Describing of Issues within Long-Term Care During the COVID-19 Pandemic: Inappropriate Antipsychotic Use in Persons with Dementia and Future Strategies to Improve Pandemic Protocols

by

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ABSTRACT

During the COVID-19 pandemic, long-term care (LTC) homes in Ontario were left severely underprepared, and many residents, specifically those with behavioral and psychological symptoms of dementia (BPSD), were contained and sedated using antipsychotics as chemical restraints. LTC homes were understaffed, crowded, did not have proper infection control protocols and overall lacked funding: all of which left them underprepared when faced with the COVID-19 pandemic. These issues became massive problems that led to many resident deaths during COVID-19. Though recommendations were given to help improve the above weaknesses in LTC after the severe acute respiratory syndrome (SARS) outbreak of 2002-2004, they were not applied to the LTC sector. This paper will recommend future strategies for Ontario's LTC by analyzing past recommendations and changes made in other countries that saw fewer resident deaths during the COVID-19 pandemic. Specifically, implementing quality improvement (QI) projects to improve weaknesses and test changes on a small scale to measure improvements, and implement policy changes to staffing, crowding, funding, training, and types of therapies given to those with dementia in LTC homes to better pandemic preparedness and decrease the use of antipsychotics as chemical restraints.

Keywords: COVID-19; LTC; Ontario; Antipsychotics; BPSD; SARS; Quality

Improvement; Policy

AUTHOR'S DECLARATION

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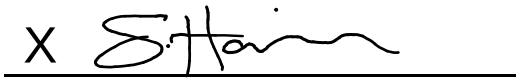

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STATEMENT OF CONTRIBUTIONS

I hereby certify that I am the sole author of this Major Paper and that no part of this paper has been published or submitted for publication. I have used standard referencing practices to acknowledge ideas and other materials that belong to others. Furthermore, I hereby certify that I am the sole source of creative work and/or inventive knowledge described in this Major Paper.

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LIST OF ABBREVIATIONS AND SYMBOLS

COVID-19- Coronavirus disease of 2019

LTC- Long-Term Care

PPE- Personal Protective Equipment

PWD- Persons with Dementia

SARS- Severe Acute Respiratory Syndrome

SARS- CoV- SARS Coronavirus

BPSD- Behavioral and Psychological Symptoms of Dementia

QI- Quality Improvement

UK- United Kingdom

GMC- General Medical Council

FIT- Focused Intervention Training

AUAA- Appropriate Use of Antipsychotics Alberta

AUA- Appropriate Use of Antipsychotics

CFHI- Canadian Foundation for Healthcare Improvement

PSW- Personal Support Worker

LQIP- Long-Term Care Home Inspection Program

OECD- Organization for Economic Co-operation and Development

QIP- Quality Improvement Plan

PDSA Rapid Cycle- Plan-Do-Study-Act Rapid Cycle

CBD- Cannabidiol

THC- Tetrahydrocannabinol

Chapter 1. Introduction and Background

The coronavirus disease of 2019 (COVID-19) has wreaked havoc within Ontario long-term care (LTC) facilities over the course of the pandemic. Many issues amalgamated to cause the severe failure in LTC we have seen during the pandemic in Ontario. Among those issues are inadequate personal protective equipment (PPE) stockpile available to staff of LTC facilities, overcrowding of residents within LTC facilities, understaffing in LTC homes, and lack of infection control training and qualified personnel in LTC settings (Brophy et al., 2021; Brown et al., 2021; Silverman et al., 2020). These factors all contributed to LTC facilities being overwhelmingly unprepared for potential infectious outbreaks and the large-scale outbreaks within these facilities during the COVID-19 pandemic. The unpreparedness, such as the lack of PPE and understaffing mentioned above, had repercussions leading residents to suffer from high levels of anxiety, depression, and loneliness (Badone, 2021). With this, increased use of antipsychotic medication was reported (Howard et al., 2020). Antipsychotics were used to manage residents' behaviour, especially those with dementia (Howard et al., 2020).

The public health sector in Ontario, including LTC, saw a cut to promised funding of approximately $500 million before the pandemic in 2019-2020, indicating that LTC was not among the main priorities of the Ontario government (Financial Accountability Office of Ontario, 2020). However, after the thousands of deaths of LTC residents from COVID-19, the Ontario government plans to invest more funds into LTC (Government of Ontario, 2021; Lowrie, 2020). The funds being distributed to LTC need to be invested in strategies to help improve pandemic protocols in the wake of future outbreaks to ensure

appropriate care is given to those in LTC homes and enhance the quality of life of residents.

In 2019, the Government of Canada introduced *A Dementia Strategy for Canada* (Public Health Agency of Canada, 2019a). This strategy's vision was for caregivers and persons with dementia (PWD) to be supported, for dementia to be understood and prevented, and for quality of life to be optimized (Public Health Agency of Canada, 2019b). The specific national objectives were to prevent dementia, advance therapies and find a cure, and improve the quality of life for PWD as well as caregivers (Public Health Agency of Canada, 2019b). To achieve this improved quality of life, the Public Health Agency of Canada outlined that PWD need safe communities, access to quality care, and improved treatments (Public Health Agency of Canada, 2019b).

During the COVID-19 pandemic, the flaws in LTC homes were highlighted. The issues that the 2019 dementia strategy addressed were enhanced, and residents with dementia and caregivers alike faced difficult circumstances (Lowrie, 2020; Public Health Agency of Canada, 2019b). Without the proper funding and policies in place, the objective of improving the quality of life for PWD and caregivers and advancing therapies were not met. Instead, residents in Ontario LTC homes, in which over half have dementia, were disproportionately affected by COVID-19 (Canadian Institute for Health Information, 2021a; Ontario Long-Term Care Association, 2021). Those in LTC homes faced high death rates due to COVID-19 and a spike in overprescribed pharmaceuticals that were not deemed safe or appropriate based on symptoms (Canadian Institute for Health Information, 2021a; Kirkham et al., 2017; Velayudhan et al., 2020).

COVID-19 is not solely responsible for the issues seen in LTC homes; yes, it did exacerbate the problems; however, those problems were around long before COVID-19 plagued LTC (Carroll, 2021; Daly, 2015; Liu et al., 2020). LTC in Ontario was never planned; it has simply evolved to be what it is today, and due to this, we see the issues mentioned above, such as overcrowding and understaffing (Daly, 2015). During the severe acute respiratory syndrome (SARS) outbreak in 2002-2004, these issues were present in LTC settings. However, the impact that SARS had on LTC residents was minimal. Therefore, we did not see the same level of attention and outcry as we see now due to COVID-19 (Ontario Human Rights Commission, 2001; Silverman et al., 2020). The following sections will investigate the history of severe acute respiratory syndrome (SARS) in Ontario and how it relates to the COVID-19 pandemic, specifically in LTC homes, as well as the purpose of LTC in Ontario and how dementia and antipsychotic medications relate to it to provide background on this topic.

1.1 SARS 2002-2004 Outbreak in Ontario and COVID-19

SARS is a viral respiratory illness caused by the SARS coronavirus (SARS-CoV) (Centers for Disease Control and Prevention, 2013). SARS was first reported in 2002 in the Guangdong Province in China (Caldaria et al., 2020). It then spread to over 24 countries before it was contained in 2004. The most considerable impact SARS had in Canada was on acute care hospitals. Due to this, Ontario allocated funding to enhance acute care infrastructure and expand overall preparedness for outbreaks, such as creating a PPE stockpile and improving public health laboratories (Silverman et al., 2020). The government also invested in improving staffing, training, and infection control and prevention within acute care (Silverman et al., 2020).

Additionally, the government thought it was essential to improve public health laboratories as public health laboratories in Ontario could not meet the demands for SARS testing (Health Canada, 2003). There was not a significant effect on LTC homes in Ontario during the SARS outbreak. Due to this, no significant changes were made to LTC facilities directly relating to SARS.

As of 2004, there were no reported cases of SARS worldwide until 2019 (Centers for Disease Control and Prevention, 2016). In Wuhan, China, 2019, there were reports of a novel coronavirus. This virus was similar to SARS-CoV, so it was aptly named SARS-CoV-2. Coronavirus disease 2019, known as COVID-19, is the disease caused by SARS-CoV-2. It reached epidemic levels in Wuhan, China, and was declared a pandemic once it spread across several countries (Centers for Disease Control and Prevention, 2020).

1.2 Purpose of Ontario Long-Term Care and Prevalence of Dementia

Ontario's LTC facilities provide support, care, and healthcare services to more than 115,000 people each year (Ontario Long-Term Care Association, 2021). LTC homes has 24/7 supervision for those who need it (Ontario Long-Term Care Association, 2021). Nursing care, primary medical care, and assistance with daily living are all integral parts of LTC. A large proportion of those in LTC homes have either physical impairments/ frailty or cognitive impairment. These conditions are usually coupled with other chronic health conditions such as type 2 diabetes, hypertension, heart failure, and chronic obstructive pulmonary disease (Pandya, 2011).

By association, a large portion of LTC residents have dementia, and it is estimated that approximately 70% of PWD will be admitted into LTC (Ontario Long-Term Care

Association, 2021). For decades, LTC in Ontario has been faced with underfunding, overcrowding, and understaffing. The infrastructure in LTC in Ontario was also dated and not up to standard (Thompson & Jeffords, 2021).

1.3 Dementia in Long-Term Care

Dementia is a group of symptoms that includes loss of thinking skills, memory, and the loss of ability to accomplish daily activities (Alzheimer Society Canada, 2018b). Dementia is also a condition that can be caused by different medical and neurological diseases. Any disorder that decreases one's previous level of cognition significantly is termed dementia (Gale et al., 2018). In Canada, over half a million people live with dementia, and an additional 25,000 people are diagnosed every year (Alzheimer Society Canada, 2018a). Canada has a growing and aging population, which is why the Alzheimer's Society of Canada expects these numbers to increase to 937,000 by 2031 (Public Health Agency of Canada, 2017, 2019a).

Dementia is a debilitating condition due to its impact on the individual's daily functioning. A loss of independence with PWD comes with their decline in cognition (Gale et al., 2018). PWD often require daily assistance due to increased risk from their disorientation and the additional burden of behavioral and psychological symptoms of dementia (BPSD) (Atti et al., 2014; Sutcliffe et al., 2015). Changes in mood leading to agitation, depression, and anxiety in conjunction with memory loss, declining motor skills, and thinking skills are all considered BPSD and make effective and appropriate care for PWD difficult (Bieber et al., 2019; Sutcliffe et al., 2015). Family members or friends of PWD have the complicated role of becoming the informal caregiver to their

loved ones (Bieber et al., 2019). This new role is difficult to navigate and can become a burden to the informal caregivers and lead to PWD being moved to long-term care facilities or receiving proper in-home care (Alzheimer's Association, 2019; Bieber et al., 2019; World Health Organization, 2019).

