Expert Panel Guidance on Appropriate Use of Antipsychotics in Long-Term Care (DRAFT)

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Expert Panel Consensus Statements

The evidence-informed consensus statements were developed by a panel of experts and knowledgeable individuals, through a consensus-building process from June 2024 to January 2025.

The target for long-term care (LTC) homes in Canada reflects a level of excellence for the quality indicator 'potentially inappropriate use of antipsychotics in long-term care' to which LTC homes can aspire, and represents acceptable practice in Canada. The annual improvement goal supports collective action toward the target by giving LTC homes something to strive for each year regardless of their proximity to the target rate for Canada.

The target for long-term care (LTC) homes in Canada and the annual improvement goal are meant to inspire change to improve the health and safety of people living in LTC by setting clear expectations of where Canada should be regarding the appropriate use of antipsychotics in LTC. They are intended to be ambitious, realistic, and encouraging for LTC homes, but they are not mandatory for LTC homes.

Consensus Statement 1 - The Target for LTC Homes in Canada

The panel recommends 15% as the target for LTC homes in Canada for the quality indicator 'potentially inappropriate use of antipsychotics in long-term care.'

Note: *The target sets a standard for the overall risk-adjusted rate for Canada. It is a level of excellence for the quality indicator to which LTC homes can aspire. There is no timeframe associated with the target*.

This means that the proportion of people living in LTC homes across Canada receiving antipsychotic drugs without a diagnosis of psychosis should ideally be 15% or less. All LTC homes can contribute to reaching the target for the country through quality improvement initiatives that reduce potentially inappropriate antipsychotic use in their setting to 15% or lower.

Consensus Statement 2 - Annual Improvement Goal

For LTC homes that are not meeting the target for LTC homes in Canada, the panel recommends a 15% relative reduction as the annual improvement goal for the quality indicator 'potentially inappropriate use of antipsychotics in long-term care.'

This means that LTC homes should aim to reduce the proportion of people living in that home who are receiving antipsychotic drugs without a diagnosis of psychosis by 15% relative to the proportion from the previous year.

For example, if a LTC home with a rate of 20% for the quality indicator was to achieve the 15% relative reduction over 1 year, it would mean that their new rate is 17%.

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Executive Summary

What is the Issue?

Antipsychotic medications are the main class of drugs used to treat schizophrenia or symptoms of psychosis. The use of antipsychotics in people without psychosis is considered potentially inappropriate. Potentially inappropriate use of medications can mean that the drugs are not indicated, the risk of harms outweigh potential benefits, or non-pharmacological approaches are more appropriate. In long-term care (LTC) homes, antipsychotics are sometimes used to manage responsive behaviours associated with dementia (e.g., aggression, agitation); however, the use of antipsychotics for dementia is considered "off-label" for most antipsychotics in Canada. Using antipsychotics inappropriately can be a safety concern, as these medications are associated with higher risk of falls, fractures, stroke, and death in older adults in LTC.[4-7]

In Canada, the percentage of people who may be inappropriately receiving an antipsychotic medication in LTC homes is monitored using the quality indicator "potentially inappropriate use of antipsychotics in long-term care" (refer to Appendix 1 for more details). A lower percentage for this quality indicator means there are fewer people on antipsychotics without a diagnosis of psychosis. Canada's rate for the quality indicator increased to 24.5% in 2023-2024 from 20.2% in 2019-2020. Rising rates indicate a reversal of substantial progress made by the LTC sector since 2015 to address the behavioural and psychological symptoms of dementia by other non-drug means. There is currently no established target for the quality indicator that would suggest acceptable practice for the LTC sector in Canada.

What Did We Do?

In 2023, a group of pan-Canadian health care organizations came together as the Appropriate Use Coalition to improve patient outcomes and reduce risks through appropriate use of medications in Canada. One of their first priorities is to streamline and coordinate an approach to address the appropriate use of antipsychotics in LTC homes. To support this work, CDA-AMC and Choosing Wisely Canada convened a multidisciplinary panel to develop evidence-informed consensus statements on the appropriate use of antipsychotics in LTC. The panel was composed of 17 experts across Canada with diverse professional and personal experience in the LTC sector. Using a modified Delphi process, the panel deliberated on a target for LTC homes across Canada and an annual improvement goal for the quality indicator "potentially inappropriate use of antipsychotics in long-term care."

To develop consensus statements on a target and an annual improvement goal, the panel considered input from an engagement survey of interested parties, evidence from a literature-based Environmental Scan (including performance data from Canadian Institute of Health Information [CIHI] and interRAI), and their relevant expertise in LTC throughout the consensus-building process. This report outlines that process and its outcomes, including key themes and clinical considerations when using the target for LTC homes in Canada, and the annual improvement goal, for quality improvement and clinical care.

What are the Consensus Statements?

Consensus Statement 1: The panel recommends 15% as the target for LTC homes in Canada for the quality indicator 'potentially inappropriate use of antipsychotics in long-term care.'

- This means that the proportion of people in LTC homes receiving antipsychotic drugs without a diagnosis of psychosis should ideally be 15% or less for Canada. All LTC homes can contribute to reaching the target for the country through quality improvement initiatives that reduce potentially inappropriate antipsychotic use in their setting to 15% or lower.

- This value is risk-adjusted, which refers to a statistical technique used to control for population differences between LTC homes. By adjusting the quality indicator for factors at the individual level (e.g., age, long-term memory problems, cognitive performance) and at the LTC home level (e.g., resource utilization), the risk-adjustment process enables a fairer comparison of the rate of potentially inappropriate antipsychotic use between LTC homes.

Consensus Statement 2: For LTC homes that are not meeting the target for LTC homes in Canada, the panel recommends a 15% relative reduction as the annual improvement goal for the quality indicator 'potentially inappropriate use of antipsychotics in long-term care.'

- This means these LTC homes should aim to reduce the proportion of people living in that home who are receiving antipsychotic drugs without a diagnosis of psychosis by 15% relative to the proportion from the previous year.

The target for LTC homes in Canada is not mandatory for LTC homes to implement, and there is no time limit to reach it. The annual improvement goal complements the target for LTC homes in Canada by recommending a safe and achievable rate of change for LTC homes striving to consistently improve their performance on the quality indicator each year. The panel highlighted the benefits of systematic and sustainable approaches to achieve the target and annual improvement goal that focus on the appropriate use of antipsychotics through person-centred care, reflect improvements in care, and avoid unintended consequences.

What is the Potential Impact?

These consensus statements will serve as a starting point to inform the Appropriate Use Coalition's future efforts, such as the alignment and development of quality improvement programs with tools and resources for LTC homes. The purpose of the target and the annual improvement goal is to inform, motivate, and monitor change that will improve the safety and quality of care for those living in LTC. Importantly, the target is a not a limit; LTC homes that are already at a 15% rate for the quality indicator are encouraged to continue their quality improvement efforts.

Reaching the 15% target for LTC homes in Canada is estimated to result in 21,000 fewer people receiving potentially inappropriate antipsychotics across the country, compared to the 2023–

2024 national rate for Canada. This could mean fewer side effects, falls, hospitalizations, deaths, or other harms because of inappropriate antipsychotic use for up to 21,000 people in LTC homes.

Setting the Context

Rising Potentially Inappropriate Antipsychotic Use in Long-Term Care

Antipsychotic medications are the main class of drug used to treat people with schizophrenia and symptoms of psychosis, including delusions and hallucinations.[8] However, they are sometimes used for behaviours or conditions that may be difficult for care providers to manage in long-term care (LTC), such as the behavioural and psychological symptoms of dementia (e.g., responsive behaviours such as aggression, anxiety, agitation).[9] While the use of antipsychotics may be reasonable in some cases, such as severe agitation, aggression, acute delirium, or psychosis, there is concern that antipsychotics are sometimes prescribed inappropriately, such as when they are not indicated (i.e., not all antipsychotics are approved for use in people with dementia), when other non-pharmacological approaches are more appropriate, or when harms outweigh potential benefits.

