumstances that led to the COVID-19 crisis in its long term care homes, most of them in Ontario. With unusual access to the company's internal data and public health information, the 10-member panel – made up of experts in geriatrics, public health, infectious disease, infection control, labour relations, architecture, health care policy and health care design – found that the contributing factors are highly complex.

Well before the pandemic struck, families of long term care residents, unions and industry associations across the country had been advocating for more funding to address staffing and infrastructure challenges in long term care. But long term care in Canada is not a sector that can operate in a silo.

Home operators – private, not-for-profit and municipal – must rely on critical investment, input and co-operation from across the health system to function well. COVID-19 not only exposed cracks within the sector, but also the broken links between it and the system as a whole.

This translated into a series of systemic breakdowns that allowed the virus to flourish in long term care. Among these breakdowns was a sector-wide shortage of personal protective equipment to shield staff and residents from transmitting and contracting infection, along with a woeful lack of laboratory testing throughout the pandemic's first wave to identify those who were infected. At the outset, it was also not understood that people without symptoms could spread the disease, and that symptoms could vary so dramatically. Managing outbreaks within residences was further complicated by inconsistent and sometimes conflicting instructions from public health authorities.

The pandemic also exacerbated the sector's pre-existing problems and historic challenges. Among them are the outdated long term care facilities with multi-bed shared rooms and communal bathrooms that fuelled the spread of COVID-19. As the pandemic stretched on, the sector's shortages of personal support workers and nurses intensified and challenged the industry's efforts to contain the spread of the virus. No-visitor policies also contributed to residents' overall physical and psychological decline. In many homes, doctors who had been contracted to care for residents were

often absent, while health authorities in various regions discouraged the transfer of infected residents to emergency departments so local hospitals could maintain their capacity to admit COVID patients from the community. Yet it was well known from the outset that seniors, with their advanced age and likelihood of having other conditions, were at high risk of the worst outcomes.

Together, these circumstances combined to create a perfect storm of sickness and death in nearly a quarter of Canada's long term care and retirement residences, amounting to outbreaks in 1,287 sites, with the majority of these in long term care, across 10 provinces in the spring first wave.

Health authorities in various regions discouraged the transfer of infected residents to emergency departments

If there is anything to be gained from this tragedy, it is the opportunity to learn from the forces that shaped it. Affecting meaningful change will not only require reform within the long term care sector, it will demand closer collaboration across the broader system – between home operators, local and provincial governments, public health units, hospitals, physicians and their governing bodies, health care and personal support workers, their unions, and the families who have entrusted the care of their loved ones to long term care.

The sector is currently home to more than 425,000 seniors at 5,800 sites across Canada, a number poised to rise substantially as the country's older population is expected to increase by nearly 70 per cent over the next two decades. As COVID-19 so ruthlessly demonstrated, the need for change – not least to shore up public confidence in long term care – has never been more urgent. The next wave, the next pathogen, or the next pandemic may be just a breath away.

UNPROTECTED

When the first known case of COVID-19 reached Canada on January 25, the national stockpile of personal protective equipment, or PPE, was dwindling. Canada was hardly alone. Several countries discovered the cupboards were nearly bare, that their supplies of medical-grade masks, face shields, gowns and gloves could not keep pace with the expected demands of a highly contagious new virus.

The global shortage resulted in overburdened supply chains, lengthy back orders, and rationing. As doctors, nurses and other healthcare workers scrambled to fashion their own protective gear, federal officials in Canada made it clear that whatever PPE was available would be prioritized and reserved for frontline healthcare workers in hospitals.

But in the pandemic's early days, the broad need for personal protection was misunderstood: Specifically, masks were considered unnecessary for people without symptoms of COVID-19. Echoing the stance of the World Health Organization, Canada's chief medical officer of health recommended on March 30 that masks be worn only by the sick, or those caring for them. The rationale offered was that masks do little to prevent transmission from asymptomatic people and might actually increase the risk of infection if they are used improperly, or induce people to be careless or

complacent. That advice contributed to the early view by health officials in Canada that it was unnecessary for seemingly healthy staff members in some long term care settings to wear masks.

[...] earlier decisions to prioritize the protection of in-hospital staff would prove disastrous for long term care and retirement residences

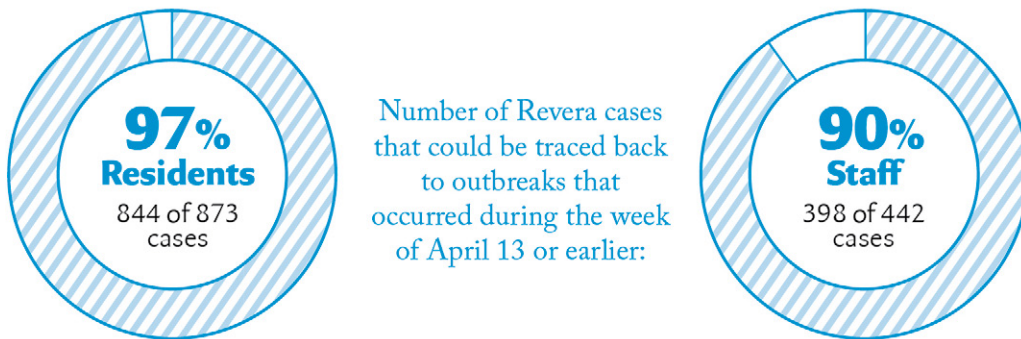
Science, however, is an ever-evolving field, and just one week later the federal government reversed its guidelines on masks. Enough research had accumulated to prove that asymptomatic people could indeed transmit the novel coronavirus, and – based on studies of the major outbreak aboard the Diamond Princess cruise

ship – could spread it with startling frequency. That knowledge eventually expanded to include evidence that pre-symptomatic people could also pass on the virus, and that while symptoms may involve coughing, sneezing and fever, they might also present as stomach upset, headache, a loss of taste or smell, or even blackened toes – a list so varied that a number of COVID-19 cases likely went undetected early on.

On April 6, Canada's chief medical officer issued the new recommendation that everyone should wear non-medical face masks in public spaces and wherever social distancing was not possible, again safeguarding medical-grade PPE for frontline health workers. On April 8, the Public Health Agency of Canada issued a recommendation that all staff working in long term care settings be universally masking as well. However, earlier decisions to prioritize the protection of in-hospital staff would prove disastrous for long term care and retirement residences, which generally only keep a three-day PPE supply on hand as the pandemic preparedness legislation requires. Yet efforts to secure more, in anticipation of COVID-19, were unsuccessful. Revera, for example, heard from vendors and health officials as far back as February that PPE stock was reserved for hospitals and would be made available to a long term care home only if it was already experiencing an outbreak.

While universal masking became mandatory in Ontario long term care homes on April 8, the actual same-day delivery of PPE to long term care homes did not take effect until April 13, five days later. By then, COVID-19 had gained a strong and stubborn foothold in long term care homes across the country.

Revera's data shows that 97 per cent of its residents' infections – or 844 of its 873 cases in long term care, which was much more severely impacted than the company's retirement residences – could be traced back to outbreaks that occurred during the week of April 13 or earlier. The same timeline applies to 90 per cent of infections among its staff: 398 of the company's 442 employee cases owed to outbreaks that started before mid-April.



The numbers add up to a sobering conclusion. Since only essential caregivers were permitted at long term residences after March 9, the Revera Expert Advisory Panel found that the virus was most likely introduced into homes by staff members and essential caregivers who had contracted the infection in their communities (an issue further explored in Chapter 2). But in March, infected staff members without symptoms, or those who were pre-symptomatic, had little reason to suspect they were carriers and appropriately went to work – often unprotected – to care for the elderly.

Meanwhile, the decision of public health authorities not to prioritize long term care residents and staff members for COVID-19 testing in March and April marked another missed opportunity to contain the virus. Additionally, when the world learned the virus spread asymptotically, only one province where Revera operates, Ontario, heeded the industry's calls for surveillance testing every two weeks for all staff (not just staff in homes in outbreak).

The drastic move became necessary in part because the loss of staff in long term care homes rose steadily as the pandemic stretched on. Some employee absences were due to infections among staff, and quarantines. Others missed work for the same reasons that kept employees home across the country, as children no longer in school were in need of supervision, or staff with underlying conditions felt they could not take the risk of catching COVID-19. But in a sector where recruiting and retaining staff have been longstanding challenges (an issue covered further in Chapter 4), the impact of losing personal support workers, nurses, cooks, cleaners and other crucial employees during outbreaks and lockdowns is difficult to overstate.

MIXED MESSAGES

With the growing case counts in long term care through the spring, various levels of government ministries, bodies, public health units, hospitals, long term care agencies and doctors issued advice, instructions, orders and recommendations in a bid to keep the crisis in check. But often the input was inconsistent and contradictory, triggering rounds of confusion that may have increased the risk of transmission.

Different residences in the same province, for instance, received different instructions from local public health units as to how long a staff member should be quarantined following a potential exposure to the virus. In Ontario, which has 35 public health units, a 14-day quarantine was recommended by one unit, while another suggested quarantining an exposed staff member for 28 days.

Similarly, conflicting instructions emerged around infection prevention and control practices. Staff at one Revera home, for example, received training from the region's emergency medical services personnel, only to be told a day later by the local public health unit that the instructions were incorrect and staff had to be re-trained according to its procedures.

One of the most critical and controversial areas of advice, however, involved efforts to create cohorts of residents. The aim was to separate the healthy from the sick and those suspected of being infected. But there was little consensus among public health units as to how Revera, as well as other operators, could achieve this, particularly in homes with few spare rooms, and homes with shared rooms that accommodated as many as four residents. The clashing instructions from various public health authorities resulted in multiple moves that increased the risk of spreading the virus and also contributed to residents' decline. An estimated 90 per cent of long term care residents have a cognitive impairment, and changes to their environment – seeing personal belongings packed away, for example – were often traumatic.

At the same time, enforcing rules around physical distancing, isolation, and infection control measures among residents with dementia – who are prone to wander, and unlikely to adhere to masking or strict hygiene practices – also highlights a fundamental gap in understanding the characteristics of long term care residents.

Managing outbreaks was further complicated by the scarcity of doctors at a time when residents most needed medical care.

IS THERE A DOCTOR IN THE HOUSE?

The pandemic altered the practice of medicine across the country, as online and telephone appointments between doctors and patients became common. The College of Physicians and Surgeons of Ontario, for example, recommended that family doctors deliver virtual care as much as possible to minimize the risk of spreading the virus and to conserve thin supplies of PPE. The College of Physicians and Surgeons of Alberta made a similar recommendation, advising its members to conduct physical examinations only when absolutely necessary, and to follow those exams with self-isolation if required.

Other provincial colleges governing family physicians took the same tack, and since most long term care doctors are family doctors, they tended to follow the advice. The Ontario Long Term Care Clinicians, a professional and advocacy organization whose members include medical directors and attending physicians in the province's long term care residences, also recommended that care to residents only be provided virtually. All this had a profound effect in limiting the availability of in-person doctor visits at long term care homes, where residents faced both the highest needs for medical care and the highest risk from COVID-19 infections.

Often, attending physicians under contract with homes to provide medical care did not visit, despite repeated requests that they do so, and their capacity to provide care virtually was often hampered by other factors. Some doctors, for instance, were unfamiliar with the online platforms needed to run appointments remotely. Elderly residents, meanwhile, found it difficult to participate in virtual consultations, especially when they were ailing and as staffing shortages grew more severe. Yet most long term care homes where physician attention fell short had little recourse to remedy the situation.

In Ontario, for example, the Long-Term Care Homes Act clearly spells out that each residence must have a medical director, and it details the duties and obligations of that position. This includes development, implementation and evaluation of medical services for residents, advising on clinical policies and procedures, after-hours care and on-call coverage, and communicating these expectations to attending physicians. But nothing in the Act cements the obligations of attending physicians, beyond the need for them to be available 24 hours a day either in person or by telephone. Neither are attending physicians required to have training or experience in geriatrics, palliative care, or infection prevention and control procedures, such as the safe use of personal protective equipment. The pandemic pushed these issues to the forefront.

When attending physicians explained why they would not visit their long term care homes in person, they cited fear as a major reason. Doctors felt they had inadequate training in infection control and in the use of personal protective equipment, and also

offered a range of personal reasons. A significant portion of long term care physicians are themselves elderly, having retired from their own family medicine practices, and they worried their advanced age, or an underlying condition, would increase their risk of serious infection. Some mentioned that they had an immune-compromised family member, which made them reluctant to enter a high-risk residence.

Meanwhile, some long term care home supervisors expressed concerns that physicians working at multiple homes might spread the virus from one affected site to another that had been COVID-free. Indeed, there are no limits on the number of homes or residents for whom an attending physician can provide care, how visits should be organized, or when or whether families should be included in care discussions. Approaches can vary from province to province, and even from home to home.

For long term care homes struggling to contain an outbreak, the absence of doctors was compounded by the lack of treatment options for sick residents.

At some sites, the medical director is the only physician on staff; at others, attending teams of 10 doctors or more provide rotating care or after-hours services. Retirement residences have even fewer requirements when it pertains to medical care; neither do they have any obligation to provide after-hours service.

For long term care homes struggling to contain an outbreak, the absence of doctors was compounded by the lack of treatment options for sick residents. Several hospitals and regional health networks discouraged long term care homes from sending infected seniors to hospital, especially if they were frail, suffered from dementia or were deemed unlikely to survive.

This left many residents to battle the disease in locked-down homes that were never designed to provide acute care, which meant going without the medications, oxygen and ventilators that might have eased their suffering or saved their lives.

AN EPIDEMIC OF LONELINESS

An unfortunate result of the sector's efforts to contain the virus by restricting visitors was the separation of long term care residents from their loved ones – husbands, wives, children, grandchildren, friends. Restricting all visitors, including essential family caregivers, was the earliest measure undertaken to safeguard long term care residents from infection. It was a restriction that applied to all homes, regardless of whether or not they had an outbreak, and it occurred at a time when the familiar faces of staff were also disappearing, along with employees in general.

It did not take long before loneliness and feelings of isolation and depression took their own toll. Experts note that the mental health effects of the extended lockdowns have proven to be as damaging as the virus.

Family members also endured considerable turmoil in not being able to see their loved ones or care for them, particularly if the loved one had become ill. They expressed understandable frustration and early in the pandemic's first wave, many began considering options to withdraw their loved ones from long term care and retirement homes. Since many Canadians were working reduced hours or not working at all, some families did opt to temporarily bring their loved one home, particularly as governments relaxed rules around discharge policies and long term absences during the pandemic. But most Canadians recognized that the needs of their aged family member remained too complex for them to manage outside of an assisted-living or long term care setting.

Yet, in retrospect, it may be that a critical level of attention was lost with the prohibition of family visits. Family caregivers might have been able to detect minimal or atypical symptoms of COVID-19 in their loved one early enough to manage the resident's disease sooner and more effectively. At the same time, it might well have prevented the physical, cognitive and psychological decline of seniors essentially shut away from the people who brought them joy.

Recommendations

The Expert Advisory Panel recommends the following steps be taken to address issues explored in this chapter that contributed to the impact of COVID-19 in long term care homes in the first wave:

- 1 A several-day supply of PPE must be maintained at every long term care home. Central regional inventories should be established to provide supplementary supplies for homes that require extra supplies during an outbreak.

Revera Response: Recommendation already implemented.

Early on in the pandemic, Revera was a contributor to and a founding member of the Canadian Alliance to Protect and Equip Seniors Living (CAPES), a volunteer-based initiative that sources, supplies and shares PPE across the seniors' living sector in response to the urgent need during the COVID-19 pandemic. Moreover, Revera actively engaged in a vigorous purchasing strategy to secure PPE from local, national and international suppliers with an expenditure commitment of \$15.5M to date, with further continuous investments contemplated. Revera warehouses a minimum six-month supply of PPE, reviews thresholds and makes adjustments as needed. Additionally, Revera utilized government supply during outbreaks. In Ontario, each long term care home also has an eight-week supply from the government stock.

- 2 Consistent provincial public health standards and directives should be established for each provincial health system. Ontario in particular must align the varied approaches taken by its 35 individual public health units. The varying messages received from the various units resulted in confusion in the Ontario long term care sector.

Revera Response: Recommendation is directed at the broader system rather than Revera.