Approximately 62% of residents in Ontario LTC facilities have a dementia diagnosis (Ontario Long-Term Care Association, 2021; Sun, 2021). Family members and friends of those with dementia move their loved ones to LTC homes as managing and caring for PWD can be onerous for caregivers. Many do not have experience caring for those with cognitive impairments (Bieber et al., 2019; Carroll, 2021). Knowing how to help those with cognitive impairments is an advantage that many assume LTC workers would have. Yet, a report by Ontario's Long-Term Care COVID-19 Commission found that some LTC facilities' medical directors had no training in how to provide for those with cognitive issues (Carroll, 2021). Medical directors in LTC homes are physicians in charge of developing, implementing, monitoring, and evaluating medical services to residents, as well as advising on clinical procedures and policies. For someone in this position to have no training in cognitive dysfunction is a significant oversight and irresponsible as cognitive impairments make up 90% of residents, and approximately 2/3^{rds} of those are PWD (Marrocco et al., 2021; Ontario Long-Term Care Association, 2021). Without proper training about the needs and how to assist those with cognitive dysfunction, specifically dementia, a more pharmaceutical approach can be recommended during times of stress by the medical director and cause PWD to be sedated instead of adequately seen to. This approach was seen during the COVID-19

pandemic as antipsychotics were used as a form of sedation to compensate for understaffing and overcrowding in LTC homes (Marrocco et al., 2021).

1.4 Antipsychotics use and best practices

Antipsychotic medications are a class of drugs that were developed to treat psychosis. The intended use was for conditions like schizophrenia, bipolar disorder, and depression; nonetheless, this drug class is commonly used in PWD (University of Calgary, 2014). Antipsychotic medication is given to PWD to help manage BPSD, regardless of whether or not it is the appropriate treatment option (Kirkham et al., 2017; Rios et al., 2017; University of Calgary, 2014). The best guidelines for antipsychotic medications state that they should not be used for more than 6-12 weeks at their lowest dosage (Bangash et al., 2017). While professionals agree that antipsychotic medications can be an appropriate intervention for BPSD in PWD if the symptoms are severe and dangerous enough, the dosage and frequency often exceed what is recommended (Kirkham et al., 2017). In these instances, the prescribing of antipsychotic medications can be deemed inappropriate because they do not follow the medications recommended usage and do not benefit the PWD (Bangash et al., 2017; Kirkham et al., 2017).

Side effects of antipsychotics can include increased risk of cardiovascular death, falls, sedation, and sudden death (Bangash et al., 2017). In addition to these side effects, antipsychotics are associated with weight gain, diabetes, and hyperlipidemia (Atti et al., 2014; University of Calgary, 2014). Antipsychotics cause more side effects, but the ones listed above generally have a significantly adverse impact on PWD (University of Calgary, 2014).

1.5 COVID-19 in Long-Term Care

As previously mentioned, residents within LTC facilities were one of the groups hit the hardest during the COVID-19 pandemic. These individuals were subjected to abhorrent conditions due to the lack of preparedness mentioned above (Silverman et al., 2020). The reality is that many LTC facilities, both publicly and privately managed, are faced with an overcrowding of residents and understaffing (Brown et al., 2021; Silverman et al., 2020). These issues intensified once the pandemic began as residents became sicker due to COVID-19 and required extra medical attention. LTC employees also contracted COVID-19 and were unable to work as a result (Brophy et al., 2021). With even lesser staff, LTC facilities were unable to manage or contain the outbreaks occurring. Strict quarantining protocols were put in place but many residents with cognitive disabilities could not comprehend the protocols. This led to wandering and decreased moods due to a lack of interaction and stimulation (Alonso-Lana et al., 2020). Further problems occurred with COVID-19 spreading to staff and residents in LTC homes. These situations became unmanageable without staff to care for residents and the unmanageability contributed to the increased use of antipsychotic medication (Alonso-Lana et al., 2020). The Ontario government and LTC facilities should acknowledge this issue and consider solutions to try and decrease the use of antipsychotics as chemical restraints and only prescribe them according to recommendations.

1.5.1 PPE Stockpile in LTC

Regarding the PPE stockpile, after the introduction, funds were not allocated to maintain the stockpile. As a result, in 2017, all expired products were disposed of and continued to be disposed of moving forward (Silverman et al., 2020). However, there

were no funds available to replenish the stock. This led to a shortage of PPE at the beginning of the COVID-19 pandemic. There was also a lack of reporting between the federal and provincial governments, as both were unaware that the other was failing to maintain the PPE reserves (Brophy et al., 2021; Silverman et al., 2020). Both governments counted on the other to support the depleting reserves, which further amplified supply issues.

1.6 Summary

This chapter has discussed the SARS 2002-2004 outbreak, the precursor to COVID-19, and how SARS 2002-2004 led to minimal changes in LTC in Ontario. Further to this, the purpose of Ontario LTC and dementia in LTC was reviewed. Next, the use and best practices of antipsychotic medications were discussed, and how this drug class should be used sparingly in those with dementia with BPSD. Finally, the presence of COVID-19 in LTC facilities was appraised, and issues within LTC, such as overcrowding, understaffing, and lack of PPE, were examined. These topics are integral to understanding why LTC in Ontario failed to protect residents. They also support the discussion of possible solutions to strengthen pandemic protocols in LTC in Ontario and decrease overprescribing of antipsychotics, such as quality improvement (QI) projects, policy changes, and the use of alternative therapies, which will be discussed further in Chapter 4.

In Chapter 2, a historical review will be conducted to provide context on where LTC went wrong; overprescribing antipsychotics and long-standing issues within LTC will be the main focus. Firstly, the history of antipsychotics in Canada will be discussed,

and examples of how a country with a similar healthcare system to Canada, England, dealt with antipsychotic reform will be considered. Secondly, past issues in LTC will be addressed and explored, such as funding, understaffing, overcrowding, and lack of training. Lastly, how these issues impacted antipsychotic use in LTC will be highlighted.

Chapter 2. Historical Review

This chapter will begin by examining the history of antipsychotics as well as the history of antipsychotic reform in England and Canada. It will then explore issues within LTC, such as understaffing, crowding, lack of training and education for PWD, and the use of antipsychotics in LTC. This information will provide the reader with context as to the problems in LTC in Ontario regarding antipsychotic use and how the pandemic exacerbated the problem. It is essential to understand how LTC came to be in Ontario to understand how these issues led to the results seen during the COVID-19 pandemic. With this information, the problems within LTC will be explored. To be aware of why strategies to decrease antipsychotic use in LTC are essential in the event of another outbreak, we need to reflect on the history of shortcomings in LTC leading up to and during the COVID-19 pandemic.

2.1 The History of Antipsychotics

Antipsychotics, formerly known as neuroleptics or major tranquilizers, are the main class of drugs used to treat psychosis, specifically schizophrenia (The Centre for Addiction and Mental Health, n.d.). There are two distinct types of antipsychotics; first-generation antipsychotics and second-generation. First-generation antipsychotics were approved in the 1950s and, since then, have been used for the treatment of BPSD despite the lack of scientific evidence supporting its use in dementia (Liperoti et al., 2008). Second-generation antipsychotics were introduced in the 1990s and believed to have fewer side effects than first-generation antipsychotics. However, this was found to be untrue as second-generation antipsychotics just have different side effect profiles. With

this knowledge that second-generation antipsychotics were not the safer alternative, many physicians reverted back to first-generation antipsychotics to treat BPSD (Schneider et al., 2006).

Using antipsychotics for BPSD has been a controversial topic for decades (Banerjee, 2009). Without substantial scientific evidence to support the use of antipsychotics for those with BPSD, many organizations, like the Alzheimer Society, advise against it and deem it as a last resort (Alzheimer Society Canada, 2017). In 2017, Alzheimer Society Canada released a position statement solidifying that notion. The report highlighted the issue with over-prescription of antipsychotics in LTC with those with dementia, as well as the inconsistent usage observed from province to province and LTC home to LTC home. Due to the risks of antipsychotics mentioned in section 1.4, the Alzheimer Society of Canada recommends antipsychotics as a last resort for BPSD and focuses on a more person-centered approach to care, which will be discussed in Chapter 4.

In England, years before the Alzheimer Society Canada's position statement, the Alzheimer Society United Kingdom (UK) made similar recommendations in the report *Optimising treatment and care for people with behavioral and psychological symptoms of dementia: A best practice guide for health and social care professionals* (2011). This report, in conjunction with an independent report by Professor Sube Banerjee, led to nationwide reform of antipsychotic use, as discussed below (Alzheimer's Society, 2011; Department of Health, 2015). This action plan in England impacted Canada's information regarding the risks and best practices of antipsychotic use and how Canada chose to approach antipsychotic reform, which is why the action plan will be discussed below

(Alzheimer Society Canada, 2017). Additionally, England's policy reform and action plan discussed below will be valuable when exploring future strategies for LTC in Ontario in Chapter 4.

2.1.1 Antipsychotic reform in England

Before significant policy change in the UK, it was reported that over 145,000 people with dementia were being overprescribed antipsychotic drugs leading to 1,800 deaths a year (Triggle, 2009). The government had been aware of the need for change regarding antipsychotic prescribing and asked the Professor of Dementia and Associate Dean at Brighton and Sussex Medical School, Dr. Sube Banerjee, to conduct an independent report outlining the use of antipsychotics for PWD in England. The study results led to Banerjee calling for action "to deal with the specific problem of the overuse of antipsychotic medication in England" (Banerjee, 2009). He made recommendations for the appropriate use of antipsychotics, which led to policy being put forth. The government agreed that these numbers were startling and indicated neglect towards PWD (Department of Health, 2015).

The goal of the policy changes seen in England was to reduce the prescribing of antipsychotics in PWD. The action plan, executed by the National Institute of Health and Clinical Excellence, had multiple objectives to fight inappropriate prescribing of antipsychotics (Dementia Partnerships, 2009). These included appointing a new National Clinical Director for Dementia and outlining the importance of psychological therapy. It also highlighted that providing more access to psychological treatment for PWD and caregivers was essential to identify the root of the aggression and agitation to better

prevent it. Auditing the prescribing of antipsychotics, so definitive figures were available, and creating targets to cut antipsychotic use were also crucial objectives. The action plan also aimed to regulate the medication more efficaciously through collaborations with the General Medical Council (GMC) and Royal Colleges, and the Alzheimer's Society. The last crucial objective was for all healthcare professionals to have specialist training on dementia to deepen their understanding of assisting PWD (The Pharma Letter, 2009).

The main point of this action plan was not to ban the use of antipsychotics and audit its usage but create a nationwide initiative to decrease the frequency of inappropriate prescribing due to the dangers associated with antipsychotics within the dementia population. This action plan highlighted identifying the root causes of the BPSD and coming up with non-pharmacological interventions to help reduce the strain and frequency of the symptoms (Dementia Partnerships, 2009).

Another policy implemented in England to address inappropriate prescribing of antipsychotics was called the Focused Intervention Training (FIT) and Support into Practice Program. This program aims to help healthcare professionals by providing patient-centered care to reduce inappropriate antipsychotic prescribing. Dementia Practice Development Coaches deliver intensive training and education for nine months to help professionals reduce antipsychotic prescribing and use alternative evidence-based best practices to help reduce BPSD (Brooker et al., 2016).

England's National Health Services Information Centre conducted an audit in 2012 about the inappropriate prescription of antipsychotics in PWD. It found that between 2008 and 2011, there was a 52% reduction in antipsychotic prescribing after the implementation of the above policies. England still strived to reduce the prescribing of

antipsychotics in cases where it was deemed unnecessary, so they further evolved their strategy and in 2015, the English government released the *Prime Minister's challenge on dementia 2020.* This report outlined the government's commitment to improving the quality of life of PWD and its continuation of regulating antipsychotic use. They pledged to continue monitoring the prescribing of antipsychotics in PWD and not let this initiative become less of a priority (Department of Health, 2015).