Prior to 2020, quality improvement efforts resulted in steady progress in reducing this potentially inappropriate use of antipsychotics in LTC homes across Canada.[9] In 2019-2020, potentially inappropriate use was reported to be at its lowest in the last decade at 20.2%, which was a substantial decrease from 27.2% reported for 2014-2015.[9] However, rates have increased since the start of the COVID-19 pandemic and continue at an undesirable rate, reversing the progress made in the past decade.[9-11] It has been suggested that the downstream impacts of the pandemic (e.g., staff shortages, social isolation, and disruption of services) may have exacerbated the conditions that can lead to inappropriate antipsychotic medication use.[9,11] In 2023-2024, CIHI reported that the rate of potentially inappropriate use of antipsychotics in Canada was 24.5%, with most provinces well above this national average.[9]

Why Is This an Issue?

The number of people living with dementia in Canada is expected to reach 1 million by 2030,[12] which will likely impact LTC systems and populations. With this expected rise in the prevalence of dementia, rates of potentially inappropriate antipsychotic use may continue to rise without action. Inappropriate use of antipsychotics is concerning given that the potential for harms may outweigh the potential benefits.[4-6] The effectiveness of antipsychotics to manage behavioural and psychological symptoms of dementia may be limited and varies by the type of antipsychotic.[13] Additionally, antipsychotic use may increase the risk of stroke, falls, fractures, fall-related hospitalizations, and mortality among people living in LTC.[4,5] Most antipsychotics include a safety warning indicating that older adults with dementia treated with antipsychotics have an increased risk of death compared to placebo.[14-28]

Canadian clinical practice guidelines recommend against the use of antipsychotics in people with dementia living in LTC in most circumstances.[13,29,30] The literature suggests that using antipsychotic medications to manage behavioural and psychological symptoms of dementia is

likely an ineffective and harmful approach in the long-term,[4,5,29,31] especially when non-drug approaches allow LTC staff to assess and address the root cause of responsive behaviours and contributing factors that are unique to individuals and their context.[32,33] Behavioural and psychological symptoms of dementia can be caused by a variety of factors, such as an individual's physical environment, pre-existing illnesses, and unmet need (e.g., pain, hunger).[34]

Inappropriate antipsychotic use also conflicts with an individual's right to autonomy and dignified care. Autonomy is an individual's right to self-govern and act in a way that is aligned to their desires and preferences. While autonomy is often compromised in advanced stages of dementia,[35,36] sedative effects due to antipsychotics (often referred to as chemical restraints in the literature when used to manage behaviours) can further reduce their ability to exercise autonomy, including participating in their care. Providing dignified care involves respecting and upholding an individual's personhood and autonomy by recognizing their capacity and goals.[37,36]

How is "Potentially Inappropriate Use of Antipsychotics" measured?

$$= \frac{\text{People living in LTC who received antipsychotic medication on at least one day in the week before their valid target assessments}}{\text{People living in LTC with valid assessments}}$$

Figure 1: The Quality Indicator "Potentially Inappropriate Use of Antipsychotics in LTC[2,38]"

In Canada, CIHI has been using the quality indicator "potentially inappropriate use of antipsychotics in LTC" for over a decade to monitor the percentage of people living in LTC receiving antipsychotics without a diagnosis of psychosis.[2,9] Refer to Figure 1 for an explanation of how the indicator is calculated. The quality indicator excludes people with a diagnosis of psychosis, schizophrenia or Huntington chorea, and those with hallucinations or delusions during the relevant assessment period, people with an end-stage disease (6 months or less to live), people receiving hospice or palliative care, and people who were recently admitted to LTC (i.e., within 3 months).

While a lower number is better, it is likely that performance rates on the quality indicator will never reach 0 for the following reasons:

- The quality indicator interprets certain approved indications for antipsychotic medications as potentially inappropriate, specifically bipolar disorder and major depressive disorder without hallucinations or delusions.
- It includes a proportion of individuals who are receiving antipsychotics appropriately in LTC, such as short-term use for severe aggression.

This quality indicator is risk-adjusted to control for differences in factors beyond the control of LTC homes but may affect the people living in these homes, such as increased complexity of care needs (e.g., combined Alzheimer disease and other dementia) as well as younger age (under the age of 65).[2] Risk-adjustment enables a fair comparison of the level of potentially inappropriate antipsychotic use between LTC homes across Canada.

A note about risk adjustment

Risk-adjustment is a statistical technique that is used to control for population differences between LTC homes. While risk-adjustment cannot control for all factors that might affect performance on a quality indicator,[1] using this technique means you can reasonably compare quality indicator rates across LTC homes, even if the people who live in those homes have different levels of medical complexity.

The data for quality indicator 'potentially inappropriate use of antipsychotics in long-term care' is risk-adjusted at the individual level and at the LTC home level.[1,2]

Individual level covariates: Motor agitation; moderate/impaired decision-making problem; long-term memory problem; Cognitive Performance Scale (CPS); combination Alzheimer disease and other dementia; age younger than 65

LTC home level adjustment: stratifying and reweighting the data relative to the CIHI case mix index.

- For LTC case-mix, CIHI uses Resource Utilization Groups version III (RUG-III) grouping methodologies to categorize people living in LTC into statistically and clinically homogeneous groups based on clinical and resource use similarities.[3]

This quality indicator, as well as the methods to calculate it, was developed by interRAI, a network of international experts that develops tools to facilitate evidence-based clinical practice and policy decision-making. LTC homes collect the data needed to calculate the quality indicator rates using standardized clinical assessment tools, specifically Minimum Data Set 2.0 or the interRAI Long-Term Care Facilities tool.[2] The quality indicator is currently based on data from both assessment tools but some jurisdictions have either transitioned or are in the process of transitioning to the newer interRAI Long-Term Care Facilities.[2] Statistical analyses indicate that these 2 assessment tools result in comparable rates for the quality indicator, which suggests that both tools can be used without affecting rates during the transition period.[2]

Refer to Appendix 1 or CIHI's website for more information about the methods used to calculate the quality indicator.

Rationale and Objectives for the Guidance

There is currently no target for LTC homes in Canada for the quality indicator "potentially inappropriate antipsychotics in LTC." By setting a standard for an overall quality indicator rate for

Canada, a target for all LTC homes can motivate change and deprescribing efforts, as well as increase awareness about antipsychotic use in LTC.

In 2023, 11 pan-Canadian health care organizations came together as the Appropriate Use Coalition to improve patient outcomes and reduce risks through appropriate use of medications in Canada.[39] Their focus includes sharing information and evidence, and streamlining and collaborating on appropriate use efforts across Canada. The coalition includes 2 subgroups: one focused on appropriate use in primary care, and another focused on LTC. As its first priority, the latter agreed to focus on the appropriate use of antipsychotics in LTC homes, including conducting an analysis of potentially inappropriate antipsychotic use rates in Canada, as well as developing quality improvement programs, critical tools, resources, and consensus-based guidance on the appropriate use of antipsychotics in LTC.[9]

In support of the coalition's priority in the appropriate use of antipsychotics, Canada's Drug Agency (CDA-AMC) partnered with Choosing Wisely Canada (CWC) to host a multidisciplinary panel tasked with developing 2 evidence-informed consensus statements for a target for LTC homes in Canada and a complementary annual improvement goal for the quality indicator 'potentially inappropriate use of antipsychotics in long-term care'. These consensus statements are intended to serve as a reference guide to support future coalition initiatives to improve the safety and quality of care by reducing potentially inappropriate antipsychotic use in LTC homes.