While this recommendation is not under Revera's control, Revera continues, at the regional and provincial levels, to discuss and clarify the messaging and varied approaches that are creating confusion in the sector.

- 3 Each province should establish a regional network for its long term care sector with established relationships between the region's hospitals and long term care homes. A closer relationship

should allow for infection control consultation to be provided by hospitals to long term care homes. It would also allow for regular consultation from long term care homes for hospital specialists (see below).

Revera Response: Implementation of recommendation is in progress.

Long term care homes have been paired up with hospital supports in Ontario as part of the pandemic plan. Revera’s internally developed Pandemic Playbook directs homes to reach out and plan with their local hospital partner during the pandemic.

- 4 Each long term care home should have an established medical leader who will attend at the home on a regular basis and when requested by the home’s staff. Consideration should also be given to establishing a nurse practitioner role in the home to collaborate with the physician in ensuring an on-site clinical resource for patient assessment. Appropriate PPE must be maintained for clinical use. It should be evident to clinical leaders that virtual patient assessment cannot entirely replace in-person assessment of older residents with acute respiratory illness.

Revera Response: Implementation of recommendation is in progress.

Each home in Ontario is required by the Long-Term Care Homes Act (LTCHA) to have medical leadership in the form of a medical director. The role of the medical director is clearly outlined in the Act and includes oversight of the attending physicians. Physicians must attend the home weekly, as per their service agreements with Revera. Physician services must be available 24 hours/day. Revera’s chief medical officer is establishing expectations for in-person assessments, as appropriate, during outbreaks.

- 5 The relationship between regional hospitals and long term care homes should establish availability of the hospital’s medical and surgical specialists to support the home’s clinical teams in managing residents. These residents may be transported to the hospital for assessment, may be assessed virtually while in the home or may be seen in consultation by hospital specialists visiting the long term care home.

Revera Response: Recommendation is directed at the broader system rather than Revera.

As part of a broader strategy, some regions are developing “hub and spoke” models of care that provide hospital support to long term care homes/retirement residences, including access to specialists such as geriatrics and palliative care. This will be an ongoing strategy that will require provincial processes to establish a consistent approach.

- 6 Four-bed resident rooms in long term care homes must be eliminated. Shared bathrooms must receive special attention in infection control and cleaning.


Revera Response: Aspects of this recommendation are not practical in the short term.

The recommendation related to shared resident rooms is in progress as we have been eliminating four-bed ward rooms allowing for more physical space and better distancing protocols. However, it is not possible to eliminate shared bathrooms in our existing older long term care homes. While we can eliminate shared bathrooms in redeveloped long term care homes (this issue does not apply to retirement residences, where all residents have private bathrooms), we are ensuring that shared bathrooms receive enhanced cleaning in all settings to reduce the infection risks.

- 7 Designated family members and/or friends should be recognized as “essential caregivers” with the same virus screening protocols and testing used for staff. These essential caregivers must also receive IPAC (infection prevention and control) training.

Revera Response: Implementation of recommendation is in progress.

We have recognized essential caregivers in all provinces and our sites have reached out to family members who are interested in becoming designated as essential caregivers. All visitors and essential caregivers go through our screening protocols. We are about to direct homes to ensure that the designated essential caregivers receive IPAC training (this is now a requirement in Ontario). In Ontario, all family visitors, essential family caregivers and agency staff will now require proof of a recent negative COVID-19 test result in order to enter our buildings.



Yet even after the first outbreaks began to claim lives in long-term care [...] the testing of residents remained totally inadequate.

CHAPTER TWO:

Untested

The pandemic shut down wide swaths of the world in 2020. In Canada, where mask-wearing and physical distancing would become a way of life, schools, stores, restaurants and companies closed for months. With no vaccine to protect people from catching the novel coronavirus, and no reliable cure or treatment for it, prevention has been the only means available to stop its spread from one human host to another.

Yet a wholesale social lockdown ranks as the last resort of prevention efforts, given the economic, psychological and social hardships it brings. Only when community spread is so extensive that nearly everyone must be isolated from each other does it become unavoidable. Lockdowns and shutdowns are an admission that far more targeted, palatable efforts have failed to contain the virus.

At the heart of any successful containment strategy is the ability to quickly identify those who are infected. It allows people with COVID-19 to be properly cared for and isolated. It makes it possible to trace their recent history and contacts, and quarantine those who may have caught the virus from them. It also reveals where disease is spreading, enabling communities to step up prevention efforts if cases rise. None of this can happen without tests to diagnose an infection, and, to date, testing remains the sharpest weapon humanity has in its war against COVID-19.

Scientists developed the first test for the new virus even before the pathogen was given a name. A lab-performed, genetic-based assessment, it continues to be the gold standard for diagnosing the disease. Canada used the technique to confirm the country's first known case on January 27, and each province since then has decided how best to roll out testing for its own populations.

Yet the Revera Expert Advisory Panel found that the vulnerable elderly living in congregate settings were largely overlooked in those decisions by provincial health-care systems. Early in the pandemic, although it was widely understood that long term care residents faced an extremely high risk of serious complications and death from COVID-19, and so had much to gain from testing, they and the staff who look after them, were not prioritized for testing within the system.

In Ontario, for instance, where COVID-19 had killed more than 1,800 residents by the end of August – a tally that accounts for nearly 30 per cent of all the country’s deaths in long term care – the testing strategy utterly failed seniors living in congregate settings. Testing in the province focused on people with symptoms who showed up at hospital emergency departments or the COVID-19 assessment centres that sprang up on hospital grounds. But the possibility of sending sick residents from long term care homes to be tested at these sites was limited by local health authorities, who discouraged the transfer of these residents in order to protect hospitals’ capacity to handle the expected surge in coronavirus patients from the community.

As a result, screening of residents and staff became the imperfect substitute. Screening is used to identify someone who may be unwittingly infected, or who may have mild COVID-19 symptoms. It involves querying the individual about potential contact with anyone known to have the virus, or about the presence of symptoms. In the early days, only three symptoms were assessed: fever, dry cough and shortness of breath. Screening for symptoms related to loss of taste or smell, muscle aches, fatigue, diarrhea or other gastrointestinal upsets started much later.

Before long term care homes and retirement residences restricted visitors in early March, screening questions also focused on a person’s recent travels. At the time, the prime concern was that the virus might enter a home by way of visitors who had been overseas. No one realized then that it had already begun its quiet spread through communities in Canada.

Yet even after the first outbreaks began to claim lives in long term care home and retirement residences – and infections could be traced back to community spread – the testing of residents remained totally inadequate. In part, this reflected a general shortage of the supplies needed to conduct the gold standard test in the pandemic’s early days, along with a lack of knowledge that the disease could be spread by those without symptoms.

Other than in Ontario – where the government introduced surveillance testing of staff and essential family caregivers and visitors for social reasons at the end of May in response to the industry’s request – low testing levels in long term care homes and retirement residences persisted throughout the pandemic’s first wave, while

botched logistics added to the problem. Public health's reporting of positive test results often took far too long. At one of Revera's long term care homes, samples sent to a public health lab for testing were lost; in another case, test results were returned with confusing and incomplete information, factors that impeded efforts to contain further spread.

Meanwhile, most of this occurred in a policy vacuum. Not until May 31, for example, did it become mandatory in Ontario for long term care home and retirement residence staff, and essential family caregivers, to be regularly tested – nearly three months after homes had been locked down. And not until mid-June did surveillance for the disease include routine testing for all staff and and essential family caregivers in long term care. By then, however, the worst of the first wave was over. The country was

reopening as cases declined, and the death toll in long term care had already passed its staggering peak.

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The industry advocated for surveillance testing of workers and residents as early as April. If this had occurred, infected residents could have been identified, treated and isolated sooner to prevent further spread to other residents and staff. Identifying infected staff members would have allowed them to receive faster medical care and kept them from continuing to work and spreading the virus further. Access to quicker testing

would also have revealed a home's rising caseload in time to recognize the urgent and critical need to improve infection control practices and boost training for staff.

In all, the COVID-19 catastrophe makes it clear that screening, testing and tracing must be as stringent in long term care homes and retirement residences as they are in the acute-care settings of hospitals. Improving both testing and infection control in long term care will demand time and investment. But enough meaningful steps can be taken in the short term to ensure that residents are better protected as the pandemic rages on.

A BLUNT INSTRUMENT

Screening seemingly healthy people for mild symptoms of infection can help curb the spread of any contagion. It indicates who might pose a potential risk, and who should undergo further testing. But screening lacks the precision of a diagnosis and in the

context of COVID-19, it's an especially blunt instrument: Up to 30 per cent of those infected with the new coronavirus have no symptoms, and, unlike most respiratory infections, the new coronavirus is a sneaky microbe that is highly contagious when people are pre-symptomatic. Studies find that infected people often spread it for two to four days before they start to show symptoms.

Screening older people for COVID-19 symptoms adds a layer of complexity. The novel coronavirus can produce dramatically different symptoms in different people, and among older adults, those symptoms tend to be highly ambiguous: They might sleep more or eat less, speak differently or not at all, become increasingly dizzy, confused or disoriented – all clues that can be easily missed or misdiagnosed in long term care settings, where 90 per cent of residents live with dementia or other cognitive impairments.

But family caregivers who might have noticed these subtle behavioural changes in their loved ones were no longer allowed to visit when disease first broke in long term care homes and retirement residences. At the same time, the number of personal support, nursing and healthcare workers familiar with the residents, who might also have been able to recognize vague signs of trouble, was dwindling as employees fell ill themselves and absences rose.

In Ontario, before March 12, screening of staff had been a passive undertaking. Employees were asked to stay home if they had COVID-like symptoms or felt unwell. But after that date, daily active screening became the norm with questionnaires and temperature checks. It proved, however, to be a preventive measure that simply could not measure up to the goal of containment. Staff members who caught the virus in their communities but were asymptomatic or pre-symptomatic slipped through these screening protocols and became the unwitting source of outbreaks in long term



care homes and retirement residences.

Yet with no diagnostic tests available to identify cases early, infected staff and residents often remained undetected until their illness was full-blown. By then, efforts to isolate sick residents from the healthy became increasingly challenging. Cognitively impaired residents, prone to wandering, were difficult to isolate, especially in homes that lacked the extra space to do so, and especially in outdated long term care homes where shared bedrooms and bathrooms were common (an issue to be explored further in Chapter 5).

By late April, the outbreaks had spiralled into a health management crisis, and one that underscored critical differences between the infection control standards of acute care settings like hospitals and chronic care environments like long term care homes. In hospitals, procedures to ensure the isolation of those infected, and practices to contain spread (such as using single rooms to isolate sick patients, intense cleaning and disinfection of common surfaces, frequent handwashing, and the safe, regular use of personal protective equipment – gloves, gowns, masks), are second nature and routinely audited. In contrast, given the different nature of long term care, homes have not historically had the same infection control practices in place as hospitals. While these practices were seen as appropriate in the pre-COVID environment, it became apparent that increased measures were needed to combat the spread of this novel, highly virulent disease.

Throughout April and May – when most infections and deaths were occurring in long term care settings – public health had limited capacity in their testing systems, and long term care residents were not prioritized.

The few exceptions involved those unusual instances when sick residents were transferred to hospital emergency departments for testing, and in homes where outbreaks became so severe that external supervisors – including the military and local hospitals – took over the home's management. Otherwise, in Ontario, it was not until early June that public health officials began visiting homes to provide regular testing to residents and staff in non-outbreak situations.

Long term care advocates – including home operators, doctors, residents and families – had pushed public health authorities to distribute diagnostic tests sooner. But the severe lack of testing was not unique to long term care; it was emblematic of a national shortfall. During the pandemic's first wave, testing lagged across Canada, as it did in several countries. The new virus had appeared without warning, and the capacity to detect it in the human body required a sudden and massive rallying of lab resources that few jurisdictions had on hand or could ramp quickly.

SHORTFALLS, BACKLOGS AND BLIND SIDES

At the end of January, the World Health Organization began shipping a quarter of a million test kits around the globe to diagnose COVID-19. But Canada was among the industrialized nations with the capacity to develop its own tests. It did so in mid-January, shortly after scientists in Wuhan shared online the genetic code of the novel coronavirus that had surfaced in their city.

Having the pathogen's precise genetic sequence is the foundation of the gold standard test for COVID-19. But taking the test can be an uncomfortable experience. A health-care worker wearing protective gear must insert and rotate a long, flexible brush-tipped swabbing device up into the nostril to the back of the throat to gather cells and mucus that may contain the virus. The samples collected by these nasopharyngeal swabs are then sealed in saline-filled containers and sent to a lab where they are analyzed for genetic traces of the virus.

The technique used in testing the collected sample is called PCR, short for Polymerase Chain Reaction. It involves the use of certain chemicals, known as reagents, formulated to bind to the specific genetic code of the virus being hunted. The reagents are added to the samples, which then undergo an automated series of temperature-changing cycles in highly specialized machines.

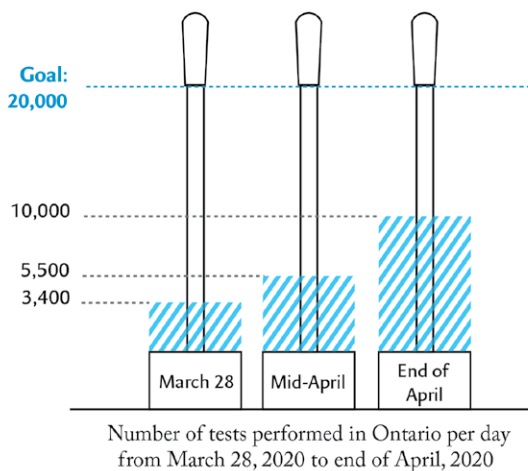
Unlike the double helix of DNA, which encodes instructions to build and operate an organism, the novel coronavirus has only RNA, a single-stranded molecule that conveys instructions. If the virus's RNA is present in a sample, the PCR process amplifies it a billion times over, like a molecular photocopier. A positive result means the viral RNA was found in the sample, and that the person it came from has an active infection. If no trace of viral RNA is found, the test result is negative.

But no test is perfect. Logistical problems can arise while collecting the nasopharyngeal specimen, or in labelling samples, processing them and reporting results. And while the PCR technique is lauded as the most sensitive and specific diagnostic available, it can fail if the virus does not happen to be present in the sample collected, or if the virus has yet to replicate in high enough concentrations to be detectable – which is a major cause of false-negative COVID-19 tests.

While the novel coronavirus is highly contagious, studies show that most people who have been infected will receive a negative result if they are tested the day after being exposed. This is because it can take several days for the virus to incubate and replicate in high enough quantities to be detected, even by a PCR test. In fact, false-negative results continue to be likely for about three or four days after an exposure. Not until eight days after exposure is the result most likely to be accurate.

At that point, roughly a week later, the chance of receiving a false-negative test drops to 20 per cent. Understanding this is critical in long term care homes, since a false-negative test may result in a resident who has been exposed remaining in a shared room, or continuing to eat in a common dining room and taking part in group activities, increasing the risk of spreading the disease further.

In rare cases, a PCR test can also return false-positive results. In a small portion of people who have had COVID-19, the gold standard test can continue to pick up genetic traces of dead virus for up to three months after symptoms have disappeared. While false-positives occur in less than one per cent of samples tested, in long term care it may result in residents remaining unnecessarily isolated or quarantined, causing undue emotional distress to them and their family. A false-positive may also prevent staff members who have cleared an infection from returning to work – further contributing to the chronic labour shortages in long term care settings which exacerbated the scope of outbreaks.



Even still, none of these issues with the leading diagnostic test for COVID-19 proved as devastating to the long term care sector as the simple lack of access to it. As with the shortage of personal protective equipment, resources for testing were prioritized for hospitals as demand dramatically outstripped supply.

When the pandemic was declared in March, the country was not only running low on the specific swabs needed to perform nasopharyngeal collections, but also the reagents required to run the PCR test for the new virus. Public health labs also faced a shortage of technicians,

capacity, and the specialized machines needed to test the sudden daily flood of samples they were receiving.

On March 28, a few weeks into the pandemic's first wave, Ontario's network of public health labs was performing only about 3,400 tests per day for the entire province, a mere fraction of its 20,000 tests per-day goal. The number increased to 5,500 tests a day by mid-April, and about 10,000 tests a day at the end of April, but that was still half the number public health authorities considered optimal for the size of the provincial population.