The action plan discussed above and the FIT program represents valuable strategies. They will be used as a guide for my discussion of future strategies to implement in Ontario LTC to try and decrease antipsychotic prescribing in those with BPSD. Although Canada faced similar issues with over-prescribing antipsychotics in LTC for those with dementia, minimal action was taken to try and reduce and audit prescribing leading up to the COVID-19 pandemic (CBC News, 2008). The history of antipsychotics in Canada is similar to that of England's; however, England has a nationwide, cohesive plan to try and tackle the over-use of antipsychotics, which led to a reduction of inappropriate antipsychotics use before COVID-19, while Canada does not. Discussing how Canada chose to tackle antipsychotic reform will be beneficial while exploring how antipsychotics are used in LTC and how that impacted their use during the COVID-19 pandemic.

2.1.2 The History of Antipsychotics Reform in Canada

The Canadian government was aware of the dangers associated with antipsychotic use for BPSD, as Alzheimer Society Canada outlined it explicitly in 2017. Moreover, many studies have been conducted outlining the risks associated with continued

antipsychotic use in PWD (Alzheimer Society Canada, 2017; Kirkham et al., 2017). In Canada, antipsychotics are prescribed to approximately 30% of all PWD in LTC facilities (Alzheimer Society Canada, 2017; Kirkham et al., 2017). In most cases, the prescribing goes against the *American Geriatric Society Beers Criteria for Potentially Inappropriate Medication Use in Older Adults* (2019), a reference tool used frequently by healthcare professionals to determine appropriate medication in older adults (Alzheimer Society, n.d.; American Geriatrics Society, 2019). The prescribing of antipsychotics within the dementia population varies considerably from province to province, and the prescription rates differ based on the LTC facility (Alzheimer Society Canada, 2017).

There has yet to be a national regulatory approach or policy implementation in Canada to reduce the inappropriate prescribing of antipsychotics in PWD. Provinces like Alberta and New Brunswick in Canada have created programs to try and mitigate antipsychotic use. One noticeable program is the Appropriate Use of Antipsychotics in Alberta (AUAA) (Alberta Health Services, n.d.). This program started in 2011 and has policies in place to reduce inappropriate prescribing and regulatory approaches involving a provincial clinical guideline. Alberta's AUAA is the most extensive intervention with the goal to reduce antipsychotic prescribing to date in Canada, which has helped Alberta have the lowest average of antipsychotic prescribing of any province (Canadian Institute for Health Information, n.d.).

New Brunswick also created an antipsychotic reduction plan called the Appropriate Use of Antipsychotics (AUA) Collaborative. It's a person-centered approach relying on the team of caregivers to understand the cause of the behaviours and respond to the variables responsible for triggering them instead of going straight to prescribing

antipsychotics (Canadian Foundation for Healthcare Improvement, n.d.-b). It was delivered in the province in 2 phases running from 2016 to 2018. Since then, this program was introduced in Quebec, Newfoundland and Labrador, and Prince Edward Island (Canadian Foundation for Healthcare Improvement, n.d.-b). These policies are relatively new and are being headed provincially. Although many provinces are taking the initiative to implement these programs, many provinces and territories, most significantly Ontario for this discussion, have no programs in place to decrease antipsychotic prescribing in PWD.

The AUA program in New Brunswick was a collaboration between the Canadian Foundation for Healthcare Improvement (CFHI), the New Brunswick Association of Nursing Homes, and the Government of New Brunswick. The change in prescribing for participating residents was 52%, with 34% of that group discontinuing use entirely (Canadian Foundation for Healthcare Improvement, n.d.-b). The CFHI tried to implement this program nationwide from 2014 to 2015, but it was not achieved. Since then, this program was introduced in Quebec, New Brunswick (as mentioned above), Newfoundland and Labrador, and Prince Edward Island. In 2020, this initiative hoped to spread to 56 LTC facilities in British Columbia. Such collaborations have helped reduce the prescribing from 1/3 in 2013-2014 to 1/5 in 2017-2018 (Canadian Foundation for Healthcare Improvement, n.d.-a).

The lack of nationwide regulatory action against over-prescribing of antipsychotics leaves inconsistent prescribing and usage of antipsychotics. While some provinces have collaborated with organizations to create programs to keep LTC homes accountable for antipsychotic prescribing and decrease over-prescribing, Ontario has not. Ontario will not

see substantial improvements in medication use without using these collaborative quality improvement initiatives, such as AUAA or the AUA (Hirdes et al., 2020). The lack of joint initiatives is only one issue seen in LTC in Ontario. Yet, it is one that had an impact on LTC during the COVID-19 pandemic. Other problems contributing to how LTC homes in Ontario could provide residents during the COVID-19 pandemic will be considered below.

2.2 Issues within LTC

While there are many issues in LTC in Ontario, one of the root causes of the problem is a lack of funding and valuable allocation of funds (MacDonald, 2020). Without proper funding and disbursements of funds, LTC homes keep making cuts to staff while trying to maximize profit by increasing the long-term care sector and having more beds and space for residents (Long-Term Care Staffing Study Advisory Group, 2020). While this was an important area of improvement for LTC in the decade leading up to the COVID-19 pandemic, as space in LTC homes was scarce, it contributed to another issue as it allowed for the quality of care for those who would occupy the beds to deteriorate and be swept underneath the carpet (Armstrong, 2009).

Additionally, an unrealistic ratio came about by decreasing staff and increasing residents in which there were too many residents and not enough staff to care for them (Long-Term Care Staffing Study Advisory Group, 2020). This led to increased stress for staff and poorer quality of care for residents (Revait, 2020). The truth is that staff in LTC homes were spread thin before COVID-19, and the issue has only worsened as the pandemic progressed (MacDonald, 2020). Many LTC employees feel that even with the

funds being received, essential changes are not being seen that would help to improve the quality of life of residents. Funding is not being allocated to the hands-on element of LTC homes (Armstrong, 2009). There are three main issues that will be explored below. Staffing, crowding and a lack of training in dementia care in LTC all led to the abhorrent conditions seen in Ontario LTC during the COVID-19 pandemic and they will be discussed in the following sections.

2.2.1 Staffing

As discussed above, there was an issue of understaffing that plagued Ontario's LTC homes long before the COVID-19 pandemic (MacDonald, 2020). While funding is a significant component of the problems in staffing we have seen, it is not the only factor. For decades, LTC homes have been persistently understaffed, leaving residents underserved (Shreve, 2021). Year after year, the demand for LTC has grown, and resident acuity has become more of an issue. Staffing levels have not been able to keep up with the increase, causing a substantial workload for staff (Long-Term Care Staffing Study Advisory Group, 2020). This issue leads to high stress, an increased likelihood of workplace injury, and less time spent with residents.

Within LTC facilities in Ontario, approximately 58% are personal support workers (PSW), 25% are registered nurses, registered practical nurses, and nurse practitioners, and the rest are allied healthcare professionals (Long-Term Care Staffing Study Advisory Group, 2020). PSWs make up the majority of the LTC sector and are not regulated profession. Even though they comprise over half of the workforce, they have little

autonomy, and there is a decrease in the interest of students enrolling to become PSWs despite the demand for them (Long-Term Care Staffing Study Advisory Group, 2020).

LTC homes often have a toxic "compliance culture" which focuses only on meeting the Long-Term Care Home Quality Inspection Program (LQIP) standards. Those who work in the LTC sector find this to be punitive and leads to staff centering on the regulated tasks and often neglecting other important outcomes such as residents' rights, security, and quality of life (Long-Term Care Staffing Study Advisory Group, 2020). This lack of autonomy and organizational freedom creates a negative image of working in LTC and makes staff feel fearful of errors and less likely to come forward with issues or incidents (Shreve, 2021). PSWs and nurses (registered nurses, registered practical nurses, and nurse practitioners), especially women, often do not report incidents of racism, sexual harassment, or assault to supervisors for fear that they will be blamed or their hours will be reduced because they are the "problem" (Long-Term Care Staffing Study Advisory Group, 2020). This culture has been present in LTC for quite some time and causes undue stress to staff, and makes for a hostile work environment.

This is not the only issue that contributes to understaffing in LTC. Many staff cannot get full-time positions regardless of their interest (Long-Term Care Staffing Study Advisory Group, 2020). Many nurses and PSWs are employed part-time at multiple LTC homes to make ends meet (MacDonald, 2020). LTC homes are unwilling to hire full-time staff and instead opt for more part-time workers due to scheduling conflicts and insufficient downtime for staff (Long-Term Care Staffing Study Advisory Group, 2020). LTC homes require 24/7 care. To achieve this, they employ many part-time and casual workers instead of a balance of full-time, part-time, and casual. This not only makes for a

less stable environment for residents as they have inconsistency with care, but it also makes work environments more stressful for staff (Long-Term Care Staffing Study Advisory Group, 2020; MacDonald, 2020). This issue was highlighted during the COVID-19 pandemic due to the pandemic protocols put in place. In April of 2019, LTC staff were ordered to work in only one home to try and stop the spread of COVID-19 (Long-Term Care Staffing Study Advisory Group, 2020). While this was essential to slow the spread of infection, many LTC homes were decimated by losing most of their workforce, and residents were left neglected.

LTC staff have been discussing the issue of understaffing and workplace safety for decades. Without proper staffing to resident ratios, adequate care for residents cannot be achieved, and unintentional neglect can occur. During the COVID-19 pandemic, residents faced abhorrent conditions, and the staff was overworked, stressed, and fearful. This issue, and other issues being discussed below, within long-term care need to be addressed to improve resident outcomes. The following section will address another vital drawback within LTC: crowding of residents.

2.2.2 Crowding

Approximately 84% of LTC homes are privately owned in Ontario, and the rest are public (Canadian Institute for Health Information, 2021b). Private homes can be further divided into for-profit homes and non-profit homes. About 57% of private LTC homes in Ontario are for-profit organizations, and 27% are not-for-profit (Canadian Institute for Health Information, 2021b). Most for-profit homes tend to be built to an older design standard compared to not-for-profit and public LTC facilities due to the changes made

from the design standards in 1999 (Brown et al., 2021). This means that while public and non-profit LTC homes have regulations prohibiting them from having 4-bed rooms, for-profit LTC homes can have 4-beds per room. The outdated infrastructure seen in for-profit LTC homes has led to over half of LTC homes in Ontario being overcrowded (Brown et al., 2021). This was a significant factor in the enhanced spread of COVID-19 observed in LTC; overcrowded LTC homes made residents more than twice as likely to get infected and die of COVID-19 and made following social distancing guidelines strenuous (Velayudhan et al., 2020).

With crowded LTC homes and not enough staff to look after residents, inevitable problems, such as issues caring for those with BPSD, occurred while managing verbal and physical outbursts. On top of trying to achieve daily tasks, the team also faced the onset of infection control protocols without proper guidance on how to implement them and had to deal with the added fear of contracting COVID-19.