Definitions

A target for LTC homes in Canada: A level of excellence for performance on a quality indicator to which organizations across Canada can aspire.

- The target for the quality indicator "potentially inappropriate use of antipsychotics in LTC," is presented as a risk-adjusted rate (expressed as a percentage) that reflects acceptable practice in LTC homes in Canada.
- The target does not include a specific timeframe to reach the value, as the time required to reach the target will depend in part on each LTC home's current performance on the quality indicator

Annual improvement goal: An interim improvement goal that LTC homes can aim to achieve as they work toward reaching the target for LTC homes in Canada. It is expressed as a percent relative reduction, per year, and reflects an achievable rate of change through quality improvement.

To inform and guide their decision-making when developing the target and the annual improvement goal the panel was asked to consider that the target and annual improvement goal are intended to be used together, and that these values should be ambitious and inspiring for the LTC sector, be encouraging to LTC homes, while also being realistic to the current context of LTC.

The target represents acceptable practice for LTC homes across Canada. It refers to an acceptable proportion of people taking antipsychotics unrelated to a diagnosis of psychosis in LTC homes across the country. Recognizing that it takes time to safely implement meaningful change, the target was designed without a time limit. The purpose of the annual improvement goal is to support collective action toward the target and motivate LTC homes to continue quality improvement efforts by giving them something to strive for each year regardless of their proximity to the target rate for Canada.

Additionally, CDA-AMC identified considerations for clinical and care practice to reduce inappropriate antipsychotic use in LTC homes. These considerations were informed by the literature, an engagement survey of interested parties, and panel input during the consensus-building process. The purpose was not to reach consensus on these considerations, but rather to offer insights for the panel to consider in their deliberations and discussions towards reaching consensus.

To support the choice of the target and annual improvement goal values, as well to inform the considerations for clinical and care practice, the panel was also asked to consider the safety of people living in LTC (e.g., avoid setting numerical values that would unintentionally promote drastic change or encourage behaviours that may cause more harm than benefit, such as medication substitution[34]) and Canadian clinical practice guidelines (e.g., recommendations about the appropriate use of antipsychotics in people with dementia living in LTC), and to reflect on issues that disproportionately impact people from equity-deserving groups and ethical considerations (e.g., autonomy and dignity in care).

This report outlines the process and results of the process to create the target for LTC homes in Canada and the annual improvement goal to support the appropriate use of antipsychotics in LTC, and includes key themes and clinical considerations when using these targets for quality improvement and clinical care.

Modified Delphi Process

We followed an online modified Delphi process to reach consensus on a single numeric value for the target for LTC homes in Canada and a single numeric value for the annual improvement goal. An overview of the approach used to develop the consensus statements, and the guidance report is provided in Figure 1. The process started in June 2024 and ended in January 2025, and adheres to the ACcurate COnsensus Reporting Document (ACCORD) recommendations for reporting consensus-based studies.[40] A detailed description of the methods (including the limitations to the process) is published separately on the CDA-AMC website.

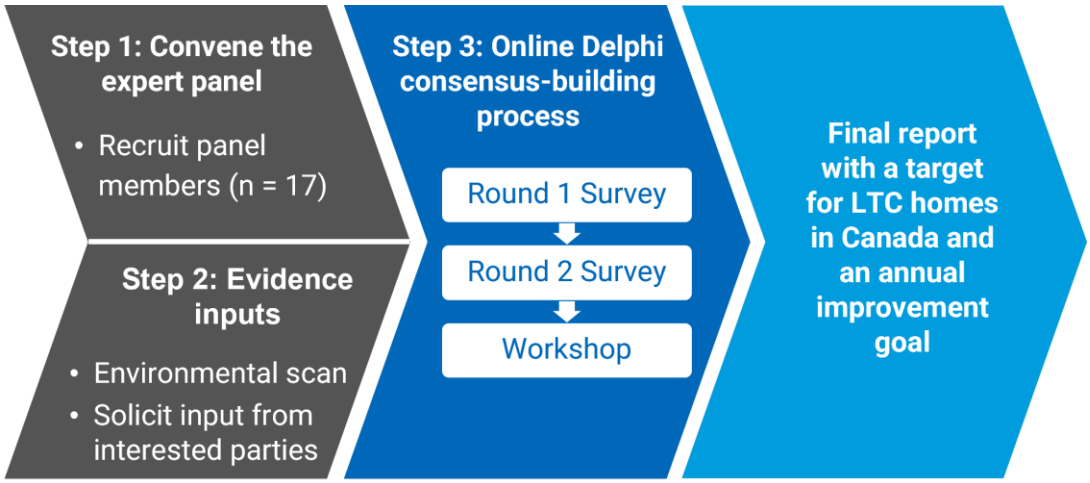

Figure 2. Overview of the Approach Used to Develop the Guidance

The Expert Panel

We purposively recruited an independent, time-limited multidisciplinary panel of 17 individuals selected for their experience and expertise related to the issue of antipsychotic use in LTC settings in Canada, and their ability to contribute to the modified Delphi process on this topic. Most panel members had more than 10 years of experience in the LTC sector in Canada through a variety of roles, including health care professionals (i.e., physicians, nurses, pharmacists), quality improvement experts, LTC administration, academics, and persons with lived experience. There was representation from the LTC systems of most of the provinces and territories of Canada (excluding Yukon and Nunavut). Most panel members self-identified as women (70.6%) for their gender identity. The panel had representation from a diverse range of ethnicities or races, including individuals who self-identified as Black, Jewish, Mohawk, white, and individuals of Caribbean or West Indies, Southeast Asian, Southern African, Western Europe, and Eastern Europe ancestry.

Refer to Appendix 2 for more details about the panel demographics.

Evidence Inputs

Concurrent to the panel member identification and recruitment, we gathered the following information to inform the consensus-building process:

- A literature-based Environmental Scan summarizing relevant information about potentially inappropriate use of antipsychotics in LTC (e.g., existing benchmarks or targets, performance data from CIHI and interRAI, quality improvement initiatives, guidelines, and implementation considerations)
- A summary of engagement survey input from interested parties (e.g., resident and caregiver associations, appropriate prescribing groups and health organizations)

The information in the Environmental Scan was used to generate the potential options for the target and the annual improvement goal in the Round 1 survey and supported relevant sections in this guidance report (e.g., barriers and facilitators to reducing antipsychotic use from the Environmental Scan were integrated into the considerations for clinical and care practice). The engagement input allowed the panel to consider a diverse range of perspectives and views and have a more comprehensive understanding of antipsychotic use in LTC homes in Canada. Panelists were asked to consider this information and their relevant expertise when completing the surveys and in their discussions and deliberations throughout the Delphi process.

The Environmental Scan and the engagement input are published separately as supporting documents on the CDA-AMC website.

Online Consensus-Building Process

The modified online consensus-building process consisted of 3 rounds, including 2 online surveys (Round 1 and Round 2), and 1 online workshop with structured discussions and live ranking and voting (Round 3). We defined the consensus threshold as 80% or higher agreement among panelists. Figure 3 illustrates a summary of the results of the modified online consensus-building process, including the survey options, the options added (Round 1 only), and the options removed after each round.

The results from the online consensus-building process are summarized in Appendix 3, as follows:

Round 1:

- Figure 6 presents the Round 1 voting results for the proposed values for the target for LTC homes in Canada.
- Figure 7 presents the round 1 voting results for the proposed values for the annual improvement goal.
- Table 3 summarizes the potential barriers and facilitators to reducing potentially inappropriate antipsychotic use in LTC, as described by the panelists in Round 1.
    - These themes have been incorporated into the considerations for clinical care and practice section of this report.

Round 2:

- Figure 8 presents the Round 2 voting results for the proposed values for the target for LTC homes in Canada.
- Figure 9 presents the Round 2 voting results for the proposed values for the annual improvement goal.