Meanwhile, as demand for tests continued to outpace lab capacity, the gap created backlogs and stalled the reporting of positive test results by days, and in some cases

a week or more. In turn, this delayed efforts to trace contacts, quarantine those who may have been infected and contain further spread.

The health system's testing woes continued to cause issues for the long term care sector. Not only did the lack of access prevent the timely diagnosis of residents and staff, the province-wide testing shortages also hid the fact that as early as March the virus was spreading widely in Canadian communities – communities where long term care staff worked and lived and became infected. If testing levels had been higher, they would have revealed that the greatest viral threat to long term care at the time was not from returning travellers, but rather from local spread of the contagion. Instead, the sector was blindsided.

Research conducted since has also found that COVID-19 outbreaks in long term care homes are likely to arise after the virus has become prevalent in the community outside its doors and particularly in those areas where its staff members reside. In fact, Revera's internal case tracking shows that when cases increased in the community, a similar spike followed in neighbouring long term care homes about two weeks later, essentially shadowing the trajectory of infection in the community.

In an effort to slow community spread, the World Health Organization recommends that lockdowns should be considered when the test positivity rate in a given area climbs above five per cent, or, put another way, when at least five per cent of a region's test results come back positive. By that definition, the whole of Ontario had teetered on the brink of utter disaster in the pandemic's first wave: 10 per cent of COVID-19 tests conducted in the province at the beginning of April were positive. On April 11, the positivity rate peaked at 20 per cent – meaning one in every five people tested was infected with the novel coronavirus. But it was the long term care sector, its residents,



staff and connected families that paid the highest price of not knowing the scope and location of viral transmission.

By the end of May, thanks in part to diligent physical distancing, improved testing capacity and mask-wearing, Ontario managed to dramatically reduce to four per cent the proportion of tests coming back positive, and that figure dropped to roughly one per cent in June.

Testing, or the lack of it, can clearly have a profound impact on the course of an outbreak when physical distancing is the only way to stall the spread of disease. The urgent issue on the horizon is how best to conduct a rapid, robust and accessible testing program for long term care homes and retirement residences, where residents face the greatest risk of dying from a pathogen so tricky to detect.

THE GOLD AND SILVER: A TALE OF TWO TESTS

The notion that the gold standard test to diagnose COVID-19 could be offered on a regular basis to the senior living sector is an impractical and unwieldy proposition. In Ontario alone, about 144,000 people live in long term care and retirement residences, which employ roughly an equal number of staff. To provide PCR tests for these 288,000 people on a bi-weekly basis would require labs in the province to perform 20,000 tests a day – a threshold it never came close to meeting during the pandemic's first wave, and a tally that doesn't include testing anyone else in Ontario.

While no other diagnostic so far beats the sensitivity or accuracy of a PCR test, the gold standard technique is too cumbersome for frequent use in long term care. It takes too long to be a timely or meaningful way to identify visitors who may be infected. A nasopharyngeal swab to collect samples for testing is also too uncomfortable for residents to undergo on a regular basis. As one Revera leader noted, many of its long term care residents who took the test suffered nosebleeds as a result. For healthcare workers who must don PPE to gather nasopharyngeal tissue samples, the test is both risky and time-consuming – samples have to be collected, properly labelled and shipped to a public health lab.

Results can also take far too long to be returned, particularly as testing demands rise with the reopening of schools and businesses. Reporting of results can also present challenges. When testing finally became available in long term care, paper-based test results were generally faxed to residences by the stack for staff to sort through and decipher. At one Revera home, a set of results came through the fax machine with only case numbers – no names – attached to the reports, leaving staff to puzzle over precisely who was infected and who was not.

For all these reasons, a rapid, point-of-care screening test would be much better suited to meet the unique demands of helping to diagnose COVID-19 in long term care homes and retirement residences. During the pandemic's first wave, none were available in Canada.

Unlike lab testing, which can take days to produce results and requires dedicated healthcare workers and technicians to perform, rapid screening tests – such as at-home pregnancy tests – produce easy-to-read visual results within minutes, and people can often perform these tests on themselves. Some rapid screening tests evaluate a saliva sample or throat swab for the presence of specific proteins (known as antigens) produced by the virus. If the antigens are found, the test is positive. Other rapid diagnostic tests screen samples for traces of viral RNA using a toaster-sized desktop machine that can produce results in about 15 minutes.

In October, Health Canada approved ID NOW, a version of this genetic testing device from the U.S.-based Abbott Labs, making it the first, and long-awaited, rapid point-of-care test to receive the national go-ahead for use in this country. Earlier in the year, the U.S. Food and Drug Administration had approved Abbott's BinaxNow, a rapid antigen diagnostic test, which may also eventually be available in Canada. Neither test is officially approved to detect COVID-19 in those who have no symptoms at the time of writing.

There is no doubt that rapid tests are generally less sensitive and specific than the gold standard lab evaluations – the false-negative rate can be as high as 30 per cent in some products. But what they lack in accuracy, they may make up for in speed, which could be critical to slowing the spread of disease in the future. At the very least, rapid screening can swiftly pinpoint who should have their results confirmed through the gold standard method. Not only would this lighten the testing load on over-burdened labs, it would also allow the long term care sector to finally wield its own on-the-spot detection weapon against COVID-19, independent of any government bodies or agencies.

NO MORE FLYING BLIND

In the face of a global pandemic that has claimed a million lives and counting, the availability of smart, swift and sustainable testing programs is essential to containing the spread of COVID-19. With no vaccine, treatment or cure currently available to even slow transmission of the novel coronavirus, a three-pronged containment strategy based on screening, diagnostic testing and contact tracing is the best hope of prevention.

If containment efforts fail, and community spread goes unchecked, a lockdown – and all the economic and psychosocial burdens that come with it – becomes the regrettable alternative. As the spring wave clearly demonstrated, when low testing levels failed to reveal the prevalence of community spread in Canada, there was no way for the long term care sector to recognize the root source of infections. The Revera Expert Advisory Panel found that the testing shortage ranks among the top contributors to the scope of the COVID-19 tragedy.

As the pandemic continues to wreak havoc in Canada and around the world, the hope is that the hard-won lessons learned about the importance of testing through the spring of 2020 will make a meaningful difference for the winter ahead.

Recommendations

The following recommendations from the Expert Advisory Panel cover issues explored in this chapter related to screening, testing, contact tracing, and infection prevention and control (IPAC).

- 1 Standards involving IPAC in long term care must be brought to the levels expected in hospitals. This must include, at a minimum, training in hand hygiene; hand hygiene auditing; and the safe, effective use of PPE, including donning and doffing, and a focus on appropriate cleaning methods.

Revera Response: Implementation of recommendation is in progress.

We have well-established IPAC education and training from a clinical team that includes the chief medical officer, a consultant infectious disease physician, and a manager of clinical support, who has a Certificate of Infection Control from IPAC Canada. We have purchased and implemented a digital tool for auditing hand hygiene that provides results of audits in real-time for identification of homes/staff that require additional training. The frequency of hand hygiene and PPE donning and doffing audits has been increased during the pandemic. We have put an IPAC champion in each home and hired four regional IPAC specialists in Ontario. In the western provinces, we have increased the number of regional managers to improve IPAC education and support the homes' IPAC champions. Similar resources are planned for the retirement residences.

- 2 Staff must be trained in the management of infectious residents, including isolation procedures, contact and droplet precautions, and methods to be used to protect against airborne transmission.

Revera Response: Recommendation already implemented.

IPAC training had already been in place prior to COVID-19 in both long term care and retirement residence settings to manage other infections. Given the novelty of the COVID-19 virus and its transmission, we put in place additional IPAC tools, training and audits to ensure sustainment of IPAC measures. As we recruit new staff, we are retraining constantly to ensure that, as much as possible, good IPAC procedures are followed.

- 3 Each long term care home and retirement residence must establish screening protocols for staff and visitors.

Revera Response: Recommendation already implemented.

We have established active screening for staff and visitors in each home. Each province has different specific wording and direction; we have consolidated those provincial rules so that all our homes across Canada follow the highest level of screening. In addition, we have made additional investments in an IPAC surveillance software provider that allows our sites to track signs and symptoms for residents, monitor outbreaks and conduct hand hygiene audits. This solution was previously deployed in long term care homes in 2019. Over the summer, we partnered with the vendor to develop two new modules that allow our sites to: (1) track lab results for resident and staff; and (2) track staff symptoms and infections. These modules allow us to have a single source of truth for tracking of test results and manage all infection cases in a site through one application.

- 4 Staff should be trained in how to obtain various samples for testing.

Revera Response: Recommendation already implemented.

In Ontario, we have worked with Public Health to administer weekly or bi-weekly surveillance testing for our staff. This includes a playbook and operating procedures for testing, which included training on specimen collection (currently nasopharyngeal in Ontario) as well as tools and support for test result tracking. In the western provinces, we have not yet been able to secure surveillance testing from Public Health, so we are working with a private laboratory chain to conduct surveillance testing clinics for our employees, including training on specimen collection using the bilateral nasal method. We are also in the process of securing alternate testing modalities such as antigen testing and, at the right time, will train our staff on specimen collection for those tests.

- 5 Education related to assessment of patients with respiratory infections should be available for all staff.

Revera Response: Recommendation already implemented.

Education related to respiratory infections had been previously available to our staff. At the onset of COVID-19, we developed specific education related to its symptoms and transition, and continue to update the education to staff as our knowledge of the virus evolves.

- 6 Management should familiarize itself with the residential areas of staff members and monitor community spread in those neighbourhoods to determine when there is a higher likelihood of staff becoming infected. Screening and testing procedures should be increased during times of high community prevalence. Consideration should also be given to providing private transportation options for staff.

Revera Response: Recommendation already implemented.

Revera has created an interactive dashboard that tracks outbreak risk, including community spread, for its sites. Additional precautions are taken when community spread poses a greater risk for a site. This includes heightened IPAC measures and audits, additional surveillance testing, and additional education on IPAC to staff and visitors as well as reminders on how to reduce risk of infection outside of work. Additionally, we have been providing transportation vouchers/reimbursements for staff.

- 7 Isolating infectious residents is difficult in older long term care homes. Homes should consider having temporary transitional facilities available on-site that will allow for true isolation of residents who develop COVID-19.

Revera Response: Implementation of recommendation is not feasible.

Currently, long term care homes add 1:1 support for those residents who require isolation and are unable to self-isolate. Adding transition facilities brings in new risks: how to staff the additional unit, ensure safety protocols are in place or meet licensing requirements. Additionally, moving residents to these transitional facilities would create significant and potentially unsettling change for residents. Moreover, given occupancy decreases, we are better able to create isolation areas within our homes.

- 8 Until routine testing of asymptomatic residents and staff is available, homes should continue regular testing with PCR detection of viral RNA. The frequency of asymptomatic testing should vary with the prevalence of disease in the geographic area around a home, and the prevalence in the communities where staff members reside.

Revera Response: Recommendation already implemented.

Revera conducts weekly or bi-weekly staff surveillance testing (lab-based PCR) at all of its Ontario sites through collaboration with Public Health. In the western provinces, Revera has secured a partnership with a private laboratory chain and is rolling out twice-monthly surveillance testing at sites with higher community spread.

9

Revera should continue to track the availability and sensitivity of point-of-care rapid testing products, either those that are antigen based or those that detect the virus's genetic material. It should consider rolling rapid tests into screening protocols for staff and visitors whenever spread increases in local communities. Rapid tests approved to date by Health Canada (ID Now) are not currently approved for use in asymptomatic individuals; however, this situation is expected to change quickly. Revera should stay knowledgeable about what types of tests are available and approved by Health Canada in order to provide the best option for regular cost-effective screening for staff, residents and visitors.

Revera Response: Implementation of recommendation is in progress.

Revera continues to pursue rapid point-of-care solutions as part of our testing strategy. In general, vendors in this space continue to have challenges bringing products to market, securing government approvals and making commitments to meaningful product quantities. However, we do have commitments from a couple of providers for a small quantity of kits that we can pilot at our sites. For the time being, we will continue to use lab-based PCR testing and, as we gain more confidence in antigen testing, we will show preference for this modality given speed, simplicity and cost.



The [long term care] sector cannot rely on essential medical supplies to be available from governmental authorities in periods of high demand.

CHAPTER THREE:

No Winners: The Revera Experience in Wave One

On March 12, one day after the World Health Organization declared COVID-19 to be a global pandemic, Revera recorded its first cases at one of its retirement homes in British Columbia. The novel coronavirus was known to be spreading along the Pacific Coast, and testing confirmed that a 99-year-old resident and a staff member at Hollyburn House in West Vancouver had contracted it. Initially, the resident was thought to have a cold or flu until testing proved otherwise. The staff member's infection was first indicated by screening measures Revera had mandated at all its residences three days earlier.

With quick detection, both people were isolated, the outbreak was contained, and both recovered – the centenarian included. At the time, it appeared that everything was working as it should.

But on March 24, two weeks after the Hollyburn cases, COVID-19 broke out at the McKenzie Towne Continuing Care Centre in southeast Calgary, infecting 44 staff members and 62 residents, including 21 who died. The virus emerged at more sites a week later, and through April, Revera was averaging an outbreak a day.

In all, the pandemic's first wave resulted in 87 outbreaks at Revera sites in Canada, meaning 55 long term care homes and 32 retirement residences experienced at least one case of COVID-19. The impact in long term care was especially grim: The virus infected 874 residents and killed 266, a fatality rate of 30 per cent. In retirement residences, 104 seniors were infected and 20 died. Among staff members, there were no deaths, but 65 employees in retirement residences, and 443 in long term care, contracted the virus.

Through the prism of numbers, the emotional toll of the crisis can be obscured. Death, after all, is no stranger in long term care. The homes are end-of-life destinations for nearly all the frail older Canadians they house. In normal times, however, the passing of residents is marked by compassion, dignity and respect by their families and by the staff who knew them, in many cases, as friends. But in the context of COVID-19, death became all the more tragic for the desperate circumstances that encumbered it, circumstances which also exacerbated the steady loss of life.

As one Revera executive described it: "All of our residents die with us. We celebrate their deaths with honour, love and respect. These people are our friends and in many, many instances we are their family. Death during COVID took a very dark turn and how we needed to manage the dead was without dignity and respect. That broke our hearts."

In the brief lull between pandemic waves, Revera worked to understand how these events unfolded while also implementing measures to mitigate the ongoing threat of COVID-19. The corporation – which is home to roughly 10,000 older adults at its 74 long term care homes across six provinces (the vast majority in Ontario) and an additional 10,000 seniors at its 96 retirement residences – assembled internal and external experts to investigate what worked, what went wrong, and how to prepare for the future.

THE SPRING OF CATASTROPHE

It was in mid-January that Revera began preparing for the pandemic, after one of the first COVID-19 cases outside of China was diagnosed in a tourist visiting Thailand from Wuhan. The case was a reminder to the world that the pathogen – known to be especially dangerous to the elderly – was just a plane ride away. Revera struck an executive leadership team to review and update emergency measures, and redirected resources to support these efforts and secure supplies. It also created new communications tools to quickly share pandemic-related information with employees across the company. In February, for instance, the leadership team directed staff to stay home if they felt unwell; it also advised homes to monitor residents for signs of

infection, to screen visitors for symptoms and travel history, and, on March 9, to receive only essential visitors. But it was not enough to keep a highly contagious virus at bay.

In the first wave of COVID-19, more than two-thirds of Revera homes did not have an outbreak, and of those that did, more than half of all outbreaks involved only one case. However, nine long term care homes – most of them in Ontario and Alberta – had significant outbreaks for weeks and, in some cases, for months. The outbreaks at these nine sites account not only for most of Revera's cases but for the vast majority of deaths: 241 of the 266 seniors who lost their lives to COVID-19 in Revera's long term care homes died at these locations. Common to the nine sites were pre-existing problems related to outdated buildings, and the fact that pre-existing infection control practices which were considered effective pre-COVID proved to be insufficient to combat this novel virus; these factors compounded the difficulty of controlling the virus – in part due to the systemic barriers that kept appropriate testing, medical services, consistent guidance and support out of reach when the pandemic hit.