2.2.3 Training

Within LTC, there is a lack of appropriate training and education for treating those with cognitive impairments, such as dementia (Carroll, 2021). This serves as a barrier for staff as demands for LTC have increased over the years, and training has not matched the needs (Long-Term Care Staffing Study Advisory Group, 2020). One of the difficulties PSWs face in training is that their educational experience does not reflect real-life conditions. Educators will teach based on ideal environments (Long-Term Care Staffing Study Advisory Group, 2020). These environments do not always mirror what actual work will be like within the LTC home. This lack of training and experience can be

challenging for PSWs when they start working in understaffed, overcrowded, fast-paced LTC facilities with residents with BPSD and additional needs (Long-Term Care Staffing Study Advisory Group, 2020). The consequences of such environment lead to the fact that many newly graduated PSWs feel unprepared as LTC scenarios are more challenging than expected.

Additionally, with the staffing issues that LTC faces, PSWs are given many tasks outside the scope of their training. The same can be said for newly graduated registered nurses, registered practical nurses, and nurse practitioners. Many feel they do not have the experience to take on their functions in LTC homes (Long-Term Care Staffing Study Advisory Group, 2020). Without proper education and training, the tools required to meet residents' quality of life needs are less likely to be satisfied (Long-Term Care Staffing Study Advisory Group, 2020).

Another area in LTC that does not have adequate training to assist those with dementia is management. As discussed in Chapter 1, it was found that many Medical Directors did not have training in geriatric medicine, palliative care, or dementia care (Marrocco et al., 2021). Since medical directors are in charge of developing and implementing medical services within LTC homes, this is a substantial concern. The involvement of Medical Directors in advising on clinical procedures and policies is also concerning given the lack of training some have with cognitive disabilities (Carroll, 2021). Without that knowledge, a more pharmacological-based intervention could be advised, even though it is not recommended for those with dementia (Marrocco et al., 2021). Furthermore, many Medical Directors did not have the requisite leadership

instruction or crisis management training which is a factor that led to LTC homes being poorly managed during the COVID-19 pandemic (Marrocco et al., 2021).

The lack of training in LTC for those interacting with residents is a massive problem that impacted how residents' were treated during the COVID-19 pandemic (Marrocco et al., 2021). This is one of many issues that led to many staff feeling ill-prepared and overwhelmed with assisting those with dementia in following infection protocols. If LTC staff do not have proper training on how to care for residents during an infectious outbreak, it will leave both staff and residents more vulnerable to infection, which ultimately reduces the quality of care. In the case of COVID-19, LTC staff in Ontario did not have training nor guidance on proper infection control protocols leading to a spike of cases in LTC homes. With staff sick from COVID-19, LTC homes became even more understaffed and antipsychotics had to be used as chemical restraints to keep residents with BPSD contained and “easier” to care for (Howard et al., 2020). The lack of training in dealing with those with dementia and staffing shortages led to the inappropriate use of antipsychotics as a chemical restraint in LTC during the COVID-19 pandemic (Sun, 2021).

2.3 The Use of Antipsychotics in LTC

Before the pandemic, approximately 30% of all PWD in LTC facilities were prescribed antipsychotic medication without psychosis diagnoses (Canadian Institute for Health Information, 2016). During the COVID-19 pandemic, due to a lack of training, staff, and overcrowding issues, the proportion of PWD being prescribed antipsychotics has increased within LTC (Howard et al., 2020). As discussed above, the use of

antipsychotics in those with dementia is often not advised and is not the best course of action for those experiencing BPSD, and yet antipsychotic medications are being used as chemical restraints to keep PWD malleable and manageable due to overcrowding and understaffing (Howard et al., 2020; Kirkham et al., 2017). It is known that antipsychotics are not usually the appropriate choice for BPSD. However, there is little accountability, so it is being used on PWD (Bjerre et al., 2018).

This type of drug was used as a form of chemical restraint on residents and aided the staff of LTC facilities to contain residents with their depleted workforce (Sun, 2021). The ethical implications of using a dangerous drug like antipsychotics on those who don't require them for prolonged periods are immense (Kirkham et al., 2017). The side effects of antipsychotics are dire and can range from sedation to death (Bangash et al., 2017). There was a significant push in the early 2000s to decrease antipsychotic use within LTC due to its risks; however, there has been an increase in use since the beginning of the pandemic (Howard et al., 2020; Stall et al., 2021).

2.4 Summary

To summarize what was discussed in this chapter, antipsychotics were created to treat symptoms associated with psychosis. Physicians then used these drugs to try and manage symptoms related to BPSD even though they were not recommended as a primary intervention for most with dementia. A comparison was made between how another universal healthcare system, the one found in England, decided to create a nationwide policy reform and action plan to combat overprescribing of antipsychotics, Canada did not. This has contributed to antipsychotics being overprescribed in LTC in

Ontario. An exploration of issues in LTC was then featured. Lack of funding, lack of staff, overcrowding, and a lack of training, especially training in how to assist those with dementia was, highlighted. All of this culminated in a discussion surrounding antipsychotics being used in LTC, focusing on how they are being used as chemical restraints to subdue those with BPSD. In Chapter 3, an analysis of policy implementation and preparedness in Ontario LTC from SARS 2002-2004 outbreak to COVID-19 will be investigated to examine lessons learned by Canada to help support Chapter 4's future strategies and recommendations.

Chapter 3. Critical Analysis of Policy Implementation and Preparedness within Long Term Care

An analysis of policy implementation and preparedness within long-term care (LTC) in other countries, specifically Hong Kong, Singapore, and South Korea, will be explored to commence this chapter. This exploration will set the stage for analyzing how other countries utilized past exposures to SARS to help prepare LTC for future outbreaks. Next, an analysis of Ontario's policy implementations after the SARS 2002-2004 outbreak will be discussed. By assessing the changes to the policy made after the SARS 2002-2004 outbreak and the pitfalls seen in modifications made to LTC in Ontario, it will allow us to discuss how prepared LTC in Ontario was for the inevitable COVID-19 exposures in LTC. The discussion surrounding COVID-19 in LTC will allow for dialogue about possible lessons learned by Ontario regarding LTC and how residents, specifically those with dementia, need to be protected. By examining past actions taken after the SARS 2002-2004 outbreak by Ontario LTC and how that shaped LTC's response to COVID-19, there can be a discussion about future recommendations to ensure residents, especially those with dementia, are protected in the event of another pandemic or outbreak of infectious disease.

3.1 SARS and LTC in Different Countries and their Impact on COVID-19

During the SARS outbreak in 2002-2004, many countries faced devastating effects to LTC. These disastrous outcomes led to these countries, specifically Hong Kong, Singapore, and South Korea, improving LTC infrastructure, such as how many beds LTC homes had per room and the amount of PPE and infection control protocols

within LTC homes, which has led to fewer deaths and infections during the COVID-19 pandemic. The changes seen in LTC in the aforementioned countries will help to form my suggestions for future strategies in Chapter 4.

Countries like Hong Kong, Singapore, and South Korea experienced resident deaths in LTC during the SARS outbreak in 2003 (Silverman et al., 2020). Since SARS affected LTC in these countries, the countries mentioned above changed their infection protocols and increased access to PPE, among other strategies, like updating quarantine practices, to protect the vulnerable population from future outbreaks and ensure preparedness in the event of another outbreak. Residents in LTC homes were disproportionately affected by the SARS epidemic (2002-2004) in Hong Kong, Singapore, and South Korea, which led to the changes discussed below.

During the SARS epidemic in 2003 in Hong Kong, 72 LTC residents contracted SARS, and 57 residents died from the infection (Heckman et al., 2021). It was found that the risk of getting SARS in LTC homes was five times greater than the general population, which prompted Hong Kong to develop, continuously maintain and update strict guidelines to better protect its residents from disease (Heckman et al., 2021). Hong Kong mandated that all LTC homes have a designated infection control practitioner and that annual outbreak drills were conducted to ensure staff knew what to do in the event of an outbreak (Cowling et al., 2020). It was also required that a permanent PPE stockpile was maintained that could last one to three months and that all visitation rules addressed hygiene and PPE use (Heckman et al., 2021). Technology was acquired to help family members communicate with residents in quarantine to help reduce feelings of isolation and loneliness, and provisions were made to externally quarantined staff and residents

(Silverman et al., 2020). These guidelines, accompanied by strict travel bans, community lockdowns, work accommodations, and school closures, made Hong Kong more prepared at the beginning of the pandemic and helped reduce the spread of COVID-19 in LTC (Cowling et al., 2020; Heckman et al., 2021).

The guidelines created after the SARS epidemic in 2003 in Hong Kong helped incentivize LTC staff to pay greater attention to infection control practices and taught them how to act quickly and reduce the spread of COVID-19 (Heckman et al., 2021; Institute of Medicine (US) Forum on Microbial Threats, 2004). The mandate that at least one month's supply of PPE must be kept on-site for staff within a LTC home was a crucial factor in the success of LTC in Hong Kong and helped to decrease the spread of COVID-19 during the early months of the pandemic (Silverman et al., 2020). The PPE stockpile ensured that LTC workers had access to safe, adequate protective gear during the beginning of the pandemic, something Ontario could not provide given its limited supply of up-to-date, non-expired PPE (Silverman et al., 2020). During the COVID-19 pandemic, these mandates proved to be quite effective in reducing the spread and deaths of residents. The guidelines mentioned above were critical in protecting residents in LTC in Hong Kong (Heckman et al., 2021). Without them, it is suspected that Hong Kong would have seen higher losses, like those seen in Ontario.

Hong Kong, Singapore, and South Korea also acted quickly during the pandemic and moved all residents from LTC to a quarantine center/ hospital to reduce the spread of COVID-19 (Silverman et al., 2020). By moving residents to a quarantine center, these countries have reduced the number of deaths in LTC. These countries have reported remarkably lower death rates in LTC homes (Heckman et al., 2021; Silverman et al.,

2020). After the SARS outbreak in 2002-2004, it was recommended that countries create quarantine protocols to ensure social distancing, make sure residents do not experience high levels of loneliness, and ensure staff have proper PPE in the event of another outbreak. These countries followed guidelines which contributed to positive results by having fewer deaths in 2020. Comparatively, 81% of deaths in Canada and 54% of deaths in Ontario due to COVID-19 have occurred in LTC, indicating a sizeable issue in response and lack of a cohesive quarantine plan. This percentage was the highest percentage of deaths in LTC in 16 Organization for Economic Co-operation and Development (OECD) countries and was approximately 27% above the average (Silverman et al., 2020).

These are just some examples of countries that implemented SARS guidelines and saw favorable results. The countries mentioned made changes after the damages seen during the SARS 2002-2004 outbreak. SARS negatively impacted their LTC sectors. During the COVID-19 pandemic, the countries mentioned above have seen a reduction in deaths of LTC residents compared to Ontario due to the changes made related to the SARS outbreaks in 2002-2004. The SARS outbreak in 2002-2004 taught many countries lessons regarding the vulnerabilities of their LTC homes. If the Ontario government had heeded these lessons and implemented changes based on recommendations, it is possible that there could have been fewer cases and deaths seen in LTC.