Round 3:

- Table 4 presents the results of the Round 3 ranking exercises for the target for LTC homes in Canada.
- Table 5 presents the results of the Round 3 ranking exercises for the annual improvement goal.

After the discussion and ranking exercises, live voting confirmed that the panel reached consensus on 15% as the target for LTC homes in Canada, with 16 out of 17 of panel members (i.e., 94%) agreeing with this value. The panel also reached consensus on an annual improvement goal of 15% (relative reduction per year), with 17 out of 17 of panel members (i.e., 100%) agreeing with this value.

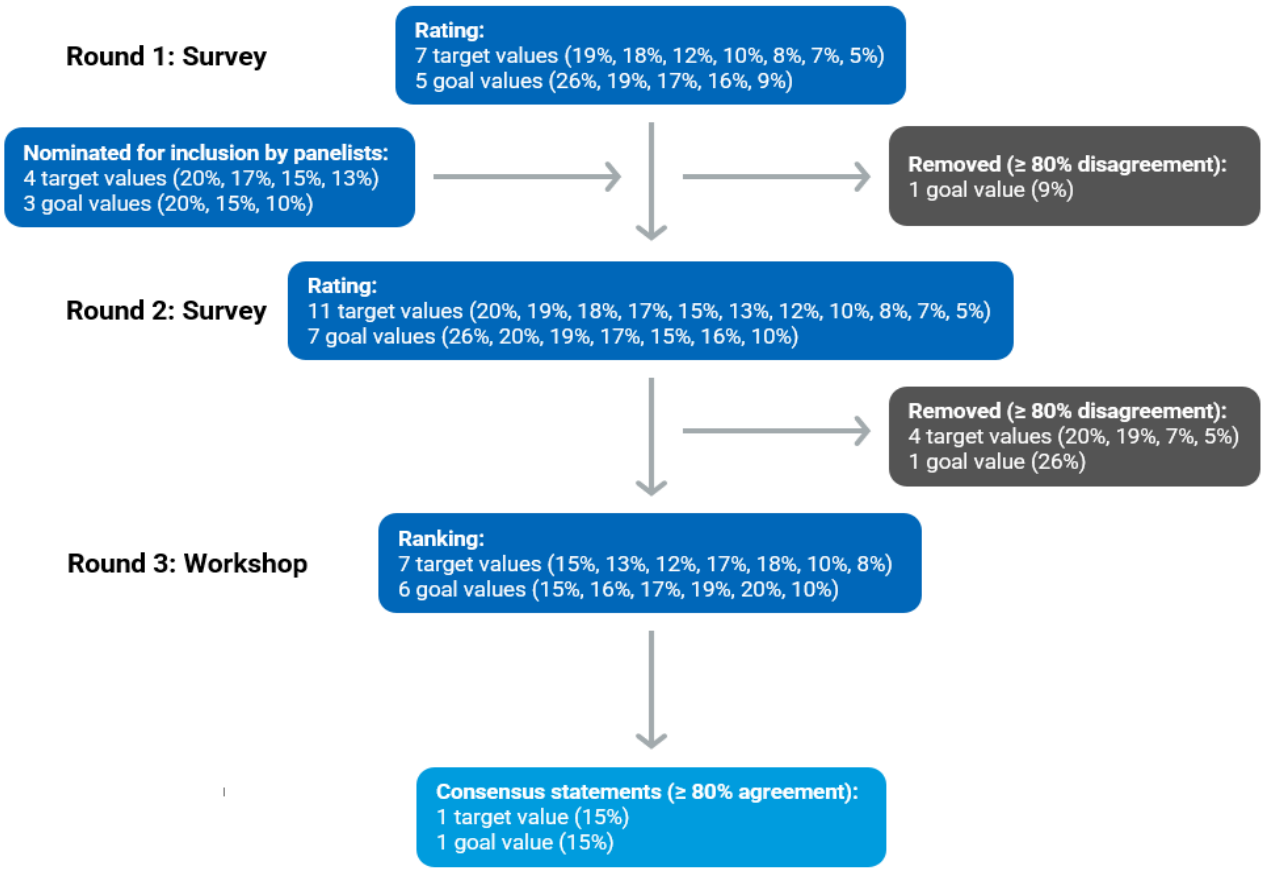

Figure 3. Overview of the 3 Rounds of the Modified Consensus-Building Process

Consensus-Based Target and Annual Improvement Goal

During the consensus-building process, the panel members discussed many different ideas and considerations, which informed the selection of the numerical values of 15% and 15% for the target and the annual improvement goal. A key theme throughout the deliberations was the need to find balance between a target value that is seen as ambitious enough (i.e., a level of excellence for the quality indicator) without being unattainable (i.e., still achievable and sustainable given what has previously achieved in Canada). Other recurring themes included consideration of the current context of LTC (e.g., staffing levels, availability of resources), the desire to improve the safety and quality of care in LTC, and the need to avoid potential unintended consequences.

Consensus Statement 1: The Target for LTC Homes in Canada

Consensus Statement 1 - The Target for LTC Homes in Canada

The panel recommends 15% as the target for LTC homes in Canada for the quality indicator 'potentially inappropriate use of antipsychotics in long-term care.'

Note: *The target sets a standard for the overall risk-adjusted rate for Canada. It is a level of excellence for the quality indicator to which LTC homes can aspire. There is no timeframe associated with the target*.

This means that the proportion of people living in LTC homes across Canada receiving antipsychotic drugs without a diagnosis of psychosis should ideally be 15% or less. All LTC homes can contribute to reaching the target for the country through quality improvement initiatives that reduce potentially inappropriate antipsychotic use in their setting to 15% or lower.

The panel reached consensus with 16 of 17 panelists (94%) agreeing that 15% should be the value for the target.

Rationale for the Selection of 15% for the Target

Figure 4 provides an overview of the selection process for the 15% target value.

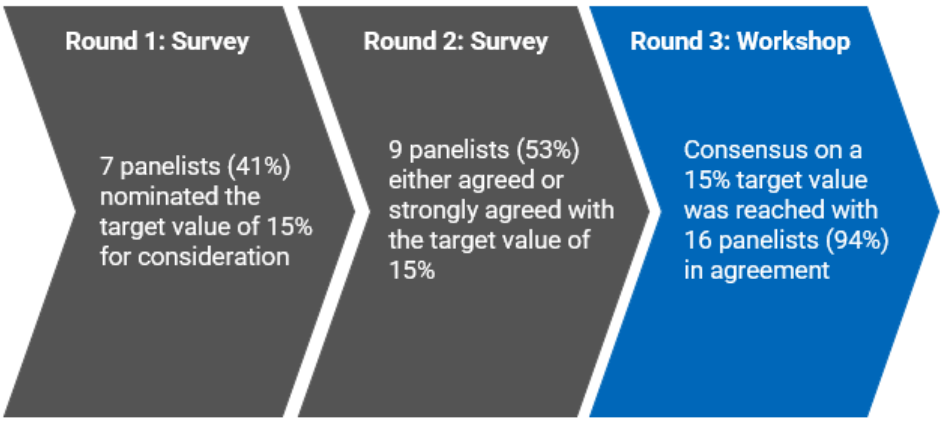

Figure 4. Selection Process for the 15% Target Value

While 15% was not one of the initial options for the target, 7 panelists nominated this value for consideration in the Round 1 survey. Panelists suggested 15% given that it was a middle value between 2 survey options survey %) for which there was a large gap (i.e., between 12% and 18, and it was a good balance between a desire to improve from the current rates while still being relevant to the reality of LTC homes. In the Round 2 survey, 53% of panelists either agreed or strongly agreed with the value of 15% for the target.