What the first wave starkly demonstrates is that long term care operators cannot necessarily depend on outside resources to be on hand when they are most needed. Rather, closer connections should be made in advance – with local hospitals, doctors, other authorities and agencies – to secure the necessary staff, training, infection control expertise and medical support, before the immediate moment of need. The COVID crisis has at last drawn national attention to the long term care sector, and it should be a catalyst to securing stronger relationships between long term care homes and the health system.

Similarly, the sector cannot rely on essential medical supplies to be available from governmental authorities in periods of high demand. Instead, home operators, and possibly the sector as a whole, should develop their own supply chains. In the first wave, the large operators in the sector (such as Revera), which had already established global sourcing of personal protective equipment (PPE), united as a collective to help smaller operators who desperately needed this equipment. Through the CAPES initiative (Canadian Alliance to Protect and Equip Seniors Living), the large operators ensured smaller operators could acquire and maintain stores of PPE. Home operators also have to forge closer links with public health units to monitor community spread, and step up all defences – screening, testing, tracing and infection control – if prevalence rises in the community surrounding the home, or in the areas where staff members live.

There is good evidence to suggest that the experience gained in the first wave, as tragic as it was, can make a profound difference in combatting disease spread. In early April, for example, as science learned more about the stealthy asymptomatic transmission of the novel coronavirus, Revera mandated universal masking with contact and droplet precautions, and began actively screening all staff and residents

twice a day. It either closed common dining rooms or introduced physical distancing in the common dining rooms of long term care and retirement homes. In mid-April, staff were restricted to working at a single site to reduce the risk of spreading the virus from one home to another.

The experience gained in the first wave, as tragic as it was, can make a profound difference in combatting disease spread

Internal analysis indicates that these interventions not only reduced the number of cases and new outbreaks that emerged after April 13, they also significantly lowered the average duration of outbreaks. (Revera's internal data shows that 97 per cent of long term care infections among residents in the first wave flowed from outbreaks that predated the middle of April.)

Unfortunately, while these measures can be relatively simple to implement quickly, analysis shows that the best defence to fight the spread of the novel coronavirus is no quick fix. The company's stock of outdated buildings – long term care homes built back when two- and four-bed ward-style rooms were standard – was a major predictor of severe COVID-19 outbreaks. Given the inability to completely redevelop these properties in the short term, all other measures to defend against the virus take on even greater significance if the staff and residents of Revera homes are to withstand future waves of the novel coronavirus.

BUILT-IN RISKS

More than 30 of Revera's long term care homes in Ontario have ward-style multi-bed rooms, which (as with 40 per cent of all Ontario nursing homes) do not meet current provincial design standards. Revera has plans in place to redevelop its outdated sites in Ontario. But while construction applications had been submitted years ago for government approval, the plans were still undergoing the lengthy process of reviews when COVID-19 broke out.

Known as category "C" buildings, these homes were constructed in the early 1970s, when residents tended to be younger in age and more able-bodied. The senior citizens accepted into long term care today from communities and hospitals tend to be older and have more complex care needs. Often, they have been waiting months, if not years, to get in. (More than 35,000 seniors are currently on the waiting list for a long term care bed in Ontario.) Those who manage to land a spot arrive with acute and chronic medical conditions, including cognitive and physical disabilities, that older buildings were never designed to accommodate (an issue explored further in

Chapter 5). Many of the communal washrooms in these buildings, for example, are too small for wheelchair access.

Revera's older buildings have generally contended with higher rates of the seasonal flu and other respiratory viruses. The company's internal analysis found that homes where infectious disease outbreaks were historically more common were at higher risk of trouble with COVID-19. Recent external studies have also found that outdated building design is one of the top reasons that privately owned homes had larger COVID-19 outbreaks that lasted longer and resulted in higher mortality rates. In Ontario, most of the homes that require redevelopment are privately owned.

External analysis concluded that the greatest predictor of larger and severe outbreaks of COVID-19 was the two- to four-bed rooms in older long term care homes, given that these homes had little extra space to physically distance residents in common or recreational areas, few extra beds or rooms to keep the sick from exposing the healthy, or few rooms that could be used to quarantine those potentially infected.

Another top predictor of infection was the level of hands-on care that residents required. Homes where seniors needed more frequent attention from personal support workers, nurses, healthcare workers and medical staff resulted in increased visits and closer physical contact, which raised the risk of virus transmission.

The external review also found that long term care homes that had the highest proportion of patients with dementia faced a higher risk of severe outbreaks. Retirement homes that provided "memory care" units also had a higher risk. These "floors" are secured units that accommodate seniors with Alzheimer's Disease and dementia who are prone to wandering, exit-seeking and behavioural problems. About 89 per cent of long term care residents suffer from these neurodegenerative conditions, and managing their care during outbreaks was challenging for staff and residents alike. As one Revera executive described it: "We tried using masks, but not all residents were able to wear them and ongoing removal and touching of the masks posed additional risk. They roam, and for many it is constant, and to keep them isolated is next to impossible."

Meanwhile, in many cases, neither regional health authorities nor hospital support contacts were able to offer strategies or guidance as to how best to cope with these residents to keep them safe and to keep them from potentially infecting others. Over time, Revera supervisors found it was somewhat effective to have a dedicated staff in the secure units to engage the residents around hygiene practices. But this approach was difficult to sustain given the staffing shortages that had emerged early in the first wave, owing in part to the absence of employees who had unknowingly contracted the virus in their communities.

THE INVISIBLE THREAT

Unlike the coronavirus behind the 2003 epidemic of SARS 1 – which was most contagious when infected people were sick with symptoms that made them easy to identify and isolate – COVID-19 can be transmitted before symptoms develop, when there is little to indicate who poses a threat. Moreover, in up to a third of COVID-19 cases, infected people who never go on to develop symptoms are nonetheless capable of spreading it.

Neither of these features related to pre-symptomatic and asymptomatic spread were known at the pandemic's outset. Nor was it clearly understood that symptoms could vary widely between people and include not just signs of respiratory infection, but also symptoms related to smell, taste, and stomach upset. At the same time, the diagnostic tests that might have helped to identify the infected were in tragically short supply across the country.

Retrospective analysis shows that the rise of infections in long term care homes was predicted by the rise in community cases. Canada's first spike in community prevalence, for example, occurred around March 15. That was the week the novel coronavirus shifted from a distant threat to an imminent one, as schools closed and travel restrictions were introduced. Fourteen days later, around March 30, Revera recorded its first spike of infections, with more than 30 new cases per day.

Throughout the first wave, Revera's outbreak patterns in its long term care sites were nearly identical to the course of disease spread in the community, just two weeks behind – a lag that reflects the time it typically takes for COVID-19 to appear after exposure to the virus. When community cases in Canada peaked in mid-April with more than 1,800 new infections per day, Revera homes mirrored a similar peak with a high of roughly 120 new cases per day at the end of April. As community cases declined, two weeks later, the number of infections at Revera sites also decreased.

With long term care homes in B.C., Alberta, Manitoba and Ontario, Revera data shows its outbreak patterns also reflected the geographic clusters of COVID-19 at the provincial level. For example, Alberta and Ontario, home to 68 per cent of Revera's long term care residences, both had higher caseloads and greater spread than the other provinces where the company had homes, and Revera outbreaks in Ontario and Alberta mirrored the locations of higher community prevalence.

Of Revera's 55 outbreaks in long term care, Ontario had 45, Alberta had six, Manitoba had three, B.C. had just one. Ontario, meanwhile, recorded a cumulative caseload of 308 per 100,000 people early in the first wave, and Alberta had a cumulative rate of 362 positive cases per 100,000 people. Cumulative infection rates in other provinces at the time ranged between 106 and 147 cases per 100,000.

Unfortunately, at the time, the entire country lacked proper testing capacity and the extent of community spread went undetected, as did the cases among staff members who contracted the virus in their communities. In turn, employees unwittingly brought it into the long term care homes where they worked, where proper personal protective equipment was scarce, also reflecting a national shortfall. Daily active screening of staff, which began in Revera homes on March 9 – the same day the essential-visitors-only policy came into effect – could not fully capture the stealthy nature of COVID-19, especially when public health units were not yet supporting surveillance testing of staff and residents.

Internal analysis has since shown that the undetected cases among staff and visitors were a major contributor to the crisis. In Revera's retirement residences, there were 26 significant outbreaks (defined as situations in which five people or more contract the virus) during the first wave, and more than half of those situations involved staff members only.

As it became clear that staff had become the inadvertent source of the rising case numbers among residents under lockdown, Revera began introducing measures to restrict employees from working at more than one site on March 23. To reduce the risk of spread between homes, B.C. issued the same mandate on March 26, while Alberta and Ontario implemented a strict one-site order for long term care home and retirement residence workers in mid-April.

When routine surveillance testing of staff began at the end of May in Ontario, Revera data suggests it did help to detect infections among staff members before COVID-19 could be spread to residents. Prior to June 15, the data shows that during an outbreak, infections were more likely to be identified in residents first. The finding offers hope that improvements in point-of-care testing methods will soon be available to detect infection in asymptomatic staff and visitors before it can spread to residents.

LOSSES ON THE FRONTLINE

While the demand for beds in long term care skyrockets, the supply of personal support workers, nurses, other healthcare workers and non-clinical employees has been utterly outpaced by the ever-growing needs of the aging population (an issue further explored in Chapter 4).

Revera, however, can boast a higher than average record of retaining full-time staff, in part due to more competitive wages and benefits, which, from the outset of the pandemic, included quarantine pay for full-time employees, financial and non-monetary

incentives to continue working through outbreaks and, later, support services to cope with the emotional stresses the job suddenly entailed.

As with all congregate living, providing 24-hour care seven days a week often requires the work of part-time employees, and Revera has an even split of full- and part-time staff members. But it was a balance totally upended in homes that suffered large outbreaks, where between 15 and 25 per cent of the company's full-time employees were unable or unwilling to come to work.

Not only were staff members falling ill themselves, but colleagues who had been exposed to them had to be sent home to quarantine, in some cases taking out another two-thirds of staff for several days, and more if they went on to develop COVID-19.

At the same time, by mid-April, many of Revera's regular part-time workers were lost to the strict one-site rule that provinces rightly introduced to keep staff from transmitting the virus in multiple homes. Many long term care home and retirement residence employees traditionally work part-time at a number of sites to accumulate a full-time wage, and the inability to do so forced many to either dedicate their services to a single site or to leave their jobs altogether for another line of work.

In the grip of an outbreak, both scenarios left homes in need of personnel at a time when resident needs were greater than ever. Pandemic training to implement tighter infection control – including the safe donning and doffing of protective gear, and the extra cleaning and disinfecting of surfaces – required extra staff at a time when employee absences were far greater than usual. Caring for rising numbers of sick residents was always the priority, as staff relocated residents within homes to keep up with the ever-changing status of those who had to be isolated or quarantined.

The pandemic's first wave also heralded the advent of other new, time-draining tasks, as staff often had to facilitate virtual medical appointments by holding iPads and other devices for residents to be assessed by long term care doctors, many of whom declined to visit their homes in person. In the latter weeks of the first wave, when testing was at last sporadically provided by public health for homes in crisis, results came back erratically, taking anywhere from half a week to a month, and these arrived in various formats: by email, by fax and by handwritten notes. One Revera home received 21 handwritten pages of results faxed without names attached; the report listed only case identification numbers, followed by a positive or negative sign. Staff had no choice but to spend precious hours sorting through the reports to figure out which results belonged to which resident.

Revera launched aggressive efforts early in the pandemic to recruit additional staff with a digital campaign and outreach to nurses' associations, public health bodies,

colleges, universities and school boards. But these efforts could not bridge the growing gap of employee availability.

As the one-site work restriction came into effect, the company turned to employment agencies to hire temporary workers, and received commitments for full-time staffing. But this proved to be challenging if COVID-19 broke out in a home. As more employees stopped coming to work due to illness, quarantines and fear, Revera had to expand the number of agencies it relied upon, and sometimes staff committed by these companies would refuse shifts or simply not show up when they realized they had been assigned to a long term care home or retirement residence contending with an outbreak.

The temporary workers who did fulfill their commitments had to be trained, to familiarize them not only with the home's regular procedures but also with the infection control practices the outbreak necessitated. Agency staff, for instance, were often not well trained in the use of PPE prior to their arrival at a home, and training them further increased the workload on Revera staff members already extremely stretched for time. This instruction also required an ongoing effort, which not all agency employees were willing to embrace. In some cases, issues of non-compliance resulted in calls to the agency to replace certain workers, which meant the entire training process had to begin once more against a chaotic backdrop of so many other competing priorities.

In the hardest-hit homes, even basic care and accommodations for residents became a struggle to provide. In a few homes, hospitals sent much-needed support, including medical staff and nurses willing to clean and provide food.

But other efforts to shore up staffing failed. During a severe outbreak at a Toronto-area Revera home, for instance, a company executive made a desperate plea to a supervisor of the Local Health Integration Network (LHIN) who explained that she would love to help and had roughly 1,000 home care personal support workers currently not working, as many seniors had suspended their home care during the pandemic. But these workers, she added, could be sent to long term care homes only if they volunteered to go. None did.

Revera sent regional managers and other company executives to help manage homes struggling with severe outbreaks. One company official, for example, spent several months away from his family helping to resolve major outbreaks at Revera sites in the Ottawa area; on his way home, he had to be sent directly to the Forest Heights Long Term Care Home in Kitchener, where he would remain for the next three months.

A 240-bed, older long term care home, Forest Heights was the site of Revera's longest COVID-19 outbreak. The disease emerged there on April 1 and lasted

90 days, infecting 69 staff as well as 175 residents, of whom 51 died. On June 2, Ontario's Ministry of Long-Term Care issued a mandatory management order that put St. Mary's General Hospital in charge of Forest Heights, making it one of 11 hard-hit sites the province took over during the pandemic's first wave.

Communicating with families was strained during the outbreak; some complained in the media that they had been kept in the dark and felt powerless to help their loved ones given the lockdown. Some of these sentiments might be explained by the haphazard testing available to confirm positive cases. Often test results came back in unpredictable batches, adding to perceptions that dozens of cases had either been hidden, or appeared all at once. While many families showed their support for staff who continued to work under the most trying of circumstances, others – in their understandable grief and frustration – blamed staff for the tragic events unfolding.

For the employees who remained on the thin frontlines, the experience of working through the crisis was akin to fighting an unwinnable war. A letter sent to a Revera executive by an employee who has been a personal support worker for many years at one of the company's long term care homes described it this way:

“Covid...was a bad nightmare, a hell that I hope to never have to go through again. A war that had no winner. The survivors now walk with deep scars. Many not even realizing what after-effects are coming... [Each day] seemed very much the same. Keep working. Keep going. Comfort the sick and dying. Care for the families. Care for the staff. ‘Bag’ another body. No time to cry, no time to say goodbye, no time to rest, just no time...”

“...I was blessed to be with [most] of the people who died. I was able to bring their families in to say goodbye if they wished. I held phones to the resident's ear so they could hear their children's voices sharing their most intimate feelings. I prayed with each one. Many times, I confess, I removed my mask so that they could see my smile when I saw the fear in their eyes to give them a sense of peace, knowing the risk, but feeling it the right thing to do for them in the moment.

“We are broken and we are sad. I do not feel.”

DOES IT TAKE A CRISIS?

Despite early efforts to prepare for the pandemic, COVID-19 had a devastating impact on some of Revera's long term care homes during the first wave. Most of the

company's sites were unaffected, but the burden of illness and death at nine long term care homes and four retirement residences was substantial and tragic, involving more than 1,200 cases among staff and residents in all, and the deaths of 286 residents in Revera's retirement residences and long term care homes.

Most of the sites that experienced the most severe outbreaks are older stock built decades ago, and do not meet current design standards. Revera has been actively advocating for approval to redevelop them. Unfortunately, this comes too late to fully mitigate the ongoing threat posed by COVID-19. Yet both internal and external studies have concluded that these outdated buildings, with their ward-style multi-bed rooms and communal bathrooms, contributed to longer, deadlier outbreaks.

The toll at Revera, and across the sector, has rightly focused national attention on the long-neglected needs of long term care. Commissions and investigations are underway, and there are signs this era of scrutiny could bring change for the better.

Given our inability to instantly redevelop outdated buildings, these types of preventive steps are even more critical in keeping COVID-19 at bay. Revera analyses have already shown in the first wave that proper masking and PPE use, one-site working restrictions for employees, and infection control measures tailored to COVID-19 made a significant difference in quelling the number of outbreaks and cases through the latter half of the pandemic's first wave.