3.2 SARS 2002-2004 and COVID-19 in Ontario LTC

In Ontario, acute care hospitals were primarily affected during Canada's SARS outbreak in 2002-2004. The response by the government was to invest in improving

staffing, training, infection control, and prevention within acute care to combat this (Silverman et al., 2020). Additionally, the government thought it was essential to improve public health laboratories as public health laboratories in Ontario could not meet the demands for SARS testing (Health Canada, 2003). The government of Ontario also implemented a PPE stockpile to be prepared for future outbreaks (Brophy et al., 2021; Silverman et al., 2020). In Ontario, LTC homes were not significantly affected by the SARS 2002-2004 outbreak. Due to this, the Ontarian government made no substantial changes to quarantine protocols or infection control preparedness in LTC, even though other countries highlighted how susceptible LTC was to harm from current and future SARS variants (Miller, 2020). While the above-mentioned changes were necessary to support acute care, they did not significantly assist LTC in Ontario during the COVID-19 pandemic. This was seen with the introduction of a PPE stockpile in Ontario.

3.2.1 Personal Protective Equipment (PPE)

As discussed in section 3.1, Hong Kong created a PPE stockpile and required it to be viable for staff to maintain a one-to three-month supply (Cowling et al., 2020). After the SARS 2002-2004 outbreak, Ontario also began a PPE stockpile. However, funds were not allocated to maintain the stockpile after introducing the PPE stockpile. As a result, in 2017, all expired products were disposed of and continued to be disposed of moving forward (Silverman et al., 2020). An issue arose when it was identified that there were no funds available to replenish the stockpile. There was also a lack of communication between the federal and provincial governments, as both were unaware that the other was failing to maintain the PPE reserves (Brophy et al., 2021; Silverman et al., 2020). Both governments counted on the other to support the depleting stock, further amplifying

supply issues. This led to a shortage of PPE at the beginning of the COVID-19 pandemic (Silverman et al., 2020). Without proper access to PPE supplies, hospitals and LTC homes face PPE shortages and cannot meet the demand for PPE needed while interacting with those with COVID-19. Not only was this a safety issue for healthcare practitioners and staff, but it was also a safety concern for residents. Without PPE, staff, as mentioned in Chapter 2, worked in multiple LTC homes and contributed to the spread seen at the beginning of the pandemic (Brophy et al., 2021; Long-Term Care Staffing Study Advisory Group, 2020).

3.2.2 Infrastructure of Ontario LTC Homes: For-Profit vs. Nonprofit

As discussed previously, improvements to LTC were not a prime concern after the SARS outbreak in Ontario. LTC continued to suffer from understaffing and overcrowding both before and during the pandemic due to a lack of funds and resources (Ontario Health Coalition, 2019). As discussed in chapter 2, there are public and private LTC homes in Ontario. The majority, over 80%, of LTC homes are privately owned and can be further divided into for-profit homes and nonprofit homes (Canadian Institute for Health Information, 2021b). The experience in for-profit homes was not comparable to nonprofit homes during the COVID-19 pandemic (Stall et al., 2020). The outcomes of the COVID-19 pandemic were worse in for-profit homes. There were more infections and deaths in for-profit homes than nonprofit (Stall et al., 2020). The outdated infrastructure can largely explain this that for-profit homes have. For-profit homes have older design standards and frequently change ownership. The rooms in for-profit LTC homes are less private, with more beds to a room within a smaller room. The common spaces are also more centralized and open (Stall et al., 2020). Comparatively, nonprofit LTC homes have

newer designs that promote infection protection and control by limiting interaction in resident bedrooms and common areas. Nonprofit homes have self-contained "residential home areas" with a maximum capacity of 40 residents, which was extremely helpful in reducing the spread of COVID-19 (Stall et al., 2020).

The outdated design standards observed by for-profit homes have been an issue since the SARS outbreak in 2002-2004. Reducing overcrowding, improving social distancing measures, and improving infection/ quarantine protocols were all suggested after the SARS outbreak (Institute of Medicine (US) Forum on Microbial Threats, 2004). One specific suggestion was to update LTC homes and reduce the number of beds per room to two to decrease crowding. Regardless of this, many for-profit LTC homes in Ontario have four-bedded room accommodations for residents. It is estimated that if 4-bed rooms were converted to 2 bedrooms during the beginning of the pandemic, 998 cases and 263 deaths could have been averted (Brown et al., 2021). This indicates that although lessons were available to be learned after the SARS outbreak, many recommendations were not applied to vulnerable healthcare sectors in Ontario, like LTC.

3.2.3 Staffing

Additionally, a staffing crisis in LTC in Ontario was not addressed regardless of recommendations after SARS (Government of Ontario, 2020; Institute of Medicine (US) Forum on Microbial Threats, 2004). The staffing crisis in LTC significantly impacted the quality of care delivered during COVID-19 and staffing safety. Approximately 10% of the country's total cases were LTC staff due to the lack of preparedness and safety measures (Canadian Institute for Health Information, 2020). During the SARS outbreak,

the lack of staff made the outbreak challenging to manage, and that was and continues to be an essential factor in LTC during the pandemic. The COVID-19 pandemic was so devastating on LTC that military personnel was called in to manage operations in some cases because the staff was not given the tools or funds to deal with the issues arising (Brophy et al., 2021). Another recommendation after SARS that was not implemented that could have decreased cases and deaths from COVID-19 was to have infection control practitioners on staff. LTC homes did not have infection-control practitioners on staff to assist with outbreaks, which proved to be a disservice (Silverman et al., 2020).

3.2.4 Recommendations and Antipsychotics Use

After the SARS outbreak, recommendations were made to ensure preparedness in the event of another epidemic (Institute of Medicine (US) Forum on Microbial Threats, 2004). Unfortunately, Ontario did not heed these recommendations in LTC, and many consequences resulted. Overall, Ontario did not implement any significant changes to LTC after the SARS outbreak as it did not significantly impact LTC. Although it was not substantial in Ontario, many countries faced devastating results after the SARS outbreak invaded LTC. Ontario could have taken note of these countries' experiences and made proactive decisions to help protect LTC from future outbreaks. If Ontario had done so, we might have seen different outcomes after the beginning of the pandemic as other countries have.

All of the issues listed above, such as overcrowding, understaffing, lack of appropriate PPE, led to further problems with caring for those with dementia, specifically those with behavioral and psychological symptoms of dementia (BPSD) (Howard et al.,

2020; Kirkham et al., 2017). This resulted in the poorer treatment of those BPSD to follow social distancing guidelines and keep them contained (Howard et al., 2020). Issue within LTC homes in Ontario left employees with little support when caring for and assisting those with BPSD. This, in part, brought about an increase in antipsychotic use in those with dementia, and antipsychotics were used as chemical restraints (Sun, 2021). With recommendations not being implemented after the SARS outbreak in 2002-2004, LTC homes were unprepared for a pandemic like COVID-19.

3.2.5 Ontario's COVID-19 Experience and How it Compares to Other Countries

In Canada, there have been 3,148,878 cases of COVID-19 as of February 8th, 2022, and 34,969 deaths (Government of Canada, 2022). Exactly 1.06 million of those cases are from Ontario. There have been 11,878 deaths in the province of Ontario, which is approximately 34% of all deaths within Canada. The damage done during the first few months of the pandemic is unsalvageable, especially in LTC. LTC has taken a back seat in Ontario and experienced understaffing, crowding, and lack of training long before the pandemic (Government of Ontario, 2020; Long-Term Care Staffing Study Advisory Group, 2020). Instead of investing to improve LTC infrastructure, the government allocated funds to acute care, which has inadvertently led to 4,168 deaths in Ontario being reported as residents in LTC homes (Government of Ontario, 2022). Many issues present in LTC in Ontario amplified the effects of COVID-19.

Many issues can be identified that led to the results seen in LTC in Ontario. As mentioned above, after the SARS outbreak in 2002-2004, many countries implemented policies to be better prepared in the face of other infectious outbreaks (Silverman et al.,

2020). Countries such as South Korea faced significant losses within LTC due to SARS and made sure to invest funds and make changes to ensure those losses would not be experienced to this magnitude again (Silverman et al., 2020). Ontario, however, did not face significant losses within LTC during the SARS outbreak but instead faced losses in acute care. Due to this, funds were distributed to acute care hospitals while LTC took cut after cut over the years after the SARS outbreak (Lowrie, 2020; Ontario Health Coalition, 2019). If more funds were dedicated to LTC, it could be assumed that we may have saved many lives in LTC in Ontario (Liu et al., 2020). LTC in Ontario is fragile and requires a larger budget and proper allocations of funds to help address its issues and lower prescribing of antipsychotics to those with dementia as they were grossly mistreated and suffered significant losses during the pandemic. LTC needs to be prepared and have plans for future outbreaks after the COVID-19 pandemic. As other countries did after SARS, Canada, specifically Ontario, must address the failures seen in LTC during the COVID-19 pandemic and do better to protect LTC residents. The lessons learned during the COVID-19 pandemic will help to shape future recommendations in Ontario's LTC and protect both residents with dementia and without.

3.3 Lessons Learned from SARS

During the SARS 2002-2004 outbreak, many communities, such as those listed above, were made privy to the weaknesses in LTC and faced significant losses in their LTC sectors. With substantial losses faced in LTC, Hong Kong, South Korea, and Singapore changed LTC to ensure that those diminutions would not be seen again. The lessons learned during the 2002-2004 outbreak led to decreased death rates in their LTC homes (Silverman et al., 2020).

Actions were not taken after the recommendations made by experts after SARS in 2002-2004 were given, which left Ontario unprepared for the "next time" (Lysyk, 2021). Additionally, systemic fragilities in LTC have reigned for decades but have not been addressed (Lysyk, 2021). Now that we face a similar but graver situation, changes must be made to ensure that antipsychotic medications will not be overprescribed now and in the future to those with dementia in LTC. The lessons we have learned during the pandemic must be regarded and put into practice.

As discussed in Chapter 2, staffing is a significant concern in LTC. Understaffing in Ontario's LTC had a massive impact on how LTC cared for residents. With staff shortages, LTC employees were overworked and were unable to care for residents amid lockdowns and social distancing protocols properly. This area in LTC is essential for delivering quality care, and many are taking notice of this. Fixing the chronically understaffed LTC homes and providing more full-time, consistent positions for staff is vital for LTC moving forward. Staff shortages contributed to an increase in the spread of COVID-19, a lack of quality of care for residents, and an increase in antipsychotic use as chemical restraints to make up for the lack of trained staff, all of which are significant problems that need to be fixed moving forward. Having enough staff with the proper training and education to address the needs of residents is one of the most important lessons learned during the COVID-19 pandemic.

Another important lesson learned from the SARS 2002-2004 outbreak that was a prominent issue during the COVID-19 pandemic is improving infection control protocols to prevent/slow the spread of infection. Although pandemic and infection protocols were in place before the COVID-19 pandemic, they were not being practiced consistently or

enforced even before the pandemic (Lysyk, 2021). With the onset of COVID-19, LTC homes in Ontario were not prepared to deal with the onslaught of issues, nor were they adequately equipped (Carter, 2021). Having suitable quarantine sites for infected individuals and being sufficient enough not to need hospital care in the vent of hospitals being over-burdened were all recommended updates in infection protocols in 2007 and 2009 in the Infection Control at Long-Term-Care Homes Report by the Auditor General (Lysyk, 2021; McCarter, 2009). These recommendations to better routine infection protocols in LTC would have been beneficial if implemented before the COVID-19 pandemic and remain one of the more valuable lessons learned.