During the workshop, the panel members discussed and deliberated on many different ideas and considerations, which informed the selection of 15% as the target for LTC homes in Canada for the quality indicator 'potentially inappropriate use of antipsychotics in LTC.'

When selecting the value for the target, panelists were concerned that an extremely high target could demotivate homes that would be starting at lower rates (or already meeting the target) from making further improvements to reduce potentially inappropriate use of antipsychotics in LTC. Conversely, other panelists suggested that extremely low values may discourage or demotivate homes that would be starting at higher rates.

The panel reflected on the importance of understanding the quality indicator (i.e., what is and is not measured by the indicator) and how it is calculated (e.g., exclusion criteria, the data is risk-adjusted so that performance is comparable between homes). They discussed the challenge of untangling potentially appropriate from potentially inappropriate antipsychotic medication use within the quality indicator, and considered some of the appropriate indications for antipsychotics that are not excluded from the indicator (e.g., bipolar disorder, major depressive disorder, short-term treatment of aggression in severe dementia) and the concern that a low target might lead to inappropriate withdrawal of medications.

While they noted how challenging it was to find this balance, they carefully considered and discussed the available evidence on current and past performance rates, potential unintended consequences of an extremely low target, and the availability of resources across LTC homes in Canada.

Alignment with Performance Rates in LTC Homes in Canada

Panel members described 15% as a value for the target that was both ambitious and achievable, and consistent with the evidence in the Environmental Scan. They raised the following points in their discussion:

- Performance rates from the best 20th percentile of LTC homes in Canada are around 15%.
- Some LTC homes are already achieving rates that are below 15%.
- 15% would be a significant improvement over the current median rate in LTC homes in Canada (i.e., 23.5% in 2023–2024).
- Between 2014 and 2019, the percentage of potentially inappropriate use of antipsychotics in LTC decreased from 27.2% to 20.2% in Canada due to substantial efforts to address this issue, demonstrating that reducing rates at the national level is possible over time.

Initially, some panelists preferred even more ambitious values for the target (e.g., 10% or 12%), given that homes in the 10th percentile have achieved rates below 10%, which demonstrates that this rate is achievable. They also considered that a target of 10% would be comparable to the current median rate in the US. Conversely, some panelists initially preferred a higher value for the target (e.g., 17% or 18%) that would be considered "not too aggressive," given the current national median rate in Canada (i.e., 23.5% in 2023–2024), and the desire to set a target that was reasonably achievable for LTC homes in Canada with much higher rates on the quality indicator (e.g., 40%, 60%). However, given the other perspectives shared in the workshop and considering the target from a pan-Canadian lens, most panelists shifted their position and were in favor of 15% as the target.

Resources to Support Achieving the Target

Throughout the Delphi process, panelists regularly acknowledged the many challenges in the LTC sector, particularly regarding the availability of resources in LTC homes. The panel discussed that while different LTC homes experience different barriers, and that they do not all have the same resources or facilitators for change currently available to them, it was still important to establish a target that the homes could work towards.

Panel members shared their experiences from their jurisdictions with successful quality improvement initiatives, including:

- LTC homes that have achieved improvements in the quality indicator rates have had programs focused on minimizing reliance on antipsychotics with additional resources in place to support their efforts (e.g., external funding, educational training, one-on-one interventions).

- Well-resourced LTC homes (e.g., well-funded; dedicated programs; offer music therapy and other recreation activities) have achieved rates below 10%.

The panel acknowledged that this type of initiatives can be very expensive and given the variation across LTC homes, they felt that 15% was a reasonable value for the target.

Given the current staffing levels and staffing challenges experienced in LTC homes (e.g., staff turnover, rotation of staff), panelists felt that:

- 15% is a value that is aspirational (i.e., a target that LTC homes can work towards in the long term) but realistic and achievable given the current context of the LTC sector (e.g., limited resources).
- It may take a substantial investment of resources and ongoing support for health care professionals to help LTC homes reduce rates of potentially inappropriate use of antipsychotics and to help sustain any progress towards the target (e.g., investment in staffing, process improvements, funding, focused programs).

The panel considered that establishing an ambitious target of 15% could be used to advocate for additional resources to help the homes meet the target.

Risk of Unintended Consequences

While "lower is better" when considering the definition and interpretation of the quality indicator "potentially inappropriate use of antipsychotics in LTC,"[2] the panel discussed the potential implications of having a lower target for a quality indicator in practice.

When selecting the value for the target, the panel considered that if the target is too low, then it may indirectly cause LTC homes to focus on strategies to artificially lower the quality indicator rate (e.g., coding people in the data collection instruments with specific conditions so that they are excluded from the indicator), rather than focusing their efforts on providing appropriate care for the people living in LTC homes. Avoiding the potential risk for unintended consequences due to setting a target that was perceived as being "too low" contributed to the panel's selection of 15% as the value for the target.

Panelists noted the following potential unintended consequences that could occur from trying to achieve a lower target without the proper resources and training:

- Admission refusals or undertreatment of people with conditions that are not excluded from the quality indicator but for which antipsychotic medication use may be clinically appropriate (e.g., people with severe major psychiatric disorders such as major depressive disorder, people with intellectual disabilities, people with severe responsive behaviours).
- Medication substitution to another class of medication with sedative properties (e.g., benzodiazepines) that may do little to effectively manage the responsive behaviours of dementia, and may cause harms.
- Changes in diagnostic patterns and increased coding of conditions that are excluded from the quality indicator (e.g., increased coding of psychosis, schizophrenia, delusions,

hallucinations, end-stage disease) to influence performance on the quality indicator without actually reducing inappropriate antipsychotic use.

Panelists also felt that 15% balanced being ambitious enough as a long-term target for the sector with being realistic to what is feasible in the LTC sector given the currently available resources at LTC homes across the country (e.g., challenges with staffing levels and continuity), while also minimizing the risk of unintended consequences.

Areas of Disagreement: Panelists in Favour of a Lower Target

At the workshop, 1 panelist with the perspective of a health care professional in LTC did not agree with the value of 15% as the target for LTC homes in Canada, and voted against 15% as the final value. This panelist expressed a preference for a lower, more ambitious value for the target, given that:

- Many LTC homes in Canada are already achieving quality indicator rates below 15%.
- Other countries have lower rates of potentially inappropriate antipsychotic use.
- They were concerned that for homes that are already at or below 15%, a target of 15% would not encourage these homes to continue to make further improvements to reduce potentially inappropriate use of antipsychotics in LTC.
- They considered that the target is intended to be applicable for a long time with no established revision date, and wanted to set a target that would remain relevant for an extended period.

Consensus Statement 2: Annual Improvement Goal

Consensus Statement 2 – Annual Improvement Goal

For LTC homes that are not meeting the target for LTC homes in Canada, the panel recommends a 15% relative reduction as the annual improvement goal for the quality indicator 'potentially inappropriate use of antipsychotics in long-term care.'

This means that LTC homes should aim to reduce the proportion of people living in that home who are receiving antipsychotic drugs without a diagnosis of psychosis by 15% relative to the proportion from the previous year.

For example, if a LTC home with a rate of 20% for the quality indicator was to achieve the 15% relative reduction over 1 year, it would mean that their new rate is 17%.

The panel reached consensus with 17 of 17 panelists (100%) agreeing that 15% should be the value for the annual improvement goal.

Rationale for the Selection of 15% Relative Reduction as the Annual Improvement Goal

An overview of the selection process for the 15% annual improvement goal value is provided in Figure 5.