Less within Revera's control are the systemic barriers the company faced in trying to corral the infection. With most health system resources focused on protecting hospital capacity, Revera, along with most long term care homes, was not prioritized for testing early in the pandemic, and received inconsistent guidance and support from the health ministries, public health units and local health authorities. The Revera experience in the first wave suggests that home operators should continue to become as self-sufficient as possible in securing PPE for staff, collaborate with public health to keep track of community prevalence, and forge support networks with local community partners and hospitals before those networks are needed.

Recommendations

The recommendations from the Expert Advisory Panel involve specific steps to improve outcomes for residents, families and staff at the company's long term care homes and retirement residences during the pandemic.

- 1 Encourage governments to develop policies around expectations of medical presence in long term care homes during outbreaks.

Revera Response: Implementation of recommendation is in progress.

The company's chief medical officer and several external stakeholders have been working with Ontario Health and the Ministry of Long-Term Care to establish clear policies to guide on-site medical presence in long term care homes during an outbreak.

- 2 Determine a strategy for supporting medical services in retirement residences during outbreaks.

Revera Response: Implementation of recommendation is in progress.

The company's chief medical officer and several external stakeholders are working with Ontario Health to develop a strategy for supporting medical services in retirement residences during outbreaks.

- 3 Establish a consistent approach with respect to infrastructure and technological requirements for virtual care, when appropriate.

Revera Response: Recommendation already implemented.

Through previous investments in a technology infrastructure and digital layer, Revera was able to quickly roll out video-conferencing tools for virtual consults.

- 4 Collaborate with Public Health to identify Revera's approach to testing, infection prevention and control (IPAC) education, PPE requirements and cohorting of residents that can be consistently delivered across all sites. Encourage provincial public health authorities to develop consistent advice.

Revera Response: Recommendation is directed at the broader system rather than Revera.

While this recommendation is not under Revera's control, Revera

continues to collaborate at the regional and provincial levels to discuss and clarify approaches to testing, IPAC and resident cohorting.

- 5 Establish regular meetings with various unions to engage them with practice changes that are designed to protect staff as well as residents.

Revera Response: Implementation of recommendation is in progress.

Revera has established and continues to maintain regular communications with its various union partners to engage them with practice changes that are designed to protect staff as well as residents. Examples include, but are not limited to, staff surveillance testing, recruitment and retention initiatives, joint government advocacy and PPE procurement. Enhancing our relations with our applicable union partners through increased communications and joint initiatives will result in positive outcomes for both residents and employees.

- 6 Proactively seek feedback from residents and families/substitute decision-makers on the type and frequency of communication they want to receive.

Revera Response: Implementation of recommendation is in progress.

As well as using informal ways to seek feedback from our residents and families, we included questions regarding feedback on communication through our formal resident and family annual surveys, and we have their feedback. Action is underway to enhance our communication based on the survey inputs. This was incorporated into our resident and family satisfaction survey this year, and action planning is underway to provide further communication based on feedback. For homes that are experiencing an outbreak, we now hold town hall meetings early in the outbreak.

- 7 Establish, in advance of outbreaks, alternative strategies for communication between residents and families.

Revera Response: Implementation of recommendation is in progress.

We continue to enhance our communications with residents and families based on feedback.

- 8 Plan individual and small group activities that can be implemented prior to an outbreak to reduce loneliness and boredom.

Revera Response: Recommendation already implemented.

Through the Pandemic Playbook, we have provided numerous tools for programming, and continue to share best practices with our sites as well as pilot innovative solutions such as Virtual Reality.

- 9 Develop a tool that can be administered regularly to assess residents and alert staff to early changes in residents' mood, appetite and cognition.

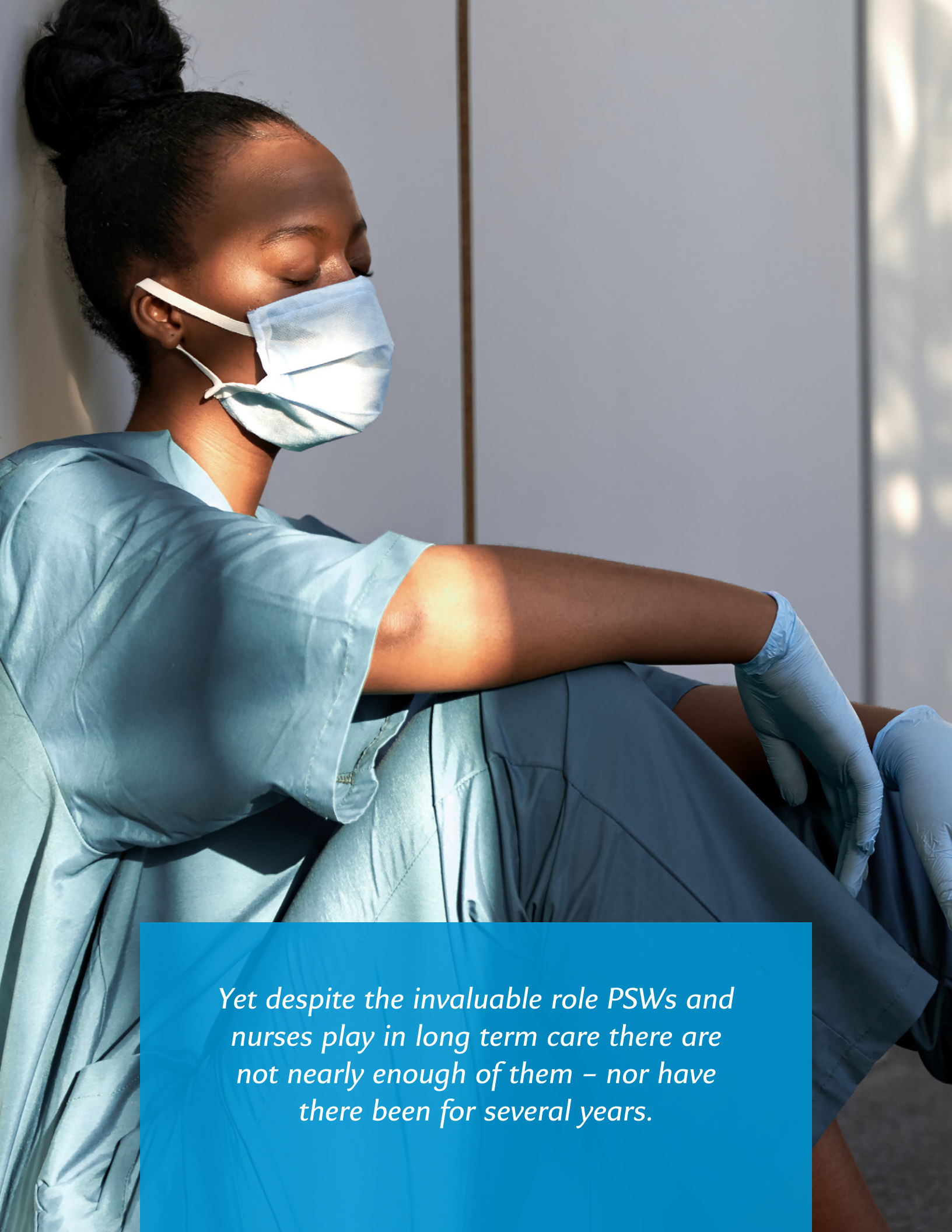
Revera Response: Recommendation already implemented.

A comprehensive screening tool has been in place since the onset of the pandemic, and is adjusted as needed based on Public Health direction. Screening is done twice a day and includes atypical symptoms.

- 10 Work with external staffing agencies to ensure that their policies on testing, following one-site workplace order, and symptom reporting are aligned with Revera's policies.

Revera Response: Recommendation already implemented.

Agency staff are screened and asked to attest to negative testing. Many sites have secured consistent staff from agencies in order to ensure agency staff are working at a single site. We have also included expectations for agencies to report positive test results to us.



Yet despite the invaluable role PSWs and nurses play in long term care there are not nearly enough of them – nor have there been for several years.

CHAPTER FOUR:

The Thin Pink Line

Alongside the hundreds of thousands of seniors who live in Canada's long term care homes and retirement residences, there's a veritable army of workers who care for them – kitchen, dietary and housekeeping staff; registered nurses; nurse practitioners; doctors; occupational therapists; physiotherapists. But by far the largest employee category in any long term care home is the personal support worker (PSW).

PSWs are the frontline caregivers who each day help to wash, feed and dress the country's frail elderly. They participate in residents' treatment, make their beds and keep them company, often in the absence of any family visitors. In recent years, PSWs have also helped to manage the growing multiple health needs of residents, many of whom suffer from advanced dementias and the behavioural challenges these conditions can bring.

Yet despite the invaluable role PSWs and nurses play in long term care, there are not nearly enough of them – nor have there been for several years.

Long before the pandemic hit, the PSW shortage had reached a crisis point in Canadian long term care. Meanwhile, during the first wave – in which 508 Revera staff members contracted COVID-19 and countless more were quarantined – up to a quarter of the company's full-time PSWs were either unable or unwilling to come to work, and a considerable portion of part-time staff were also unavailable.

The shortage of frontline caregivers added to the impact the first wave of COVID-19 had on the long term care sector. Staff levels reached record

lows just as workloads reached record highs. The pandemic triggered the sudden need for staff to receive COVID-specific infection control training, and to take the extra time and effort to practise it, from enhanced cleaning to the donning and doffing of personal protective equipment (PPE). It also brought the urgent task of screening residents twice daily, creating cohorts to separate the infected from the healthy. And the few staff left to provide this extra care had to do so without the usual help of family caregivers barred by strict no-visitor policies and, often, in the absence of doctors who declined to come to the homes. Next to the fundamental challenges of containing a highly contagious virus in outdated buildings with multi-bed rooms, the lack of PSWs ranks as a major contributor to both the severity and duration of the outbreaks.

Analysis conducted by the Revera External Advisory Panel has since found that the first wave's staffing shortages at Revera flowed from three critical inter-connected issues:

- the shortage of PSWs that plagued the sector before the pandemic hit;
- the fallout from the one-site rule, which rightly prohibited PSWs from working at multiple homes to reduce the risk of spreading the virus from one home to another;
- and a dramatic rise in unexplained PSW absences during the first wave, fuelled in part by staff members' fears of becoming infected or potentially carrying infection home to their loved ones.

None of these issues can be fully resolved in time to confront the pandemic's second wave. But understanding their root causes points to immediate steps that should be taken toward enabling, expanding and supporting the PSW labour force as the indispensable pillar it represents in the long term care of society's vulnerable seniors.

A CRISIS OF CARE

The countrywide, and in fact global, shortage of nurses and PSWs is a complex and controversial issue. For starters, the very name – personal support worker – is ambiguous, and its job description so broad that it straddles orderly duties, house-keeping and personal aid. The path to becoming a certified PSW can also vary depending on the training program, as can the scope of practice depending on where a PSW works: providing home care in the community, offering personal care for students with disabilities in schools, or assisting in hospitals and a variety of congregate living settings, including retirement residences and long term care homes.

Yet despite the critical and growing need for PSWs, the occupation ranks rock bottom in the hierarchy of healthcare positions, often with a wide range in compensation,

benefits and job security. Hospital PSWs, for example, earn on average more than \$24 an hour. In the retirement and home care sectors, compensation ranges from \$16 to \$19 an hour.

The variable pay scale can make the relatively high cost of PSW education and training programs a deterrent for many who might otherwise pursue the vocation. Those who do go into this field tend to be women and, often, ethnic minorities or recent immigrants. Many of them regard PSW jobs as an entry-point stepping stone toward higher-level work in health care.

Recent research suggests that not only is there no reliable pipeline graduating PSWs into the workforce, but that it is a challenge to retain these essential frontline caregivers. A July 2020 Ontario government report on staffing in long term care found that 40 per cent of PSWs leave the healthcare sector within a year of graduating or training, and that each year, roughly 25 per cent of PSWs with two or more years of experience leave the sector.

Despite the critical and growing need for PSWs, the occupation ranks rock bottom in the hierarchy of healthcare positions.

It is against the backdrop of this chronic staff turnover that COVID-19 broke out in long term care, a sector in which the aging population's growing care needs were already outpacing the supply of PSWs and driving up their workloads. Recent years, for example, have brought expectations for PSWs to document residents' conditions, and update their chart in electronic medical records. As well, with the rising incidence of dementia among incoming residents, PSWs assist in the management of difficult behaviours, which can include habitual exit-seeking and physically resisting care.

Generally, PSWs in long term care earn more than those employed in retirement residences, but less than those working in hospitals. In long term care homes, through collective bargaining, operators tightly align their wages for PSWs with the per-resident funding they receive from the provincial government, and they rarely, if ever, exceed what that envelope provides. The older age and increased medical needs of today's long term care residents have resulted in significant funding increases for PSWs in recent years. In Ontario, for example, the formula in 2000 called for residents to receive 2.04 hours of care per day and the current formula mandates 3.73 hours per day (a 180 per cent increase in compensated hours in addition to hourly pay increases). There are no recommendations that specify staff-to-resident ratios.

With the government funding allotted for resident care in Ontario, Revera and other privately-owned long term care operators pay full-time PSWs about \$22 an

hour, and provide a union-sponsored pension plan, sick leave, a fully insured benefit plan, up to seven weeks of paid vacation and a dozen paid statutory holidays. To date, the company has had no difficulty recruiting or retaining full-time employees with that package: 82 per cent of Revera's workforce have more than five years of service; 66 per cent have worked for more than 10 years; and the average full-time PSW at Revera has 15 years of service.

The ongoing challenge, however, involves part-time employees. To provide care for residents 24 hours a day, seven days a week, and with contracts that typically mandate 10 days of eight-hour shifts for full-time employees over a two-week period, the company relies on part-time workers to cover weekends and hours outside of the full-time shifts – as do many sectors of the Canadian healthcare system, hospitals included. At Revera, part-time employees account for half of the company's workforce.

Critics allege that home operators, to maximize their profits, prefer to employ part-time staff because they are cheaper than full-time staff.¹ But this is untrue: Hiring part-time staff is not more cost-effective than employing full-time staff, because part-timers receive extra pay in lieu of benefits. As well, it is more cost-effective to employ full-time employees, since the turnover and onboarding costs are much lower for staff who work full-time.

Part-time PSWs would, however, generally prefer full-time work given regular hours, benefits, sick pay and job security it brings. While waiting for a full-time position to become available, many employees work part-time with shifts at multiple sites to patch together a full-time wage. But the wait at any given site is often too long – and this represents a significant barrier to retaining part-time staff. They leave for full-time jobs at other companies or in other parts of the health system.

The pandemic hit part-time workers in the senior living sector particularly hard. Orders that restricted them to working at one site only (to reduce the risk of viral spread) effectively barred them from cobbling together a full-time living.

ONE-SITE FALLOUT

As the first cases of COVID-19 began to appear among Revera staff and residents, the company recognized that its part-time staff might inadvertently carry infection from

¹ Based on the funding formula used by the Ontario Ministry of Long-Term Care to pay for clinical care, reconciliation is undertaken annually to ensure that all government payments provided for clinical care are paid to the nurses, registered nurse practitioners and PSWs who provide that care. Revera would not “save money” by employing a part-time worker, since they receive ministry funding only for the money that they actually pay to staff. There is never a profit made on PSW or nursing compensation payments in long term care.

one long term care home or retirement residence to another. In mid-March, before any government mandate was issued, Revera began restricting its part-time staff from working at several locations, as it adjusted schedules and launched recruitment efforts to bring in additional workers to fill the gaps. Throughout April, the provinces where Revera operates long term care homes – British Columbia, Alberta, Ontario and then Manitoba – issued orders to restrict long term care workers to single-site employment during the pandemic.

Unions representing PSWs initially protested these moves. But once it became clear that infection with the novel coronavirus could be spread by people without symptoms, or before symptoms appeared, the one-site order was understood to be justified and necessary. What was less clear was how dramatically it would deplete the long term care workforce. At Revera, for instance, the one-site rule resulted in the company losing roughly 14 per cent of all its staff, and virtually all these losses involved the part-time staffing contingent.

Revera committed to topping up the part-time hours of employees losing work from other sites, and while this mitigated the impact of the one-site order, it hardly eliminated it. The Single Site Emergency Order was by far the chief reason for staff absences during the first wave, and it severely hampered the company's ability to provide its residents with optimum care.