LTC has not been the top priority in Ontario, as demonstrated by the cut in funding before the pandemic by the Ontario government (Financial Accountability Office of Ontario, 2020). However, the government must take it seriously, and it is essential that one of our most vulnerable populations is taken care of and protected moving forward (Carroll, 2021). Future strategies need to be made and implemented to protect those in LTC. Additional funds must be allocated to the LTC sector to ensure residents are kept safe and a priority (Marrocco et al., 2021). Staffing in LTC homes, training of LTC employees, and routine infection control protocols are all areas that need improvement and upgrading to protect better our LTC sector moving forward and prevent future outbreaks. All of these areas mentioned relate to two important focal points that need improvement; pandemic preparedness and the decrease in over-prescribing of antipsychotics as chemical restraints.

3.4 Summary

In summary, this chapter explored the changes made to LTC by other countries and the changes made to healthcare in Ontario after the SARS 2002-2004 outbreak. This set the scene for us to examine how a lack of action in Ontario's LTC led to the pitfalls seen in LTC during the COVID-19 pandemic. By analyzing policy changes made after the SARS 2002-2004 outbreak and the lessons learned, strategies for better preparation for future outbreaks in LTC and decreasing antipsychotic abuse in LTC will be discussed in the next chapter. Specifically, quality improvement (QI) projects and policy changes will be explored as recommended solutions.

Chapter 4. Future Strategies for Long-Term Care in Ontario

This chapter will be discussing future strategies to implement in Ontario's LTC to be better prepared for future outbreaks and to decrease the use of antipsychotics inappropriately in those with dementia. There are two related strategies that this chapter will focus on; Quality Improvement (QI) projects and Changes in Policy. Both of these strategies will be explored in the context of improving pandemic preparedness in LTC and reducing the overuse of antipsychotics and antipsychotics use as chemical restraints. This chapter will begin with a discourse about Quality Improvement (QI) projects and their benefits in LTC to better pandemic preparedness and reduce the overuse of antipsychotics. It will then explore policy changes to help LTC be more prepared in the wake of another pandemic and decrease the use of antipsychotics as chemical restraints in those with BPSD.

The Ontario government is partly to blame for antipsychotics being used as chemical restraints during the COVID-19 pandemic and LTC being underprepared during the pandemic. The overuse of antipsychotics and outdated infection control practices were issues before the pandemic; however, the effect of these issues on residents was amplified during these dire times (Howard et al., 2020). Addressing the fallout of Ontario's LTC before and during the COVID-19 pandemic in previous chapters has culminated in these recommendations for future strategies. If the Ontario government had adequately invested in the safety of LTC residents, there could have been fewer deaths within LTC over the span of this pandemic (Lowrie, 2020). The Ontario government and LTC facilities must invest in future strategies to address the issues seen during this pandemic.

4.1 Quality Improvement Project

4.1.1. What is Quality Improvement?

Quality Improvement (QI) is a systemic change that leads to improved outcomes for patients and other actors in the healthcare system (Batalden & Davidoff, 2007). QI projects require all parties, such as healthcare professionals, policymakers, researchers, educators, patients, and their loved ones work together to achieve these improved outcomes. The team works to create changes that will improve internal processes, reduce the expenditure, improve endpoints of care and ameliorate the indicators of interest and thein healthcare system in general (Agency for Healthcare Research and Quality, 2013). QI projects require senior leadership's cooperation to achieve the desired outcomes, and all affected levels of the system need to be involved to see efficacious change.

There are five essential steps when creating a work plan for a Quality Improvement Plan (QIP), and they are as follows:

1. The first step uses organizational-level data to identify the indicators of interest's baseline/ current performance (Ministry of Health and Long-Term Care & Health Quality Ontario, 2014). This step can be skipped if no baseline exists, and one would move to step two.
2. The second step is to review the indicator of interests and determine which are relevant to the organization. To succeed in this step, it is recommended that provincial benchmarks/ theoretical bests are examined for each indicator of interest.

3. Step three is to create a plan to address each system-level priorities you identified for improvement. This can include setting targets, identifying change ideas, measures to put in place for methods and processes, etc.
4. Step number four is to complete the narrative to communicate the above changes and priorities throughout the organization.
5. The final step is to have the QIP sign-off by senior leadership. This step helps develop shared accountability and responsibility for the QIP at all affected levels (Batalden & Davidoff, 2007).

QIPs are valuable tools to achieve systemic change within a system. When executing a QIP, it is essential to implement these steps and then incorporate a Plan-Do-Study-Act (PDSA) rapid cycle to see desired results. There are issues within LTC that have been discussed in detail throughout this paper, such as staffing, crowding, and training. Using a QIP and the PDSA rapid cycle to improve those LTC issues and improve patient outcomes would be beneficial.

4.1.1.1 What is a PDSA Rapid Cycle?

The Plan-Do-Study-Act (PDSA) rapid cycle is a quality improvement method that helps identify a possible improvement, implement said improvement, and measure the improvements made to change a system for the better (Demming, 2000). This cycle allows for improvements to be tested in a real-world setting. Testing the improvement on a smaller scale and fine-tuning the process allows for an easier transition to a larger scale. The four steps of the PDSA are as follows:

- Plan: Identify an area for improvement and plan to achieve improvement

- Do: Implement said plan on a small scale. The period for implementation can be as short as one day
- Study: Examine the results. Was there an improvement?
- Act: Act upon the results. Incorporate the change into other processes.

Incorporating the PDSA rapid cycle would benefit LTC homes to improve pandemic preparedness and reduce the over-use of antipsychotics for BPSD. It allows for smaller-scale trials of improvements to be incorporated and tested in real life. Then, improvements can be measured, and the plan can be adjusted based on the trial results.

4.1.1.2 Measures to Determine if a Change is an Improvement.

It is difficult to tell if a change leads to improvement. To know if a change is an improvement, it is essential to describe what you are trying to improve and then have a precise aim (Batalden & Davidoff, 2007). In this case, there would be two related aims; improve pandemic preparedness and reduce the use of antipsychotics as chemical restraints in LTC. Next, measures need to be established to know if the change(s) led to improvement. It is easiest to use quantitative measures to know if improvements have been made, but qualitative measures are acceptable and effective if they are the only method available. Some ways to make establishing measures simpler are limiting the number of measures and remembering that the measures are not the end goal; they're just a tool to see if improvements are being made. The main measures used in QI are as follows:

Table 1. Main measures to determine if the change results in improvement

Outcome Measures	Answers the question "what are the results of the QI work?". These measures are from the resident's perspective and comment on the quality of the system's performance (Health Quality Ontario, 2013).
Process Measures	Looks at the workings of the system. These measures capture the changes the QI efforts make to different inputs or steps that contribute to the system outcomes. It is essential to look at the processes that directly result in the outcome and not the outcome itself.
Balancing Measures	Determine if the QI improvement changes are causing issues with other parts of the system.
PDSA Measures	If the PDSA is carried out multiple times, these are the measures that are collected with each test and give insight into the effect that each change had on the system.

These measures are beneficial in their own right, and the approach used to measure improvement is up to the members heading the QIP and PDSA rapid cycle. By assessing what a QIP is, exploring the PDSA rapid cycle, and discussing the different measures of determining if the improvement is being made, we now have a clear idea of the QIP process in general. It is a valuable tool that I suggest should be used to improve pandemic preparedness and decrease the over-use of antipsychotics in those with BPSD, all of which will be discussed below.

4.4.2 Quality Improvement Projects in Ontario LTC

The cornerstone of QI projects is to improve patient outcomes using systemic change. By having providers, in this case, LTC homes, self-assess their performance in delivering quality care, they are more easily able to identify specific issues within their system and plan for future improvements. Many improvements could be made in

Ontario's LTC that would lead to improved resident outcomes. However, the two main areas of weakness that this paper focuses on and wants to use QI projects to improve are pandemic preparedness and the use of antipsychotics as chemical restraints. By utilizing a QI plan, LTC homes would be able to identify which areas of weakness contribute to the issues of pandemic preparedness and overuse of antipsychotics and create a plan to enhance the quality of care in those areas and better resident outcomes.

4.4.2.1 Pandemic Preparedness.

At the start of the COVID-19 pandemic, it became evident that Ontario's LTC was unprepared for the wave of infection sweeping the province. There was not one specific factor that led to the outcomes we saw, but many factors culminated in a force too large to address at the height of the pandemic. One area did become apparent as a significant area of weakness in LTC during the pandemic, and that was the overall pandemic preparedness (Lysyk, 2021). This is an umbrella term that addresses many different areas within LTC, such as infection control practices (PPE, hand hygiene, etc.), designated quarantine areas in case of infection, LTC home design standards (overcrowding in for-profit LTC homes), or outbreak planning and decision-making (Lysyk, 2021). Overall, the fragility in this sector within LTC was one of the major pitfalls in how LTC could handle the COVID-19 pandemic. By utilizing a QI plan and following the five steps outlined in section 4.1.1, and incorporating a PDSA rapid cycle, LTC homes will be able to identify the particular areas of weakness in pandemic preparedness, and plan to make improvements to the system. This in turn, will impact the need for antipsychotics as chemical restraints.

4.4.2.2 Overprescribing of Antipsychotics.

The spike we saw in antipsychotics being used as chemical restraints at the start of the COVID-19 pandemic was primarily due to LTC homes not being prepared for a pandemic. LTC homes did not have the resources or training on how to care for residents with a highly contagious, widespread infection (Lysyk, 2021). Due to this, staff turned to over-prescribing antipsychotics because they were spread too thin (Howard et al., 2020). After the pandemic, the government must have improved pandemic protocols and strategies to reduce the overuse of antipsychotics, as they were abused during the pandemic. The increased use of antipsychotics in LTC during the COVID-19 pandemic indicates a broken system with outdated infection control practices and insufficient resources to care for residents during emergencies. The Canadian government has been aware of the dangers of antipsychotic use for BPSD for many years (Canadian Institute for Health Information, n.d.). This being said, there are minimal educational programs in place in Ontario outlining the risks to the staff of LTC homes or training programs on alternative therapies to help those with BPSD, even though training can reduce the use of antipsychotics (Howard et al., 2020; Tjia et al., 2017). Alzheimer's Society Canada has been outspoken about the issue, and many studies have been conducted supporting the dangers associated with continued use in that population (Alzheimer Society Canada, 2017). The Ontario government should use a QIP to monitor practices within LTC and determine ways to decrease the use of antipsychotics for BPSD in addition to improving pandemic preparedness as over-prescribing of antipsychotics was a direct result of being unprepared. After conducting a QIP, policy changes can then be made to improve LTC in Ontario.

4.2 Policy Changes

As mentioned above, QI projects are great tools that can be used to identify specific areas of change that will lead to improved resident outcomes. While some changes that can be made will be at the LTC home level and be particular to the home, other changes will be made at the provincial level and will need policy changes for changes to be seen. The suggested policy changes for the Ontario government will center around two main areas; pandemic preparedness and antipsychotic use. While these two areas will be the focal point, there are subcategories that I will discuss that directly relate to improving those two areas for residents.