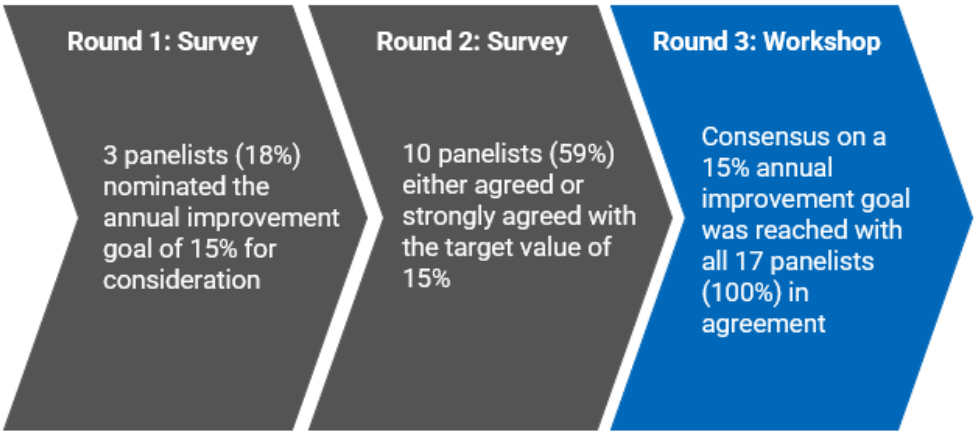

Figure 5. Selection Process for the 15% Annual Improvement Goal Value

While 15% was not part of the initial options for the annual improvement goal, 3 panel members nominated it for consideration in Round 1. It was suggested to be a sufficiently ambitious value while also being achievable for many LTC homes.

In the Round 2 survey, 59% of panelists either agreed or strongly agreed with the value of 15% for the annual improvement goal. Panelists considered that a 15% relative reduction per year:

- Aligned with the results of previous Canadian quality improvement initiatives identified in the Environmental Scan.
- Is a realistic value that would support buy-in from LTC homes.
- Would allow for sustainable progress while accommodating the variability in resources and challenges in LTC homes.

During the workshop, the panel members discussed many different ideas when selecting a 15% relative reduction as the annual improvement goal for the quality indicator 'potentially inappropriate use of antipsychotics in LTC.'

Alignment with Quality Improvement Initiatives in Canada

Panel members described a 15% relative reduction per year as a "feasible," "reasonable," and "attainable" value for the annual improvement goal.

The panelists referred to evidence from previous quality improvement initiatives in Canada that were identified in the Environmental Scan, including that:

- 15% was aligned with the results from previous initiatives, which achieved relative reductions on this quality indicator of around 16% and 17% in 1 year.
- Some homes achieved rates ranging from 20% to 40% relative reduction in 1 year, but the panel considered whether these rates would be sustainable year over year.

After the initial ranking exercise in the workshop, the top 3 ranked choices for the goal were 15%, 16% and 17%. The panel discussed how the annual improvement goal expressed as a relative reduction meant that mathematically, from the perspective of the individual LTC homes, there would be little difference between the values of 15%, 16% and 17%, in particular for smaller homes. For this reason, any of these values would be acceptable.

Panelists also considered that:

- Of the top 3 values, a goal of 15% relative reduction annually would be easier to remember and would allow for more LTC homes to aim for and achieve the annual improvement goal on a yearly basis.
- LTC homes that achieved the 15% relative reduction annually over the course of multiple years would contribute to a substantial reduction in the national rate.

The Need for Systematic, Sustainable, and Safe Progress

A common theme throughout the workshop discussions was selecting a value for the annual improvement goal that would allow for safe and sustainable progress towards the target. The panel reflected that the goal should promote systematic changes– that is, increasing supports so that providers can safely deprescribe antipsychotics (e.g., changing care practices, training staff, modifying spaces), and not simply stop prescribing medications.

The panel reflected on the Canadian quality improvement initiatives reported in the Environmental Scan, and discussed:

- Whether the relative reductions observed in these initiatives were sustained year to year, or whether the larger relative reductions only occurred in the first year, followed by a tapering of the effect.
- That the homes in these published initiatives had focused quality improvement programs and dedicated resources to support deprescribing efforts (i.e., the planned process of dose reduction or stopping of medications that might cause harm or may no longer be of benefit).

Based on some panel members' experience in their jurisdiction, the LTC homes that were able to achieve relative reductions of 16% to 17% per year were extremely motivated and had external funding and dedicated programs. However, once the additional funding or resources were gone, LTC homes limited their focus on reducing potentially inappropriate antipsychotics.

The panel acknowledged that achieving a higher relative reduction on quality indicator rates in the first year may be easier, but that as the LTC homes' absolute rate decreases, sustaining the same

degree of relative reduction can become more challenging. For example, an initial reduction could result from some "easy wins" that require fewer resources, such as a chart review to identify opportunities for deprescribing (e.g., antipsychotics that were intended as an interim measure to help the person adjust to living in LTC but were never deprescribed; antipsychotics prescribed in the community but then continued indefinitely). However, as the absolute rate decreases, the opportunities for deprescribing may require more resources due to the complex needs of the people taking antipsychotics in LTC (e.g., additional recreational therapy).

The panelists also discussed that given the current context of LTC in Canada, a too ambitious goal could:

- Potentially lead to unintended consequences (e.g., increased distress; risk of those living in LTC harming themselves or others) if homes deprescribed antipsychotics too quickly to meet the annual improvement goal.
- Discourage LTC homes if they did not feel that they had the resources to achieve the annual improvement goal.

The panel considered that an annual improvement goal of 15% would:

- Allow all LTC homes to make measurable and manageable progress towards the target, without discouraging homes over time.
- Require sustained resources and sustained effort for the LTC homes to achieve the goal yearly.

Panelists considered lower values for the annual improvement goal, such as 10%, to be too low as they wouldn't provide enough motivation for LTC homes to make noticeable changes in providing appropriate care for people living in the homes. One panelist initially preferred a lower value for the annual improvement goal (i.e., 10%), as they wanted to set realistic expectations for homes with fewer resources to be able to make slow improvements; however, after hearing the other perspectives at the workshop, they shifted their thinking and agreed with 15% as the top choice for the annual improvement goal.

Pairing the Target and Annual Improvement Goal: 15 and 15

The target and the annual improvement goal were designed to be used together to support quality improvement initiatives to reduce potentially inappropriate use of antipsychotics in LTC homes. By considering them together, we can set an ambitious target for the LTC sector in Canada (i.e., the overall percentage of people living in LTC homes in Canada who are taking antipsychotics without a diagnosis of psychosis), while offering an annual improvement goal that all LTC homes can realistically strive for regardless of where they stand relative to the target (i.e., an interim goal that LTC homes can use to compare their progress to the previous year).

During one of the small group discussions, 1 panelist initially reflected on the idea of pairing a 15% value for the target with a 15% value for the annual improvement goal (i.e., 15% relative reduction annually to reach a target of 15%). This concept was well received by the other panelists and was further considered in the subsequent rounds of discussion at the workshop.

Panelists further discussed the advantages of this "15 and 15" pairing of the target and goal, emphasizing how "15 and 15" are evidence-informed numbers for the target and annual improvement goal that are easy to communicate and remember. In particular, highlighting how "15 and 15" are:

- Simple numbers that can promote acceptance among LTC providers, and support uptake and implementation by reducing cognitive burden on providers in operationalizing the target and annual improvement goal while removing ambiguity between the value for the target and goal.
- Numbers that staff in LTC homes could see as achievable at the home level, and as such, promoting staff engagement that can help ensure sustainable change over time.

Panel members discussed how the timeframe for implementing the annual improvements and reaching the target could help inform their deliberation. During their discussions, they noted how a long timeframe would allow them to consider a more ambitious target, whereas a short timeframe (e.g., 3 to 5 years) would require a less ambitious, higher value for the target. They also noted how the time to reach the target would vary across LTC homes and depend in part on each LTC home's current performance on the quality indicator. The panel reflected that given that the target is intended for the long term and the annual improvement goal is intended to support homes in reaching the target over time, the pairing of "15 and 15" provides a balanced approach to promoting ambitious changes in the long term and achievable progress on an annual basis.