The fallout from the one-site order forced long term care homes to rely on greater numbers of temporary staff from employment agencies, and to expand the number



of agencies that they traditionally approached for help. While agency staffing helped to alleviate critical shortages in caregiving, it was also a costly option that consumed precious time as already overburdened staff needed to provide ongoing training to temporary employees unfamiliar with a home's procedures and infection control practices.

FOR REASONS UNKNOWN

The spate of COVID-19 outbreaks that hit Revera's long term care homes through the first half of 2020 also gave rise to a new phenomenon at the company: the unexplained absence. More than 500 staff members, or roughly eight per cent of Revera's long term care workforce, did not show up for work during the pandemic, and, to date, have not returned (though the company has taken no punitive action against them and they remain on the employee roster).

Most absences during the pandemic could easily be traced back to the one-site order, sick leaves, quarantine orders, pregnancy or parental leaves, the need to provide child care, or concerns about family members' vulnerability to infection. But in other cases – which included employees at homes both with and without COVID-19 outbreaks – workers offered no explanation for their absences. Nor did they respond to the

It is not a stretch to imagine that fear kept many frontline caregivers from going to work.

company's repeated efforts to reach them and find out why they had not turned up for their scheduled shifts.

While the reasons behind the absenteeism remain unconfirmed, fear likely played a significant role. In the context of COVID-19, long term care homes quickly became high-risk environments. The month of April brought a steady rise in COVID-19 fatalities, including the deaths of three PSWs in Ontario in less than three weeks, a tragedy that garnered intense media coverage. It is not a stretch to imagine that fear kept many frontline care providers from going to work. It had, after all, been a prime reason doctors cited for their refusals to provide in-person care to the residents of long term care.

At the same time, the federal government program that provided financial support to workers directly affected by COVID-19 in the first wave may also have contributed to the steep jump in unexplained absences. Unlike unemployment insurance, in which assistance is tied to prior personal income levels, the Canada Emergency Relief Benefit (CERB) provided a flat rate. All applicants who had been employed or self-employed before the pandemic hit received \$2,000 a month. At \$500 a week, collecting CERB essentially amounted to slightly more than a part-time employee

in long term care would make for three days of work in a week (22.5 hours at \$22 per hour), and considerably more than the \$18 an hour that part-time employees earn at retirement residences. The federal benefit may have had the unintended consequence of incenting part-time staff not to work, or not to apply for the many part-time positions that were going unfilled.

Revera mitigated the impact of these unexplained staff losses by increasing the hours of part-time staff who continued to work. Still, these absences added to the desperate scramble to find more frontline caregivers to fill the growing gaps. There were, for example, failed attempts to recruit staff from the large pool of available PSWs who, because of the pandemic, were not working their regular jobs in home care. But home care PSWs could not be directed by their various employers to work at a long term care home. As a result, very few employees answered the call for help, particularly if it was coming from a home where COVID-19 had broken out.

URGENT STEPS AHEAD

The shortage of PSWs was critical across the country well before the emergence of COVID-19. These essential frontline caregivers have become a dwindling resource in the healthcare system, while their work has never been in greater demand.

In long term care, the PSW shortage proved to be a major contributor to the tragedy that unfolded in the sector during the pandemic's first wave. More than 10,000 long term care staff contracted COVID-19 across the country, and 16 died. Countless workers were quarantined and isolated, all of which further depleted an already threadbare workforce.

At Revera, the staffing crisis that emerged during the pandemic was further exacerbated by the fallout from the one-site work restriction that likely pushed part-time employees to look elsewhere for full-time jobs, and also by a dramatic and sudden spike in the unexplained absences of staff members.

COVID-19 has unfortunately added to negative perceptions of the PSW field, one practised largely by ethnic-minority women often struggling to make ends meet. Their public accounts of working through the pandemic have described heavy workloads and emotional burdens, while some families have blamed PSWs as the source of outbreaks in senior living centres. All of this has made the vocation, in long term care in particular, less appealing than it had been. Yet with the ever-rising need for the essential care PSWs provide, it is urgent that meaningful steps be taken to shore up confidence, compensation and respect for those committed to caring for society's vulnerable elderly.

Recommendations

What follows are detailed recommendations compiled by Revera's Expert Advisory Panel to improve staffing levels in the short and medium/long term, support the pipeline of graduating PSWs, and ensure the safety of all frontline caregivers so that they feel comfortable going to work.

IMPROVING PSW STAFFING BY ALLEVIATING WORKLOADS AND CREATING MORE FULL-TIME POSITIONS

Priority Recommendations for Immediate Implementation

- 1 Employers can implement the position of Personal Service Assistant/Resident Support Aide:
 - a. The Personal Service Assistant is a position to supplement the PSW's work. This employee can perform tasks that will reduce the workload for PSWs.
 - b. Some of these examples include making beds, cleaning rooms, distributing laundry or providing companionship for residents.
 - c. Many employers have implemented this new position to offset staff shortages created by the outbreak of COVID-19; many others, including Revera, had implemented this prior to the pandemic.
 - d. To ensure the success of this initiative, the Ministry of Long-Term Care could confirm that the costs of this role would be covered under the Nursing envelope.
 - e. Collective agreements enable the employer to implement such classification. Unions can grieve the wage rate, but not management's right to create a new classification.

Revera Response: Implementation of recommendation is in progress.

These additional roles have already been implemented in Ontario, and implementation is underway in the western provinces. Continuation of this role in long term care requires legislative changes.

2 Employers can create the position of Full-Time Weekend Worker:

- a. Creating a full-time Weekend Worker position would involve an employee working 30 hours and getting paid for 37.5 hours. The employee would work every weekend, plus extra shifts on Friday and/or Monday to reach the 30 hours.
- b. The attraction is full-time pay, a consistent schedule and benefits associated with full-time work.
- c. The position could be attractive for those with young families (i.e., be home for family during the week and work on weekends) or for employees in full-time education.
- d. This would assist in creating more full-time positions, which is the most attractive option to employees.
- e. There is precedent set out in the ONA (Ontario Nurses Association) Nursing Home Language.

Revera Response: Implementation of recommendation is not feasible.

Revera had trialled this strategy in the past with registered nurses (RNs) without success, as we were not able to recruit RNs who were willing to work only on the weekends. Keeping the weekend workers up to date on the latest policies, procedures and resident care issues also becomes a challenge. This model also posed challenges when weekend worker employees called in sick.

3 Employers can create full-time cross-site positions:

- a. Employees would work part-time at two or more long term care home locations, but would be treated like full-time employees under the collective agreement and entitled to full benefits.
- b. Employees in Ontario must choose one site to be their true employer (for purposes of WSIB and seniority).
- c. Long term care homes in close proximity to each other could have employment agreements that cover the logistics of these cross-site employment engagements.
- d. There is precedent set out in the ONA Nursing Home Language.

Revera Response: Recommendation to be considered as part of a broader strategy.

Implementation of this strategy is not currently feasible given single-site work orders. Once single-site cohorting orders are removed, we will consider this recommendation as part of a broader strategy.

4 Create more full-time positions within a home:

a. Establish full-time float positions:

- Simply create more full-time staff and recognize that some shifts will have more coverage than required. This could potentially increase costs significantly and result in staffing imbalances between shifts.
- Creating more full-time float positions could, however, enable employers to cover absences and maintain more flexible schedules, while benefiting the employee by providing full-time hours and full-time entitlements.

b. Establish temporary summer positions:

- In summer, long term care homes could create temporary full-time lines.
- This would create a consistent schedule for the employees who take the line.
- This would represent the potential for greater earnings for summer employees.
- This would create possibilities to allow other employees to enjoy better vacation time.

c. Negotiate greater flexibility in scheduling and fewer weekends off (it will be challenging to roll back scheduling achievements of the unions).

d. Establish 12-hour shifts that would increase the ratio of full-time to part-time staff, although the longer 12-hour shift also increases a heavy workload.

e. Alternatively, the employer could establish 12-hour shifts and eight-hour shifts for PSWs. As part of this, eliminate the drop shift. Employees would do a rotation across a bi-weekly pay period where they work 12-hour shifts and eight-hour shifts combined. Most importantly, changing the schedule to a 12-hour schedule, or a 12-hour and eight-hour rotation, gives employees more days off and more consecutive days off. It also allows more employees access to full-time benefits and provides them with a consistent schedule. People often use drop shift to reduce the number of days they work. This can be achieved through these rotations. Since they are not dropping a shift, employees will be able to make more money. To achieve this, the home may need to stagger shift start and stop times to ensure, for example, that all three meals don't start on one shift.

Revera Response: Recommendation to be considered as part of a broader strategy.

Revera has undertaken a review of its workforce management strategies and will be considering this as part of the broader workforce management strategy, which will require a reset of master schedules and union engagement. In Ontario, we will be better positioned to implement this recommendation given the new announcement from the provincial government that it will increase government-paid care hours for residents to four hours by 2024-25.

5 Create job-share arrangements:

- a. Allow two employees to split a full-time line, with each one covering the other's absence.
- b. This would provide an attractive option for some employees and confirm a consistent schedule.
- c. Precedent for this arrangement exists in the ONA Nursing Home Language.

Revera Response: Recommendation to be considered as part of a broader strategy.

Revera has undertaken a review of its workforce management strategies and will be considering this as part of the broader workforce management strategy, which will require a reset of master schedules and union engagement.

IMPROVING STAFFING AND COMBATting UNEXPLAINED ABSENCES WITH SAFETY MEASURES

Priority Recommendations for Immediate Implementation

1 A solution to decrease potential leaves of absence, or unexplained absences because the staff member is afraid of infection, is to take meaningful steps to reduce the risk of infection and ensure employees feel comfortable coming into work

- a. Like Revera, provide sufficient and appropriate PPE at all sites.
- b. Conduct regular testing of all employees at all sites by the best means available.

- c. Follow rigorous screening procedures before allowing anyone to enter the long term care site.
- d. Conduct rigorous screening of visitors and apply all applicable rules to avoid high-risk entries.

Revera Response: Recommendation already implemented.

At the onset of the pandemic, Revera secured adequate PPE for its staff and has since established a strong inventory of PPE. In June, we also started twice-monthly surveillance testing for our staff in Ontario, and in October partnered with a private laboratory chain to bring staff surveillance testing to the western provinces. Rigorous screening of all staff and visitors has also been in place since the onset of the pandemic.

- 2 Develop trust and understanding with employees by assuring them that the company learned valuable lessons in the first wave, their workplace is safe, and their family members are protected. This might be most effective coming from an expert physician who has knowledge of the virus, infection prevention and control (IPAC), and PPE. This could be done via webinar.

Revera Response: Recommendation already implemented.

We have put in place a cohesive communication strategy, including emails from our chief medical officer, virtual town halls and huddles, and other ongoing channels to address this. Additionally, we have incorporated all the lessons learned into an actionable “Pandemic Play-book” tool that allows our site managers to access tips, best practices and procedures, and checklists to prevent, prepare for and manage outbreaks. This tool has been adopted organization-wide and has received a resounding positive response.

- 3 Another potential means of alleviating employee safety concerns is to invite presentations and training from staff and regional leaders who worked during, and/or managed, a COVID-19 outbreak in the first wave. This would be key for homes and staff who did not see an outbreak in the first half of 2020, and may help to decrease unexplained absences while increasing pandemic preparedness.

Revera Response: Recommendation already implemented.

In addition to various webinars where we spotlight site managers who experienced outbreaks, we have set up dedicated weekly regional calls where the sharing of stories, learnings and best practices occurs.

Priority Recommendations for Medium to Longer Term Implementation

- 1 Arrange for external parties to conduct confidential interviews with staff, with a written guarantee of anonymity and protection against retribution, to learn the reasons for unexplained absences. Derive solutions from these interviews and act upon them.

Revera Response: Recommendation already implemented.

Interviews were already conducted by site leadership and we have also had hospital Health & Safety resources providing support. Continued public misinformation, and personal family situations, are continuing to cause fear and drive a subset of employees to be unwilling to come to work.

- 2 Continue to work with unions to provide assurances to employees that their safety is a company priority with the support and understanding of the unions.

Revera Response: Implementation of recommendation is in progress.

We have been working with the unions from the onset of the pandemic, and communicate to them the strategies that we have put in place (screening, testing, PPE, communications, playbook, etc.) to create a safe environment for our employees.

- 3 Lobby to make certain the temporary CERB/Employment Insurance federal legislation is modified to the extent possible so as not to dis-incent part-time employment.

Revera Response: Implementation of recommendation is in progress.

Revera has been working with industry associations to work with the government in modifying these incentives to help with our staffing challenges.

IMPROVING ACCESS TO THE PSW PIPELINE, EXPANDING IT AND SUPPORTING THE FIELD

Over the long term, the position of PSW, and barriers to entry or success in the position, should be assessed. Some solutions are set out below.

- 1 Change the reporting requirements:
 - a. The reporting requirements of PSWs have dramatically increased. The need to chart residents' "status quo" and requiring all activities to be recorded in writing – including food consumed and bowel movements – is taking up a significant portion of their shift.

- b. Registered staff should be the primary individuals doing reporting.
- c. Instead of reporting everything, PSWs could report only when something was an exception to the normal.
- d. Employees would have more time to perform the care elements of their job.
- e. This would require working with the Ministries of Health and Long-Term Care to amend reporting requirements.

Revera Response: Implementation of recommendation is not feasible in the foreseeable future.

We currently do not see this recommendation as feasible, as PSW documentation is critical and legislation would need to be changed. Note that Revera has previously invested heavily in automation and digitization of documentation in order to streamline and reduce this task.

2

Reduce the barrier to entry:

- a. The high cost of tuition and closure of community colleges can be a major barrier to entry.
- b. Employers, the individual colleges and the government can address these issues in many ways.
- c. Employer and college solution: Partnership with colleges
 - Some long term care homes have partnered with local community colleges to provide in-house education with a commitment from future graduates that they will work for the employer for a certain length of time after they complete the training.
 - Starting in 2018-2019, Revera partnered with a college on a pilot project involving three long term care homes in three different regions of Ontario. With the project's remarkable success, the pilot has since gone Canada-wide and more colleges have partnered with Revera. The company has since hired a campus partner who works with colleges and school boards to get them started. The longest-running success of college programs involved a Kitchener home, but it has also enjoyed success in other regions. The company has also supported training initiatives with private colleges and partnered with school boards to create a PSW certification process through high school curriculums and placements.

- Students spend four months in class learning at the college and then complete an eight-week unpaid practicum program in a Revera long term care home. (This program is also available for placement in retirement residences with a four-week unpaid practicum.) Once students successfully complete the program, they could be offered conditional employment.
- Revera does not pay for the course, but multiple avenues for tuition relief are available. For students who were not previously employed at Revera, they may qualify for a high-performer grant of up to \$2,000. In some cases, the grant has been offered to two students in one class. Students can also seek tuition relief if they are given a conditional offer during their placement. Accepting the offer makes them eligible to receive \$75 per pay period for a maximum of two years.
- Existing employees who want to enrol in a PSW course (a housekeeper, for example, who wants to be a PSW) can apply for a scholarship program through Revera. This is allocated on a regional basis and will pay for successful applicants to take the PSW course. Two staff members at Revera's Reachview site, for instance, have become PSWs after Revera covered the costs of their night school program.
- Two privately-owned long term care chains partnered with a private Canadian college to run a successful PSW certification program on site. The employer paid the tuition for the PSWs and was able to get a return from a government grant for a portion of the tuition. The employers do not pay the students during the program. The students are in the classroom for the first three months, and then for the next three months they complete a placement in a long term care home and perform community work in retirement residences. The private college condensed the program to six months.
- Employers should also explore the option of having students work part-time as personal service assistants while they obtain their education to become a certified PSW.

d. Employer and college solution – Partnership with Ontario Learning Centre

- The Ontario Learning Centre is offering a program where high school students can take six PSW credits as part of their Grade 12 credit requirement.
- On completion, these students obtain their PSW certificate.
- Some employers offer to pay the tuition for students if the student commits to working for them after graduation.