4.2.1 Areas of Policy Change to Improve Pandemic Preparedness

4.2.1.1 Staffing and Training.

As discussed previously, LTC staffing is a massive issue (Long-Term Care Staffing Study Advisory Group, 2020). Many of the problems seen during the pandemic resulted from LTC homes not having enough staff to carry out much-needed infection control practices while caring for residents. With not enough full-time positions available, many nurses and PSWs were working at multiple LTC homes and spreading COVID-19 in the process (Long-Term Care Staffing Study Advisory Group, 2020). Additionally, the lack of infection control practitioners on staff in LTC homes meant that many employees were lost and lacked leadership in what to do at the start of the pandemic (Howard et al., 2020). Policies to help the recruitment processes, training, and retention of LTC employees would benefit LTC and resident outcomes.

There are currently recruitment issues within LTC. Although there are supply issues in general with workers, and it is not exclusive to LTC, this issue has still significantly impacted the staffing crisis seen in LTC (Long-Term Care Staffing Study Advisory Group, 2020). There are many different reasons why fewer and fewer qualified candidates are applying, such as lack of adequate compensation, long hours, and lack of full-time positions, and why unqualified candidates seem to be applying for jobs in LTC. However, it is suggested that it could be due to the negative public image that the LTC sector has (Long-Term Care Staffing Study Advisory Group, 2020). LTC is seen as a less desirable career path when compared to other healthcare sectors like acute care. Whether it be because our society does not value elders or because news outlets solely focus on the failures of LTC instead of the successes, it is still an issue that contributes to the understaffing of LTC. The perceptions of LTC seem to be that it is low paying, undervalued, and challenging work and is a dead-end job with no benefits or longevity (Long-Term Care Staffing Study Advisory Group, 2020). Seeing as approximately 40% of PSWs leave the field within a year of training or graduating, this is not a baseless thought (Long-Term Care Staffing Study Advisory Group, 2020). To fix LTC's image, policy changes could be put forth to increase pay and benefits to those who stay long-term in their position. By expanding the compensation, more people could want to apply to the LTC sector, which would help retention as there would be more staff available.

Currently, there is a massive issue with staffing and retaining staff in LTC. Approximately 25% of PSWs with over two years of experience leave the LTC sector per year, and only 50% of PSWs are retained in the healthcare field for less than five years (Long-Term Care Staffing Study Advisory Group, 2020). Due to PSW positions being

largely part-time, they have a high turnover rate, and entry-level PSWs hold most places even though they have less experience. The burnout experienced by PSWs with more experience due to the staffing crisis is exceptionally high leading to 43% of PSWs leaving the sector (Long-Term Care Staffing Study Advisory Group, 2020). The short staffing in LTC needs to be addressed, and policy changes such as increasing salary for staff, providing more job security and more full-time positions, and offering work benefits, would help achieve this goal (Busby, 2021). Rules must be put in place to provide LTC staff with more stability and compensation that reflects their work. By addressing the staffing issue seen in LTC in Ontario and improving training, overall pandemic preparedness will improve.

4.2.1.2 Crowding.

Crowding was another issue seen during the COVID-19 pandemic that ultimately left LTC homes underprepared for the onslaught of infection seen (Brown et al., 2021). For-profit LTC homes had some of the worst outcomes during the COVID-19 pandemic, with many deaths seen. This is due primarily to the outdated design standard that the buildings have (Stall et al., 2020). While non-profit and public homes are generally newer and possess more updated design standards, for-profit homes do not have the same infection control designs seen in their homes. More beds to a room and central common areas are frequently seen in for-profit homes leading to crowding in the LTC home (Stall et al., 2020). There are many obstacles in the way for remote or rural LTC homes to completely change the design standards of their homes, such as temporary displacement of residents, lack of funding, and long wait times for construction. Due to this, policy changes need to be made to compensate for the differences seen between LTC homes

with updated design standards and homes with old design standards that do not have infection control practices in mind. One idea is to mandate having a set number of beds per room regardless of space. Enforcing a policy that only allows fewer beds per room will make it easier to deal with infections in the wake of another pandemic.

Additionally, I would recommend a policy strategy to phase out for-profit LTC homes in Ontario. In Ontario, it was alleged that 26 residents died across two for-profit LTC homes, not due to COVID-19 but dehydration and neglect (Beattie & Reddekopp, 2021). Due to poor management and a negligible infection control strategy, the Canadian military was called in to take over at these two LTC homes. While there, they noted that staffing was a dire issue and lack of leadership (Beattie & Reddekopp, 2021). Another for-profit home resorted to placing residents' mattresses on the floor to prevent them from standing or walking and not using linens on beds (Ontario Health Coalition, 2021). Another home had residents living with cockroaches and flies due to rotten food and general uncleanliness during the pandemic in conjunction with overcrowding and poor infection control. Residents who tested positive with COVID-19 were placed with healthy residents and crowded together (Ontario Health Coalition, 2021).

While it may be surprising that for-profit homes performed worse during the pandemic than non-profit homes, the reality is that for-profit homes tend to have worse designs and constantly changing chain ownership (Stall et al., 2020). In for-profit dwellings, it was found that residents receive 0.34 hours less direct care than in non-profit homes (Ontario Health Coalition, 2021). There are also more diseases, ulcers, dehydration, pneumonia, and anemia cases in for-profit homes than non-profit (Ontario Health Coalition, 2021). General complaints are more frequent in for-profit LTC homes

as well. The risk of hospital transfer is 36% higher in for-profit dwellings, and the risk of death is 20% higher when compared to non-profit homes (Ontario Health Coalition, 2021). The conditions of for-profit LTC homes were abhorrent during the pandemic, and compared to non-profit LTC homes; residents were worse off (Stall et al., 2020). The horrifying conditions that residents in for-profit homes had to face during the COVID-19 pandemic will be a stain on Ontario's LTC forever, and changes need to be put in place moving forward.

Currently, for-profit homes receive the same funding as non-profit LTC homes, and despite what the public may think, for-profit homes do not fund the construction of new homes; taxpayers subsidize the construction of for-profit LTC homes (Brown et al., 2021). So, if there are minimal benefits to for-profit LTC homes, and in the end, it is the public who foot the bill for them and in return worse quality of care is delivered, is for-profit care worth it? I suggest that we create policy at the federal level that requires provinces to phase out for-profit LTC and focus on funding non-profit homes. At the federal level, criteria can be set that provinces like Ontario need to meet similar to the safe long-term care fund. This funding envelope requires provinces to meet specific funding requirements (Brown et al., 2021). By having additional funding streaming into non-profit, more homes can be made that meet the design standard and reduce crowding while increasing quality of care. Another way to achieve this is to create a policy that does not allow provinces to grant new licenses for for-profit homes (Brown et al., 2021). By moving away from for-profit care and allocating more resources to non-profit care, crowding will decrease as there will be more funds to renovate and construct homes with

updated design standards, quality of care will improve, and pandemic preparedness will also improve due to updated standards.

4.2.1.3 Funding.

The Ontario government also needs to provide funding to LTC so that LTC has access to proper safety equipment and resources. By making policy changes like those seen in South Korea and maintaining PPE stockpiles and mandatory quarantine procedures in place, our LTC homes will be better prepared for future pandemics (Silverman et al., 2020). Additionally, with appropriate safety equipment, the staff will be less likely to contract infectious diseases and thus will be able to continue with work and provide better care for residents during a pandemic (Public Health Ontario, 2020). By protecting staff and providing them with adequate PPE, it will also help to decrease the spread within LTC facilities. If fewer residents get sick, they will not require extra medical assistance, freeing up staff. More funds should be distributed to LTC and invested in dealing with the resident overcrowding. This would also benefit any future outbreak, as most infectious diseases spread through close contact (Centers for Disease Control and Prevention, 2022).

Re-financing LTC is also a policy change option that has succeeded in other countries like Germany, South Korea, and Japan (Rhee et al., 2015). By re-working the way LTC is delivered, the countries mentioned above were able to reduce deaths of residents during the pandemic and improve LTC (Silverman et al., 2020). Switching from our LTC model to a more universal, social insurance-funded LTC system could help make LTC more uniform and make it easier to upkeep a current design standard with

infection control protocols in mind (Busby, 2021). This change could address the issues in crowding we have seen during the pandemic.

Staffing and training, crowding, and funding are all areas of policy change that could help Ontario's LTC homes be more prepared in the wake of future pandemics. By not having enough trained staff, crowding residents, and insufficient funding, LTC was considerably underprepared for the COVID-19 pandemic, which is why these three areas should be addressed in the policy arena. The lack of attention that LTC, specifically in these three areas, was given before the pandemic was partly why we saw so many deaths of residents.

4.2.2 Areas of Policy Change to Decrease Over-Prescribing of Antipsychotics

4.2.2.1 Staffing.

To decrease antipsychotics being used as chemical restraints and the over-prescribing of antipsychotics in general, staffing in LTC homes needs to be addressed. Many of the aspects discussed in section 4.2.1.1 above are applicable here. Firstly, more staff is required to meet all residents' needs, especially those with BPSD who need more time and attention (Howard et al., 2020; Long-Term Care Staffing Study Advisory Group, 2020). With more staff, the need for antipsychotics will decrease because other safer interventions such as music therapy, aromatherapy, and recreational therapy that require more time commitment can be used.

Policies need to be in place to allow nurses and PSWs access more stable, full-time work (Long-Term Care Staffing Study Advisory Group, 2020). They also need to be fairly compensated for their work, and benefits that are comparable to the job done are

required so that more people will want to join the field (Long-Term Care Staffing Study Advisory Group, 2020). By addressing the staffing issue seen in LTC, creating policy changes to improve staffing conditions, and increasing staff in LTC homes, antipsychotics in those with BPSD as chemical restraints will decrease. Those changes, in conjunction with other policy changes like growing training programs about antipsychotics and improving auditing of antipsychotics use, both of which will be discussed in more detail below will help achieve this goal.

4.2.2.2 Training.

Other countries, like England, have training policies in place to reduce antipsychotic use in those with BPSD. The Focused Intervention Training (FIT) and Support into Practice Program aims to help healthcare professionals provide patient-centered care to reduce the over-prescribing of antipsychotics (Department of Health, 2015). The healthcare professionals are trained and educated intensively by dementia practice development coaches for nine months to reduce the use of antipsychotics and use alternative evidence-based practices instead to help alleviate symptoms of BPSD (Brooker et al., 2016). This is a potential policy option for Ontario that could improve our training practices and reduce the use of antipsychotics when not necessary.

There is currently no national policy in Canada to stop the inappropriate prescribing of antipsychotics or nationwide training programs for improper antipsychotic use (Kirkham et al., 2017). As discussed in Chapter 2, other provinces such as Alberta and New Brunswick have training programs in place to reduce the overprescribing of antipsychotics, but Ontario does not. Ontario does not offer enough programs to provide

proper training and education on inappropriate antipsychotic use for LTC staff (Hill, 2021). Ontario needs to create mandatory programming and offer training on this matter so that healthcare workers are educated on the risks of antipsychotics and will be responsible while administering them to such a vulnerable population. By making these policy changes and addressing the lack of training and education on the topic, the over-use of antipsychotics in those with BPSD will be addressed.