Considerations for Clinical and Care Practice

Beyond reaching consensus on the target and annual improvement goal, this project aimed to identify key considerations for clinical and care practice that can help reduce potentially inappropriate use of antipsychotics in LTC homes in Canada. Considerations outlined in this section summarize and highlight the interrelated concepts identified in the Environmental Scan, the engagement input summary, and the panel's inputs that can help reduce inappropriate antipsychotic use in LTC homes. Refer to Table 3 in Appendix 3 for a summary of the panel members' input from the Round 1 Survey regarding barriers and facilitators to reducing inappropriate antipsychotic use.

In alignment with Canadian clinical practice guidelines identified in the environmental scan,[13,41-44] the inputs from the engagement survey of interest holders in the LTC sector (e.g., resident and caregiver associations, appropriate prescribing groups, and health organizations) indicated that there is limited to no role for antipsychotic use for people living in LTC homes without a diagnosis of psychosis. The input emphasized that "while medications can be part of the care plan, it should not be the whole plan." Thoughtful deliberation of the risks and benefits of antipsychotics, underlying causes of responsive behaviours, and of other treatment options (i.e., non-pharmacological approaches) by LTC staff and caregivers may help prevent inappropriate use of antipsychotics, facilitate appropriate use, and avoid undertreatment of people living in LTC homes who may benefit from antipsychotics.

During the workshop, panel members described scenarios of meaningful reductions in inappropriate use and successful deprescribing of antipsychotics in LTC homes. In general, as highlighted in the following sections, examples of success came from highly motivated LTC homes with engaged staff and dedicated and sustained resources for targeted interventions focused on person-centred care. This aligns with literature that suggests that adequate staffing allows for more resources and time to implement a person-centred and safer care.[45] The panel also emphasized the importance of avoiding changes in care that influence the antipsychotic quality indicator rates without improving the health and safety for people in LTC homes (e.g., changes in coding or diagnostic patterns, medication substitution). Efforts are underway to reduce potentially inappropriate antipsychotic use, including the work led by the Appropriate Use Coalition. Using the target for LTC homes in Canada and annual improvement goal, the coalition plans to align and develop quality improvement initiatives and provide the resources and tools to make headway across the LTC systems in Canada.

Tailoring Resources and Processes

The interRAI analysis comparing homes in the 20th and 80th percentiles included in the Environmental Scan suggests that there was no difference between high performing and lower performing homes in terms of size (i.e., small, medium, or large), urban or rural location, and income quintile, and that top performing homes could be found in all provinces.[Dr. John Hirdes, interRAI Canada, University of Waterloo, Waterloo ON: unpublished data, 2025 Jan 15]. While this suggests that it is possible for homes of any size, location, or income quintile to improve their performance on the quality indicator, having dedicated resources and programs for reducing inappropriate antipsychotics are likely required to achieve success.

The panel acknowledged that resources and efforts to reach the target and achieve the annual improvement goal will need to be tailored to the local context of each LTC home.

- LTC homes can prioritize and sustain appropriate use efforts and person-centred care with support and adequate resources aligned with the needs of people living in LTC homes, such as appropriate staffing levels, materials or equipment for high-quality care (e.g., supplies for non-pharmacological approaches or recreational activities, education resources for staff), and a physical environment conducive to reducing inappropriate use (e.g., environments without safety concerns, spaces for recreational activities).

- Beyond staffing levels, panel members highlighted the importance of staff consistency and collaboration to better address the needs of people in LTC homes and reduce inappropriate use of antipsychotics. Supportive and proactive leadership can facilitate staff retention. Strong collaboration and communication in engaged and empowered care teams can also better implement and execute the changes that encourage appropriate use of antipsychotics in LTC homes. For example, leadership and staff stability over time can provide staff the opportunity to build trusting and positive relationships with people in LTC homes, learn their triggers, and identify the most effective non-drug approach to responsive behaviours instead of using antipsychotics. The panel, as well as the literature,

acknowledges staffing shortages and staff retention as a systemic challenge for the LTC sector, especially for rural LTC homes.[46]

- Aligning LTC homes' internal processes, tools, and policies relative to their inappropriate antipsychotic use rates with their needs can also help inform meaningful change in their context. The panel and literature provided potential process improvements that LTC homes may consider to facilitate reductions in inappropriate use, such as adopting medication review or a systematic monitoring process (e.g., side effects) for individuals receiving antipsychotics,[47-50]using care algorithms (e.g., Describe-Investigate-Create-Evaluate [DICE]),[34] and developing comprehensive treatment plans with clear timelines for reassessment and deprescribing.
    - Care algorithms, such as the DICE approach, provide a holistic framework for the management of behavioural and psychological symptoms of dementia that avoids superficial attempts to reduce antipsychotic use by merely shifting to use of other medications with potential harms and even less evidence of benefit.[34]

Person-Centred Care

Initiatives aiming to support efforts to reach the target for LTC homes in Canada and the annual improvement goal can consider implementing a person-centred approach, in which care plans and treatment reflect the unique needs, individuality, and preferences of people in LTC homes. For example, implementing personalized schedules may avoid the potential for responsive behaviour triggered by set meal or bath times that misalign with the preferences and needs of people in LTC homes.

Person-centred care also supports autonomy by involving individuals receiving care, as well as their family or caregivers in decision-making.[51-53] The panel acknowledged and underscored family or caregivers as an important part of the care team, as they can advocate for and facilitate person-centered care by sharing their knowledge of the individual's preferences, behaviours, and background.[36] The panel emphasized the role of resident and family councils in elevating the perspectives and concerns of people living in LTC homes and their families and caregivers as a collective.[54] These councils' insights can help build positive relationships with people in LTC homes and their families or caregivers, improve quality of life and care, and create community within LTC homes. Successful and robust family and resident councils have been described to have ongoing and transparent communication (between the councils and LTC leadership, people in LTC homes, and their families or caregivers), clear structure and processes, effective and knowledgeable leadership, a culture of trust and respect, and continuous recruitment for new members, and resources (e.g., spaces for meetings, tables and chairs).[55]

Person-centred care considers various aspects of personhood, such as an individual's cultural background, gender, ethnicity, religion, and language.[13,52,56] While it is unclear whether there are racial and ethnic disparities in potentially inappropriate antipsychotic use in Canada, research from the United States suggests that LTC settings with a higher proportion of non-white older adults have high rates of potentially inappropriate antipsychotic use.[57] The Landmark Study by the Alzheimer Society of Canada projects an increase in the proportion of people of Asian,

Caribbean, and African ethnic origin, as well as Indigenous peoples, living with dementia by 2050.[58] The increase in cultural diversity in people living with dementia in Canada highlights the value of integrating inclusive practices that facilitate culturally safe and trauma informed care in LTC homes. A literature review suggests that care that respects cultural and linguistic diversity can help prevent responsive behaviour,[59] and thus may minimize potentially inappropriate antipsychotic use. The results of non-randomized studies suggest that language discordance between LTC staff and people living in LTC homes can negatively impact care and increases the risk of potentially inappropriate antipsychotic use.[60,61] Language discordance can make it challenging for LTC staff to get to know people in LTC homes.[60,61]

The panel and the engagement survey also identified the following groups that may be more likely to be provided inappropriate antipsychotics or disproportionately harmed by antipsychotics in LTC homes:

- *People with experience of significant trauma* who may resist care due to distrust stemming from previous experiences, such as sexual abuse and racism and discrimination in the health care system.
- *Immigrants and newcomers* who disproportionately experience mental health inequities and lack options for culturally informed and safe care
- *"Younger" older adults* who are less likely to be given access to geriatric care.
- *Individuals without advocates, family, or caregivers* to push for safer and high-quality care.
- *People with intellectual disabilities and brain injuries* who may respond to medications differently.