- e. College and government solution – Reduce the cost of the PSW program
- This would reduce the barrier to entry into the PSW field, and could further expand it if it is designated a high-need vocation and training offered at no charge for tuition.
 - The government could create bursaries/scholarships for PSW education.
 - In Quebec, the government has created a program to encourage people to join the profession. They have created a 375-hour, 12-week program with a combination of training in a vocational setting and distance learning. The program is free and there is a scholarship program of up to \$760/week. Since opening, they have had 10,000 applicants.
 - In Quebec, on completion of the program, students can receive a job where they earn \$49,000 annually.
- f. Government solution – Develop creative programs for employees to become certified
- Some creative solutions include:
 - The government could create apprenticeship programs (this could further reduce the cost barrier to entry, as individuals would be paid while doing the apprenticeship).
 - The government could create a shorter program for training.
 - The government could add an element of healthcare training to high school education requirements; this could spark an early interest in working in health care.

Revera Response: Recommendation already implemented.

As outlined in the body of the recommendation above, even prior to the pandemic, Revera had established partnerships with local colleges to create a pipeline for PSWs.

3

Work to address the negative stigma attached to working in long term care:

- a. The job of PSW is not portrayed in the media as a desirable career.
- b. Employers, the government and the media can work to portray all of the positive work that long term care employees and employers do.

Revera Response: Recommendation already implemented.

The Canadian Association for Long Term Care (CALTC), Ontario Long Term Care Association (OLTCA) and other provincial associa-

tions have invested in campaigns to help change the media perception of long term care. Additionally, Revera invested in a paid media campaign designed to increase confidence in congregate living.

- 4 Recruit overseas and change the scoring of the immigration point system:
 - a. Current immigration rules prioritize higher education under a points system.
 - b. This system diminishes the ability of trained PSWs to come to Canada.
 - c. A concerted lobbying effort to change the points system to prioritize PSWs would assist in the PSW shortage across Canada.

Revera Response: Implementation of recommendation is not feasible in the foreseeable future.

Implementation of this recommendation would require changes in immigration laws and is thus not in Revera's control. However, we believe it is being discussed at various government levels, and we will continue to monitor and actively lobby for it through our various industry associations.



With more than 35,000 people waiting for a place in long term care [in Ontario] and few other options to house them, the government has continued to renew nursing home licenses for buildings that fail to meet current Ministry design standards

CHAPTER FIVE:

Building Resistance

Of all the factors that contributed to the COVID-19 tragedy in the long term care sector, none were more predictable than the insidious effects of the old, outdated buildings that house many of the country's vulnerable seniors. Built decades ago, when multi-bed rooms and communal bathrooms were customary, these long term care homes proved to be a bricks-and-mortar obstacle to containing the novel coronavirus in the spring of 2020 – and the numbers bear it out.

Nearly 60 per cent of resident deaths in long term care homes during the pandemic's first wave occurred in these so-called "C" buildings, which either meet or fall below 1972 design standards. While the age of a building had no bearing on whether COVID-19 broke out in a home, research indicates that it had a major impact on the scope, severity and duration of an outbreak. A study published in the Canadian Medical Association Journal in August 2020, for example, found that Ontario homes with outdated design standards had longer outbreaks, more cases of infection and a higher number of resident deaths.

At Revera, the study jibes with the conclusions of the Revera Expert Advisory Panel, which found that the age of a home was a powerful predictor of whether it would suffer the worst outcomes. Most of the company's 74 long term care homes and 96 retirement residences were unaffected by COVID-19, and the vast majority of the 87 outbreaks it did have during the first wave involved only a single case. But the virus took a toll at nine of the company's long term care homes and six of its

retirement residences, accounting for nearly all 1,486 cases among Revera staff and residents in the first wave, including the deaths of 286 seniors. Of the nine long term care homes most severely impacted, seven were C buildings that conformed to 48-year-old standards.

Outdated buildings where COVID-19 caused the greatest damage, the analysis showed, had been vulnerable to higher rates of seasonal flu outbreaks and other contagions in the past. Indeed, improving infection control was among the reasons that Revera was in the process of seeking government approval to redevelop 30 of its 33 C building sites when the pandemic hit.

For more than two decades, the Ontario government, home operators and seniors' advocates have all recognized the pressing need to upgrade old nursing homes. Yet an ongoing stalemate has paralyzed the approval process for redevelopment. The result has been 22 years of inertia. To date, roughly a third of Ontario's 79,000 long term care beds are still housed in buildings that fail to meet modern design standards. But the pandemic may finally change that. The number of COVID-19 deaths among Canadian seniors in long term care has drawn national and international attention to the old-homes issue, and underscored the need to take immediate action.

As part of Revera's Expert Advisory Panel review, a team of healthcare design experts has identified stopgap measures to improve infection control at the company's older sites in the short term, making better use of existing spaces and devising ways to separate residents and staff as needed. The suggestions may not only reduce infection risks at Revera's C buildings but could also serve as a guide for the many outdated homes that continue to operate during the pandemic. The team has also produced longer-term recommendations for new building designs with the goal of creating safer, healthier environments for the future and the elderly residents who may one day call them home.

A DEVELOPING HISTORY

The notion of dedicated care homes for the elderly grew out of the Industrial Revolution in the late 19th century. As people scattered for jobs in the cities, fewer family members were available to look after aging loved ones. In turn, the 20th century brought the rise of the institution: large, often government-backed facilities that housed various populations – adults with disabilities or mental illness, children with developmental challenges and, also, the aged.

Right through to the 1970s, the design sensibility of “old age” homes reflected an institutional style. Four-bed ward-style rooms, shared toilets, large dining halls and small common areas were standard in the building code of 1972. At the time,

however, the life expectancy of Canadians was just shy of 73 and residents tended to be younger and healthier, with lower rates of dementia and better mobility. As a result, nursing home bedrooms, corridors and communal bathrooms were not necessarily built to accommodate roaming and wandering, wheelchairs or walkers.



But the next two decades heralded a profoundly different approach to housing society's vulnerable seniors. With the 1980s came a growing body of evidence that architectural design has a significant impact on health. In senior living settings, it led to a new focus on preventing falls and controlling infections, and a burgeoning awareness that the layout of physical spaces can have a psychological impact. The era of the institution was over. Families wanted long term care for their aging loved ones in congregate residences that felt more like homes, with private bedrooms, private washrooms and bright, spacious lounge areas.

In response, in 1998, the Ontario government introduced its first Design Manual for seniors' homes, which fundamentally changed earlier standards with the stated intention to create less institutional long term care homes that provide a higher quality of life for the people who live there. It mandated, among other things, an end to four-bed, ward-style rooms and specified that nursing home bedrooms should accommodate no more than two residents.

With demand for seniors' homes growing, the manual – which has been updated several times since – was part of a new capital program in 1998 to build approximately 20,000 new long term care beds in Ontario. It allowed existing homes to continue to operate by the older design standard, with the expectation that they would all eventually be upgraded. A dozen years later, however, very few had been redeveloped.

Despite this, in 2010, the Ontario government granted these homes new 15-year licences to operate, again with the understanding that C buildings would be brought

up to code within that time frame. Yet when the pandemic hit in 2020, nearly 30,000 beds in Ontario remained in substandard homes.

With the 1980s came a growing body of evidence that architectural design has a significant impact on health.

In Ontario, since introducing new design standards in 1998, the province has struggled to establish a workable approval process and funding model for redevelopment. But with more than 35,000 people waiting for a place in long term care and few other options to house them, the govern-

ment has continued to renew nursing home licenses for buildings that fail to meet current Ministry design standards, because the health system cannot go without the beds they provide. Meanwhile, home operators who have been advocating for redevelopment are forced to continue to operate aging homes.

THE HIGH RISKS OF HIGH DENSITY

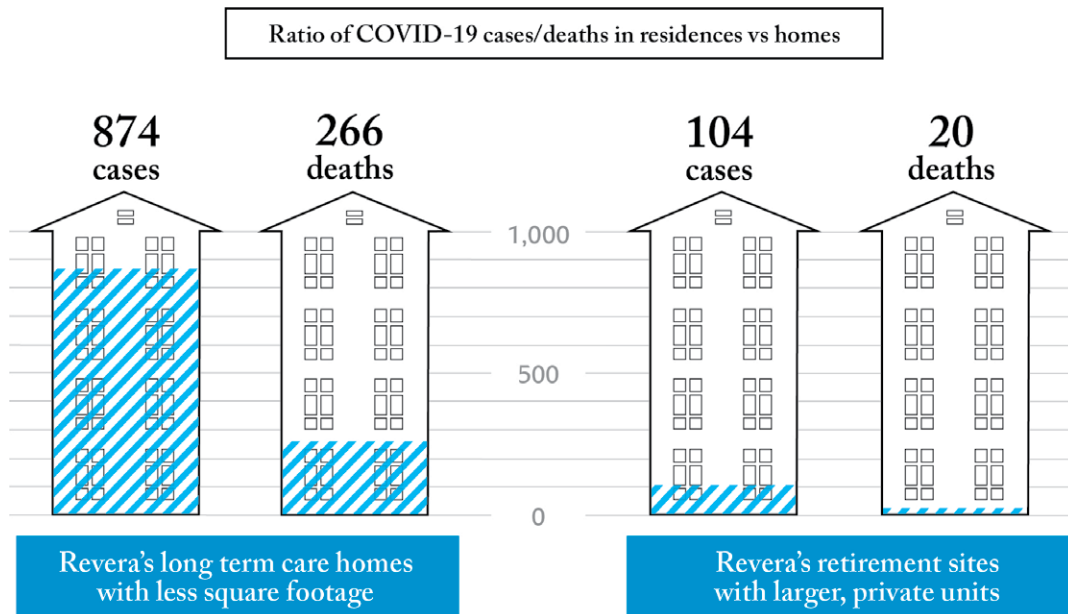
To identify the various infection control challenges in long term care homes, and potential measures to overcome them, the external review design team focused on four of Revera's C buildings plus the proposed layouts of two new long term care homes that the company plans to build. Their review also took into close account the unique threat that COVID-19 poses in congregate settings.

A highly contagious virus that may contaminate objects and surfaces for several hours or more, and has the unusual ability to be transmitted by carriers who are asymptomatic, requires infection control measures that demand space for people to socially distance, quarantine or isolate, and for cohorts to be created to keep the sick apart from the healthy. All of this must be taken into consideration in a building's layout and design. Prior to the 2015 update to Ontario's design standard, for example, the rooms in a long term care home were typically organized in a single wing, making it difficult to create cohorts of residents when an outbreak occurs. Newer homes are organized into smaller units.

With the COVID-specific factors in mind, the team assessed the six Revera sites for the environmental issues that can make a long term care home vulnerable to the spread of infection: the number and density of residents, the number of staff and visitors who access a single building, the movement of staff between multi-resident rooms, and the traffic levels in and around communal areas (such as dining rooms, activity areas or living spaces).

The health benefits of residents having more living space is evidenced by the fact that Revera’s retirement residences fared much better against COVID-19 than the company’s long term care homes. At Revera’s 96 retirement sites – where residents tend to be more able-bodied and independent, and have larger, private units – there were 104 cases among seniors, 20 of whom died. In its 74 long term care homes – where there is less square footage per resident, and more care is required to meet the complex medical needs of the frail elderly – there were 874 cases and 266 deaths.

The ward-style rooms of the outdated sites can be hot spots of contagion not only as a result of four people sharing a confined space for extended periods, but also because it can quadruple the number of other people – staff members, healthcare workers, family and friends – coming into the space and the pathogens they may bring with them. As well, sharing a washroom means more opportunities to spread viruses between residents in the same room. An Ontario study led by Sinai Health System geriatrician and National Institute on Ageing Associate Fellow Nathan Stall, for example, concluded that converting all four-bed rooms to two-bed rooms would have averted 19 per cent of COVID-19 infections and deaths in Ontario long term care homes.



Eliminating the use of ward-style rooms and reducing their maximum occupancy from four residents to two are among the many changes that provincial governments have mandated in the wake of the pandemic’s first wave.

THE GREAT DESIGN GAP

Examining the building layout information for the six Revera sites under review, the design team found stark differences between the proposed new builds, which would meet current standards, and the existing sites, which (as expected) do not meet several of the current fundamental requirements.

Of prime interest in the layouts were resident home areas, or RHAs, where seniors spend most of their time and receive care, including their rooms. The team looked at the spatial characteristics of these RHAs in terms of occupant density: that is, the available square footage per resident; shared spaces with often-touched surfaces where transmission risk could be heightened; and “pinch point” areas, such as narrow corridors, where close contact may be unavoidable.

The comparison showed that there were almost double the number of residents in the RHAs of the four existing sites as there would be in these areas of the two proposed new builds – 60 seniors in C homes, versus 32 in the planned facilities. As well, the review found that less than 15 per cent of beds in the old sites were private bedrooms, whereas more than half (60 per cent) of the accommodation in the new builds would be single rooms. Four-bed wards accounted for roughly half of the total beds in the C sites, a range of between 46 to 53 per cent. In the new builds, as the standards dictate, there are none. Other findings include:

- Existing homes have a bedroom area that is 32 per cent smaller per resident than allotted for residents in the new builds.
- There are 50 per cent fewer washrooms per resident in existing sites than in the proposed new buildings. Washroom-to-resident ratio is 36 per cent lower compared to proposed future sites.
- Increasing the availability of washrooms and sinks can help with infection control.
- The social areas (such as lounges and activity rooms) in existing homes are roughly half the size of these spaces in the proposed new builds.
- Dining room areas in existing sites have anywhere from a quarter to a third of the required space in RHAs (often, dining facilities in existing sites are centralized at grade).
- Proposed new builds include corridors that widen in areas, whereas existing homes are generally without this feature. Widening these areas allows for the possibility of treating them as transitional spaces that can serve as viewing, observing and socializing spaces if common areas are restricted during an outbreak.

- Proposed new builds present fewer pinch points in their planned layouts when compared to existing facilities.
- Consolidated staff space, which is present in all sites, with lockers often below grade, pose challenges to subdividing staff in cases of outbreak. For both existing sites and proposed buildings, storage, supplies and staff care stations were generally consolidated – hampering the ability to decentralize staff teams when outbreaks occur, and to maintain “clean / dirty” flow patterns for things such as laundry, both of which can impact infection control measures.

Recommendations

Modifying older buildings can pose unique challenges, given the obvious limitations of updating existing and occupied structures. Any change must be carefully considered in the context of how it may affect the residents who live there, as well as its regulatory implications. The feasibility of implementing structural or design changes also depends highly on the individual characteristics of each building. Not all changes can be made to every home, and careful individual site assessments are necessary to determine which changes will be possible and beneficial.

With these issues in mind, the following are potential upgrades to existing sites:

A. Priority Recommendations for Implementation in the Short Term

1 Reduce resident density.

A reduction in four-bed wards to semi-private rooms remains the most effective solution to mitigate future outbreak severity and duration, based on the data presented to date and reinforced by external experts. This relatively simple act can reduce the risk of disease spread in the most vulnerable outdated sites. At the four Revera “C” properties reviewed, reducing four-bed room accommodations to a maximum of two beds increases the square-foot-per-resident ratio by 24 per cent at these long term care homes. This allows for better physical distancing and the creation of smaller cohorts, and, ultimately, it can limit the magnitude of an outbreak if one occurs.

Revera Response: Implementation of recommendation is in progress.

This recommendation applies to old C-class long term care properties only, as we do not have ward-style suites in retirement residences. In long term care homes, we are reducing four-bed wards to semi-privates (two beds) through 2021 via attrition. We are also installing Plexiglas separators to provide additional resident protection and safety.

2 Create space to cohort residents.

Many older homes have a central area between two wings. This centralized building footprint provides an opportunity to create two distinct groupings of bedrooms, which could help to separate residents as needed during an outbreak.

Revera Response: Recommendation already implemented.

We have been cohorting residents and staff at our sites since the onset of the pandemic. This is achieved through collaboration between clinical, operations and building management groups and approaches are based on building design/layout.

3 Construct makeshift positive-pressure vestibules.

The bedroom grouping separation could be enhanced by setting up temporary positive-presurized vestibules, similar to those used when renovation work is underway in occupied healthcare facilities.

Revera Response: Recommendation to be considered as part of a future strategy.

Upon consulting with our external consultant, it was confirmed that this recommendation would create safety/fire code concerns and, due to building code requirements, a more permanent solution should be considered as part of a future strategy.