4.2.2.3 Auditing.

Policies should be applied to LTC to improve the standard of appropriate monitoring and auditing of antipsychotic use. The current standards need to incorporate residents' quality of life when auditing/ monitoring processes (Busby, 2021). Additionally, a policy to monitor inappropriate prescribing of antipsychotics in LTC should be enforced. Addressing these issues is paramount as LTC staff and physicians administer this drug as a chemical restraint. Therefore, education and inappropriate monitoring should be a top priority to stop this abuse (Howard et al., 2020). By enforcing strict audition and monitoring laws in LTC on prescribing antipsychotics, their use as chemical restraints on those with BPSD will decrease.

4.2.2.4 Alternative Therapies.

The final suggestion is that the government looks into and invests in alternative therapies to assist with BPSD, which, in part, will reduce the need to use antipsychotics as chemical restraints (Alzheimer's Society, 2017). These could be both pharmacological and non-pharmacological in nature. BPSD can cause residents of LTC to be irate, depressed, aggressive, etc., which makes them less likely to comply with physical

distancing measures and adhere to infection control practices during the COVID-19 pandemic (Cerejeira et al., 2012; Howard et al., 2020). Antipsychotics are not an appropriate or safe way to deal with these symptoms. Yet, due to being underprepared during the pandemic, they were over-prescribed and used as chemical restraints to lessen the burden on staff (Brooker et al., 2016; Howard et al., 2020). At the policy level, alternative therapies to antipsychotics should be explored in order to help care for residents and alleviate the burdens of BPSD on both PWD and staff. By making policy changes to focus on using alternative therapies, both pharmacological and non-pharmacological in nature, the over-use of antipsychotics will decrease.

4.2.2.4.1 NON-PHARMACOLOGICAL DEMENTIA TREATMENTS

As stated above, there are pharmacological and non-pharmacological treatments for dementia, but neither can "cure" the disease or slow down its progression (Berg-Weger & Stewart, 2017). Identifying the root causes of the BPSD and coming up with non-pharmacological interventions to help reduce the strain and frequency of the symptoms should be the goal of LTC homes. Non-pharmacological interventions include bright lights therapy, music therapy, aromatherapy, recreational therapy, supplements, and modified environments. In general, if dementia symptoms are mild, non-pharmacological interventions are the preferred treatment plan because they limit the risks associated with pharmacological interventions (Bangash et al., 2017). Ensuring that there is enough staff to execute these therapies is paramount to the success of the treatment as they require a more hands-on approach from caregivers. While non-pharmacological interventions are preferred, pharmacological interventions should be used if the symptoms are severe enough (The Pharma Letter, 2009). Policies need to be in place to make sure that non-

pharmacological interventions are used in most cases when applicable. During the COVID-19 pandemic, the use of non-pharmacological interventions should have been the first line of treatment; however, LTC slipped through the cracks, and antipsychotics were used as chemical restraints to manage BPSD (Howard et al., 2020). It is paramount that this does not happen again in the wake of another pandemic. This is why policies need to be put into place to protect those with BPSD from being put on antipsychotics unjustly if non-pharmacological treatments are efficacious at managing symptoms.

4.2.2.4.2 POTENTIAL ALTERNATIVE THERAPIES

Further research needs to be conducted to find safe, effective management of BPSD. One option that has potential is cannabidiol (CBD). Studies of CBD in neuropsychiatric diseases have been explored. The results are promising, but further research in Canada is needed (Maroon & Boat, 2018; Elsaid et al., 2019). CBD has been shown to aid with anxiety, depression, and pain. In the dementia population, there have been studies conducted on the use of CBD. In general, the CBD or CBD/tetrahydrocannabinol (THC) combination was well tolerated within the population, and no adverse side effects were seen (Broers et al., 2019). As the literature suggests, CBD was safe for the people and efficacious in reducing BPSD (36). The BPSD that interferes with daily life for PWD and caregivers ultimately improved with the use of CBD (Broers et al., 2019). Although studies of CBD in this population are in their formative years, the safety of CBD has been established, and more studies are being conducted with CBD in this community (Timler et al., 2020). CBD could be a healthy substitute for antipsychotics, a controversial treatment of dementia, and can be used in conjunction with the other interventions that help with cognition.

Akin to the goals of the Dementia Strategy for Canada put forth by the Canadian government in 2019, I suggest that other policies be put in place to advance therapies for dementia, specifically BPSD (Public Health Agency of Canada, 2019). Other pharmacological therapies for BPSD should be researched and developed to help manage symptoms. By pushing policies to motivate these research advancements, the over-use of antipsychotics as chemical restraints should decrease as other venues will be available to help care for those with BPSD. Overall, by reducing the use of antipsychotics as chemical restraints and having alternative therapies available, LTC will be more prepared to deliver quality care in the face of another pandemic or infectious outbreak.

4.4 Summary

In summary, this chapter covered my suggested future strategies for the Ontario government to better pandemic protocols in LTC and decreased antipsychotic use as chemical restraints in those with BPSD. There were two future strategy routes discussed. The first was the use of QI projects in LTC homes. By utilizing QIPs, LTC homes will be able to identify specific areas of change that will improve their homes and the quality of life for residents. This will help them to improve their pandemic preparedness and decrease the need and use of antipsychotics as chemical restraints. Then a discussion about potential policy changes focused on improving pandemic preparedness and reducing the over-use of antipsychotics as chemical restraints in those with BPSD was had. While other provinces, such as Alberta and New Brunswick have policies in place to try and decrease the over prescribing of antipsychotics, Ontario does not which led to the increased use of antipsychotics seen in those with BPSD (Canadian Institute for Health Information, 2021a). The COVID-19 pandemic exposed the frailty of Ontario's LTC.

Ontario needs a plan of action moving forward to protect residents and staff in LTC and reduce the reliance on antipsychotics. The strategies discussed above would be supportive of those desired results.

Chapter 5. Conclusions

5.1 Summary

The primary intent of this paper was to suggest future strategies for Ontario's LTC. Specifically, strategies to address pandemic preparedness and the use of antipsychotics as chemical restraints in those with BPSD. To explore future strategies, first, important background information about the SARS outbreak of 2002-2004, LTC in Ontario, dementia in LTC, antipsychotics use, and COVID-19's impact on LTC in Ontario was given. Then a historical review on the use of antipsychotics in PWD and issues, explicitly staffing, crowding, and training in LTC in Ontario, were explored. This historical review gave context and allowed for a critical analysis of policy implementations during and after the SARS 2002-2004 outbreak and preparedness in LTC discussed in chapter 3.

By critically analyzing issues in LTC during the SARS outbreak in 2002-2004 and highlighting recommendations made at that time to improve LTC in Ontario, it became apparent that LTC was appallingly unprepared for any infectious outbreaks. With the introduction of the COVID-19 pandemic in LTC, this unpreparedness became even more apparent. In fact, LTC homes did not have the resources to protect staff and residents (Brophy et al., 2021). This is why changes need to be made within the LTC sector to better pandemic preparedness and decrease the use of antipsychotics as chemical restraints.

After the SARS outbreak in 2002-2004, recommendations were made to update LTC's infection control practices (Lysyk, 2021). These recommendations were left disregarded; instead, funding and resources were sent elsewhere, specifically the acute

care sector (Silverman et al., 2020). The lack of funding and resources adversely impacted how LTC could care for those with BPSD and made the use of antipsychotics as chemical restraints more common (Howard et al., 2020). During the time between the SARS 2002-2004 and the COVID-19 pandemic, other countries were learning lessons from their experiences with SARS and adjusting their healthcare systems to better equip themselves in the future (Silverman et al., 2020). Ontario, however, did not make the recommended changes to their LTC sector, and as a result, significant losses were seen. Moving forward, it is essential that the areas of weakness that were highlighted in both the SARS outbreak in 2002-2004 and in COVID-19, such as staffing issues, crowding, and infection control practices, are addressed. These lessons learned then transitioned the paper into discussing the future strategies I suggested.

This paper focuses on two main areas of improvement: improving pandemic preparedness and decreasing the use of antipsychotics as chemical restraints. These two issues, during the pandemic, led to the quality of life of residents being reduced. Being underprepared for the pandemic meant that LTC homes did not have enough staff to follow infection control practices, and there was insufficient PPE for staff (Howard et al., 2020). There were no specific quarantining measures in place for those infected, and LTC homes did not train their staff on infection control practices or have infection control practitioners in place to take leadership roles in the event of a pandemic (Silverman et al., 2020). Many issues experienced during the COVID-19 pandemic fall under a lack of pandemic preparedness. There were not enough staff to assist residents with daily routines or basic hygiene. This, in turn, led to the over-use of antipsychotics as chemical restraints (Howard et al., 2020). The lack of pandemic preparedness and increased use of

antipsychotics seen in LTC during the COVID-19 pandemic is an indication that there are many flaws in Ontario's LTC sector. Ontario can not follow the same path again and needs to have strategies moving forward to address pandemic preparedness and the over-use of antipsychotics.

This paper recommends implementing QI projects in LTC homes to improve pandemic preparedness and decrease the over-prescribing of antipsychotics in residents with BPSD. By assessing where specific issues within the LTC system lie, adjusting, and testing for improvement in PDSA rapid cycles, improvements can be made to better pandemic preparedness and reduce the use of antipsychotics as chemical restraints. The other suggestion is to make changes at the policy level to improve preparedness in the wake of another pandemic and reduce the use of antipsychotics as chemical restraints. Many different areas of policy change were addressed to better pandemic preparedness and reduce the over-use of antipsychotics in those with BPSD. Specific suggestions were to enhance staffing and training by increasing benefits and compensation to staff and offering province-wide training and programming to raise awareness about the appropriate use of antipsychotics and alternative ways to help those with BPSD. Phasing out for-profit LTC homes was also suggested as they have outdated design standards and have worse resident outcomes when compared to non-profit LTC homes, yet both are publicly funded (Stall et al., 2020). Increasing funding was also an area of policy change that would lead to better pandemic preparedness and less need for antipsychotics as chemical restraints in many ways. It could help address the issues seen with staffing, crowding, and overall access to resources (MacDonald, 2020). Improving auditing measures for antipsychotics was also suggested to help reduce the over-use of

antipsychotics as chemical restraints. The last area of policy change mentioned was to invest in alternative therapies to antipsychotics. Funding research for different pharmacological interventions or using non-pharmacological interventions is suggested but requires more funding and attention.

As discussed in chapter 4, all of these suggestions would help Ontario's LTC be better prepared in the wake of another pandemic and lead to a decrease in using antipsychotics as chemical restraints. If the government considered these strategies, they would be better off when faced with future pandemics or infectious outbreaks. While the LTC sector may not be as glamourous or garner as much attention as other sectors within healthcare, it is an important sector for all of society. At one point in time, all of us will require access to LTC. Whether for a loved one or yourself, LTC will always be needed. The conditions residents faced during the COVID-19 pandemic were horrifying and will forever stain Ontario's LTC. However, moving forward, there are two options. We can either do as we did during the SARS 2002-2004 outbreak and ignore the issues outlined in LTC or make changes and be better prepared. I suggest we make changes to increase pandemic preparedness and reduce the over-use of antipsychotics as chemical restraints to improve the quality of life of residents and the LTC sector as a whole instead of sitting idly by as injustices are made toward our elderly.

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