4 Reduce the resident population to increase the availability of social space.

Restricting access to common areas or shared living areas can be isolating for residents; a balance must be struck between social engagement, communal activities and infection control. One bedroom per grouping in existing sites could be converted to a lounge or similar social or activity space, to ensure that residents in separate cohorts have a place to meet during an outbreak. This would reduce the risks of residents congregating in one central space where infection could spread between residents of different cohorts. Designating a communal area for each cohort zone would not only give residents the opportunity for social interaction, but also help to maintain their mobility.

Revera Response: Implementation of recommendation is in progress.

We have reduced the population of our homes through reduction of four-bed ward rooms, allowing for more physical space per resident and better distancing protocol. As well, we have reduced congregation of different cohorts in central areas, to minimize infection spread between cohorts. We will consider more repurposing of space as part of our future strategy to allow for further reductions in cohort sizes.

5 Increase area available for dining and reconfigure critical congregate spaces.

One of the most significant deficits found in the existing buildings reviewed is the small amount of floor area available for dining. If meal service is not delivered at bedside, it is crucial to find ways to expand available meal service areas. If meals are still delivered in the dining room, consider scheduling more than one seating per meal to reduce density among residents. Remove all loose seating furniture (sofas) and tables from sitting and lounge areas

to increase room seating capacity during an outbreak and minimize the number of elements to disinfect; provide seating for loose chairs and wheelchairs only.

Where possible, decentralized dining is recommended. Where dining spaces are located only on the ground floor, designated elevators can transport residents.

Revera Response: Recommendation already implemented.

We have moved to multiple seatings to ensure that cohorts are scheduled in congregate areas at different times if it is not possible to cohort to entirely separate areas.

6 Use screens and temporary partitions to manage communal spaces.

To help maintain social distancing, provide portable Plexiglas screens that are easy to clean and sanitize. Provide temporary drywall partitions that can help to keep two different resident cohorts separate. These temporary dividers could be used in common areas serving more than one cohort grouping, and moved as needed to avoid potential cross-contamination.

Revera Response: Recommendation already implemented.

In our ward-style and semi-private rooms, where safe distancing is difficult, we have invested in special fabricated acrylic screens to allow for better separation of residents in their rooms. These special Plexiglas screens are mobile and can be utilized to separate other areas safely where distancing may not be effective. Where applicable, screening has been used in congregate areas as well.

7 Dedicate a separate elevator for staff and visitors.

To reduce the risk of infecting residents, it is advised, where possible, to dedicate an elevator for only staff and visitors to use, given that these are small, largely unventilated areas of high-touch surfaces.

Revera Response: Implementation of recommendation is not feasible for the foreseeable future.

We are limiting the number of people in the elevators to allow for safe distancing, but have not dedicated elevators to just staff and visitors as this would be impractical for residents who would experience long waits, and in long term care homes, most residents have to be accompanied by a staff member.

8 Reconfigure resident circulation spaces.

Ensure there is safe walking space for dedicated cohorts, particularly for residents with a cognitive impairment who may roam or “walk with purpose.” In addition to the resident room and communal spaces, integrate “intermediate spaces,” such as porches and alcoves,

providing strategically placed seating to allow viewing of the streetscape. This latter recommendation would support the activities of viewing, watching and observing, all of which are recognized as critical components of life in a long term care home.

Revera Response: Recommendation already implemented.

In long term care, each resident home area includes alcoves to serve as a destination at the end of corridors, which may be fitted with life stations. Resident amenity areas are in close vicinity to active areas, such as the nursing station and dining room.

9 Create spaces for family/caregiver access and visits.

To reduce infection risk during the first wave of COVID-19, homes were mandated to follow strict no-visitor policies. But the experience revealed that the resulting unhealthy epidemic of loneliness, anxiety, depression and grief cannot be sustained or allowed to persist throughout future waves of the pandemic. Various design solutions could allow visits to continue, such as:

- a. Designate space at grade near the entry for monitored visits.
- b. Construct temporary visitation modular pods that can be connected to existing entries, to allow for resident and caregiver interaction through panels that can provide visual and, potentially, acoustic connectivity.
- c. If no safe space for visits is available in existing buildings, consider providing power to a location close to the main building entrance, or other door accessible to the resident's path of travel, where a portable and accessible pod can be brought in to allow for a safe visiting protocol. The pod should be well ventilated, provided with a barrier-free entrance, and allow for safe distancing. Ideally, the mechanical systems incorporated within the pod would allow for separate ventilation streams for the resident and visitor within the pod. A strict cleaning protocol between visits would have to be defined and implemented.

Revera Response: Recommendation to be considered as part of a future strategy.

Our approach to date has been to repurpose spaces that are not being used for their intended purposes (e.g., chapels) for visits during an outbreak. In addition, where possible, we have converted interior spaces to safe visiting areas.

10 Delineate staff workflows and work areas.

While there has been a focus on dedicated staff entrances in the context of this current pandemic, staff must also be provided with adequate changing and hygiene facilities, with

the flexibility to segregate these areas further as needed should there be staff teams dedicated to different cohorts of residents. There must be a designated space to accommodate staff testing that can be converted for other uses. In addition to a central command centre, which may be needed to oversee the home's operations, it is highly recommended that homes include a respite area for staff members, with access to natural light and (possibly) nature, given the mental health toll of working in the context of COVID-19.

Revera Response: Recommendation already implemented.

Staff have been dedicated to cohorts, and their interaction in areas of congregation and respite is limited as much as possible (given limitations to the physical plant).

RECOMMENDATIONS FOR THE LONG TERM

Existing older long term care homes will continue to struggle against design challenges that can contribute to the scope, severity and duration of outbreaks, especially given the highly contagious and stealthy nature of the virus behind COVID-19. The physical limitations of these old buildings, constructed to meet standards of a bygone era, can significantly limit effective mitigation efforts in the near term. The best hope of doing so depends on the government, which would need to allow operators to take steps to reduce the number of residents and resident density in the existing spaces in order to bring these ratios closer to the standards of the current recommended guidelines.

The designs proposed for the two new Revera buildings assessed in the external review have already addressed many of the environmental factors that can contribute to the magnitude of any outbreak. This includes the elimination of ward-style rooms, reducing the number of all shared rooms, increasing the size of common areas, enhancing access to outdoor areas, creating residential areas of smaller cohorts, and fewer shared spaces generally. The review process has also added features to plans for the new facilities designed to benefit the mental health of both residents and staff in the event of an outbreak.

Looking ahead, the design team also pointed to the need to apply what has been learned from the pandemic's first wave in terms of selecting sites for future builds. Choosing sites with closer proximity to nearby hospitals, for example, has taken on new importance. As Revera homes pursue closer relationships with hospitals, potentially working toward establishing an "on-campus presence," this could go a significant distance to fostering stronger links between long term care residences and the wider healthcare system.



The findings of the Revera Expert Advisory Panel illustrate the pressing need for a new era of investment in the health system [...] to support the long term care sector

CHAPTER SIX:

Unwritten

Through the spring and summer of 2020, nowhere in the country was a Canadian more likely to die of COVID-19 than inside a long term care home. In these homes, built to look after the elderly who can no longer look after themselves, the novel coronavirus took the lives of more than 7,000 residents between March and September – mothers, fathers, wives, husbands, grandparents, friends. The toll will forever stand as a bleak chapter in the history of a nation that prides itself on the protection it provides its vulnerable citizens.

As the pandemic rages on, there are chapters yet to be written. If they are to tell a different story, a better story, it is crucial to act on what can be learned from what came before. It was with this goal in mind that Revera Inc., which operates 170 long term care homes and retirement residences in six provinces, took the unusual step of assembling an independent panel to review the company's experience in the first wave of the COVID-19 pandemic.

More than two-thirds of Revera's 74 long term care homes are based in Ontario. As a result, the Revera Expert Advisory Panel focused its analysis largely on the experience in Ontario, where the most severe of the company's 87 outbreaks occurred during the pandemic's first wave. Additionally, the report largely focused on long term care, the hardest hit sector in the country. With experts from various spheres of medicine – including specialists in geriatrics, infection control and healthcare design – the panel drew on Revera's internal data as well as public health information to identify factors that contributed to the COVID-19 tragedy, and to provide recommendations.

There were, to be sure, circumstances beyond any human control. Compromised by weaker immune systems and, often, a range of underlying conditions, residents in long term care tend to face the highest risk of poor outcomes with any infection. This virus in particular, as the earliest mortality statistics made clear, poses an especially lethal threat to the aged.

Then, too, there was the sobering discovery that the new pathogen had the capacity to be spread by people without noticeable symptoms of infection, and that the infected can be most contagious before they develop any symptoms. Without that knowledge, the novel coronavirus went undetected as it first entered congregate settings, and, in several sites, flourished.

At the same time, in the pandemic's early days, few recognized that COVID-19 is a master of disguise. Its diverse and ambiguous array of head-to-toe symptoms were easily missed.

The panel found that the magnitude of the COVID-19 crisis was amplified by a combination of historical challenges in the long term care sector and the health system's tendency to prioritize acute care over chronic care. Staffing challenges and old buildings that fail to meet current design standards were among the sector's pre-existing problems – all of which were exacerbated by a health system that neglected the needs of seniors' homes as it rallied to support hospitals.

The impact [of the mortality rates] has forced a national reassessment of the state of long term care, and underscored the urgent need for reform.

The starkest example of this oversight was the decision to reserve the country's scarce supply of personal protective equipment (PPE) for hospital staff, and to overlook the requirements of healthcare workers in long term care homes. This move, which provided congregate homes access to government-purchased PPE only if they already had an outbreak, resulted in larger long term care operators with strategic

sourcing capabilities, like Revera, creating their own consortium to purchase PPE at the height of the crisis in order to distribute life-saving PPE to smaller operators across the sector.

Meanwhile, surveillance testing that would have identified infected staff members and residents were introduced only toward the end of the first wave in Ontario – and not at all in most other provinces. If regular surveillance testing of staff had been available, it is likely homes would have been alerted when someone was positive, allowing for prompt care, isolation and quick contact tracing to occur.

Although testing lagged across the country, the lack of tests for long term care residents and staff meant that not only did individual cases go undetected, but so did rising caseloads within a home, which, if recognized, would have triggered efforts to tighten infection control and create resident cohorts to keep the healthy away from the sick. As it was, the unfortunate chain of events led to outbreaks where dozens of infections seemed to suddenly appear out of nowhere.

While most of Revera's homes were unaffected, or involved just a single case, some long term care homes suffered mightily in the first wave. Under lockdown, residents endured the psychological pain of going months without seeing loved ones, who had been barred by restrictive visitor policies. Long term care doctors, afraid for themselves and vulnerable family members, declined to visit residents in person. Various health authorities added to the chaos with contradictory directions, while homes were discouraged from transferring their infected residents to local hospitals.

The panel found that the shortage of personal support workers (PSWs) in Canada was compounded by the single-site rule that several provinces rightly enacted to prevent staff from working at more than one site. The numbers of these essential frontline workers also dwindled as they themselves became infected and countless others had to be quarantined, while fear spread among employees. At Revera, more than 500 staff members stopped showing up for work without explanation.

With rising case numbers, containing COVID-19 became an epic struggle that stretched into months in some homes, particularly at older, outdated sites in Ontario. These '70s-era homes, with their four-bed wards and communal bathrooms, were the most powerful predictor of Revera's longest and deadliest outbreaks. More than a third of the province's 79,000 long term care beds are in similarly outdated facilities, yet efforts to upgrade them have stalled for 22 years.

Together, these factors added up to a system that failed to protect the vulnerable seniors in its care. But the panel has pinpointed measures to mitigate their impact, which, if implemented, may prevent history from repeating itself.

THE WAVES BEYOND

Armed with knowledge that was unavailable when the pandemic first emerged, science now understands more about the wily nature of this novel coronavirus – and this can make a profound difference to containment efforts. A deep supply of medical-grade masks, for example, and other elements of PPE must be on hand for all long term care employees and the various healthcare workers, doctors included, who might visit a home. Congregate living supervisors must monitor COVID-19 prevalence rates in

the communities where the home is located as well as in the areas where staff members live. As Revera data clearly shows, rising caseloads in communities lead to more infections within long term care homes and retirement residences. When community prevalence increases, so too should public health's prioritization of surveillance testing of staff, visitors and residents – since more than a third of infected individuals may be asymptomatic. Once available in Canada, the government should prioritize senior living settings when providing access to rapid, point-of-care tests, with the goal to integrate these into active screening procedures – particularly when COVID-19 cases are known to be rising in the area.

A positive test result of a staff member or resident should immediately set in motion efforts to isolate, conduct contact tracing and quarantine those who may have been exposed, particularly as it relates to separating residents from one another as needed. The risk of transmission will be further reduced by eliminating shared rooms wherever possible and, as the panel's design team recommends, expanding areas that allow for greater social distancing between residents, staff and visitors.

Working to create more full-time staff positions, with employees trained in infection prevention and control, is also bound to improve outcomes. As Revera's own data indicates, the ability to retain PSWs, and to ensure their satisfaction on the job, depends in large part on their full-time status. Indeed, in B.C., where cases and deaths among long term care residents were significantly lower than the toll in Ontario, the province took measures early in the first wave to promote full-time work, standardize wages among staff, and enable working in a single site.

The efforts of staff in long term care homes in the midst of outbreaks were, in many cases, heroic when they were left short-handed to look after residents, especially given the absence of family caregivers. Designating family caregivers as essential visitors, despite the pandemic, would benefit both the mental health of residents and the workload of those employed to care for them.

Similarly, the panel recommends that long term care homes forge closer relationships with infection control specialists and their local hospitals – well before the moment of need.

AIM HIGH

The loss of life in the long term care sector accounts for most of Canada's deaths during the pandemic's first wave, a proportion of COVID-19 mortality rates unrivalled by any other wealthy country. The impact has forced a national reassessment of the state of long

term care, and underscored the urgent need for reform. While this report has explored some of the factors that contributed to the scope and severity of the COVID-19 experience in long term care homes in the first wave, it cannot fully address why the needs of a sector that is home to nearly half a million seniors were not prioritized by the health system in pandemic preparedness and planning. What can be said is that there has never been a more powerful catalyst for change.

The findings of the Revera Expert Advisory Panel illustrate the pressing need for a new era of investment in the health system by all levels of governments, and a new era of collaboration among the system's many players – public health units, hospitals, physicians, nurses and their governing bodies, healthcare and personal support workers and their unions – to support the long term care sector and its employees, residents and their families.

While the review based its conclusions on data collected through the first wave of COVID-19, the panel's recommendations should serve as a guide to navigate not just further waves of the current pandemic, but whatever future contagions appear on the horizon. The novel coronavirus is not the first pandemic microbe to humble the world, and it is unlikely to be the last. At the same time, the population most vulnerable to infection, the elderly, is a burgeoning demographic that will inevitably require various levels of care in a range of congregate settings. For them, their families, and the staff who will care for them, it is critical to act on the hard lessons learned from COVID-19 in order to live up to the aims of a compassionate society.

Our Expert Advisory Panel

Special thanks to our expert advisory panel for their hard work and insights. Members of the panel contributed their advice and recommendations on a voluntary basis.

Dr. Bob Bell, Chair, Former Ontario Deputy Minister of Health and former President and CEO of University Health Network. Dr. Bell agreed to participate in and chair this advisory committee. Revera agreed that Dr. Bell will have final editorial approval of the committee's report.

Dr. Diana Anderson, Healthcare architect and board-certified internist, DoChitect

Bob Bass, Bass Associates Professional Corporation

Dr. Vivek Goel, Vice President, Research and Innovation at the University of Toronto; Founding President and CEO, Public Health Ontario

Santiago Kunzle, Director and Principal, Montgomery Sisam Architects Inc.

Dr. Mark Loeb, Professor, Departments of Pathology and Molecular Medicine and Health Research Methods, Evidence, and Impact, McMaster University

Dr. Allison McGeer, Professor, Departments of Laboratory Medicine and Pathobiology and Public Health Sciences, University of Toronto

Michael Nicin, Executive Director, National Institute on Ageing, Ryerson University

Dr. Krystyna Ostrowska, Medical Microbiologist/Infectious Disease Specialist, Trillium Health Partners and LifeLabs, and Lecturer, University of Toronto

Dr. Samir Sinha, Director of Geriatrics, Sinai Health System and the University Health Network; Director of Health Policy Research, National Institute on Ageing, Ryerson University

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