Collecting sociodemographic data can help identify gaps and disparities in care specific to the LTC homes in Canada. Sociodemographic data can inform targeted efforts for LTC homes and quality improvement initiatives led by health systems.

Training

Panel members described successful reductions of inappropriate medication use from initiatives that provided opportunities for LTC staff training and skills development through various platforms (e.g., websites, toolkits, and guidelines). Through training, staff can better understand dementia and BPSD, antipsychotics, other pharmaceutical agents, side effects of medications, person-centred care, and non-pharmacological approaches. The panel also highlighted the value of supporting LTC staff to apply what they learned from training into practice. Families or caregivers of people in LTC homes may also benefit from increasing their knowledge in these topic areas.[62] Increased knowledge empowers LTC staff and families or caregivers to challenge the status quo and implement or advocate for positive change.[63,64] Additionally, the panel spoke to the benefits of trained and certified staff in LTC homes in providing high-quality care.

Access to Specialized Care

The panel also emphasized the value of specialized care, especially as LTC homes see increasingly complex cases. For example, the panel noticed a rapid increase of individuals with severe mental health disorders being admitted into LTC homes. Some LTC homes benefit from behavioural support units, which have the resources and geriatric psychiatry expertise to manage responsive behaviours appropriately. Additionally, conducting psychiatric assessments upon admission may help facilitate deprescribing inappropriate antipsychotic use and direct people to appropriate care. People in LTC homes may also benefit from access to pharmacists, family physicians with expertise in dementia, and recreation workers. Of note, rural LTC homes face longer wait times for specialized care compared to urban areas, considering the distance and time needed to reach these homes.[65]

Deprescribing Antipsychotics Initiated Prior to LTC Admission

Short-term antipsychotic use is sometimes initiated in the community or in acute care prior to LTC admission. In these cases, care providers in LTC homes may feel less inclined to stop antipsychotic use during admissions, especially when they feel it may help new people to acclimate to their new environment. However, the panel identified these circumstances as key areas of focus to start deprescribing efforts and to encourage appropriate use of antipsychotics. A retrospective study in LTC homes in Ontario suggests that adults ages 66 to 84 are less likely to discontinue potentially inappropriate antipsychotic use within 180 days of admission compared to adults 85 years and older.[66] This finding aligns with observations from the engagement survey about increased antipsychotic use in "younger" older adults living in LTC homes. There is also evidence to suggest that discontinuing long-term antipsychotic use is possible without exacerbating challenging behavior,[67] despite the fears and concerns expressed by health professionals and LTC staff in the literature.[48-50,62,68]

LTC staff sometimes lack the necessary information to make an informed and person-centred decision about deprescribing antipsychotics that were initiated prior to LTC admission (e.g., reasons for initiating antipsychotics, symptoms, previous courses of antipsychotic use, reasons for stopping, and effective non-drug approaches).[69] Having this data may enable LTC staff to better identify side effects or avoid long-term use after admission when initiation dates for medications are available. Accessible data means LTC staff can use 1 system to access all needed health information from the health continuum, inclusive of treatments received prior to LTC.[69]

Monitoring Balancing Measures and Unintended Consequences

The panel emphasized the importance of avoiding superficial decreases in quality indicator rates that do not improve safety and health outcomes for people in LTC homes or that limit access for people who may benefit from clinically appropriate antipsychotic use. The literature, engagement input summary, and panel discussions highlighted how monitoring the following practices may

reveal whether efforts to reduce potentially inappropriate use of antipsychotics in LTC homes lead to unintended consequences:

- Balancing measures (i.e., quality indicators that determine whether changes designed to improve performance on 1 quality indicator are causing new problems in other quality indicators).
    - Examples of balancing measures (many of which have been used in previous quality improvement initiatives from the Environmental Scan) include: use of physical restraints, worsening behavioural symptoms, aggressive behavior scale, falls, pain, delirium, and level of independence in performing activities of daily living.
- Use of other medications to detect any potential compensatory increases in other medications (e.g., substitutions to another class of medication with sedative effects) that may have limited evidence of benefit and may cause harm.[34]
- Changes in diagnostic patterns (e.g., increased coding of psychosis, schizophrenia or other exclusion criteria) to influence performance on the quality indicator without actually reducing inappropriate antipsychotic use.

The Need to Understand the Quality Indicator

Throughout the Delphi process, the panel discussion reinforced the importance that those working in LTC homes need to understand what the quality indicator is measuring and how it is calculated to properly support interpretation and uptake of the target and the annual improvement goal. Discussions during the workshop revealed some of the nuances of the quality indicator that may be misunderstood or misinterpreted.

The Quality Indicator is Comparable Between Homes

Quality indicator performance is comparable across LTC homes, as the data is risk-adjusted to control for population differences between LTC homes. While the panel discussed some concerns about the variation in populations between homes and the changing demographics of those admitted to LTC in relation to their potential impact on the quality indicator performance, risk adjustment of the data accounts for these variations and changes.

Table 1 provides examples of some population considerations that the panel discussed and the corresponding covariates that adjust for these factors.

Table 1: Population Considerations Discussed by the Panel and Corresponding Covariates Used in Risk Adjustment for the Quality Indicator

Population Consideration	Corresponding Covariate(s) used in Risk Adjustment at the Individual Level
Increased number of younger people	Age younger than 65

Increased number of people with brain injury or intellectual disabilities	Moderate or impaired decision-making problem Long-term memory problem Cognitive Performance Scale (CPS)
People admitted with more advanced dementia	Alzheimer disease or other dementia

The Quality Indicator Captures Some Potentially Appropriate Indications

It is likely (and expected) that a proportion of individuals who are receiving antipsychotics appropriately will be included in the quality indicator because the quality indicator is only designed to measure potentially inappropriate antipsychotic use in LTC, not inappropriate use of antipsychotics.

Some of the approved indications for antipsychotics that are not excluded from the quality indicator include bipolar disorder, major depressive disorder, and the short-term treatment of aggression in people with severe dementia (refer to the Environmental Scan for details on approved indications). The indicator would categorize the off-label, yet perhaps clinically reasonable, use of antipsychotics as potentially inappropriate use (e.g., off-label use of atypical antipsychotics to treat obsessive-compulsive disorder, post-traumatic stress disorder, or generalized anxiety disorder).[70] While risk-adjustment can adjust performance rates to account for these situations, antipsychotic use in these potentially appropriate conditions and circumstances precludes striving for the quality indicator rate to be zero.

The panel discussed that it is important to understand whether and how these potentially appropriate indications for antipsychotic use in LTC may impact quality indicator performance:

- Bipolar Disorder – the contribution to the quality indicator from people with bipolar disorder is expected to be minimal given that:
    - Bipolar disorder is not very common in LTC (in 2023–2024, 2.7% of people living in LTC in Canada had a diagnosis of bipolar disorder).[71]
    - If a person with bipolar disorder experienced delusions or hallucinations, they would be excluded from the indicator.
- Short-term treatment of aggression or agitation in people with severe dementia – while this may contribute to the quality indicator (depending on the length of treatment and timing of the assessment), the intent of the target is not to penalize LTC homes for using antipsychotics in these potentially appropriate cases. It is about ensuring that the appropriate care is provided and that clinical practice guidelines are followed (e.g., opportunities to deprescribe antipsychotics where appropriate).

- People admitted to LTC after being prescribed antipsychotics in the acute care setting — if antipsychotics are continued for greater than 3 months after admission, then there is the potential for this to contribute to the quality indicator. However, for an assessment to be valid (and used to calculate the quality indicator), it must be conducted more than 92 days after admission, and it cannot be the first assessment or the admission assessment. This situation represents an opportunity to deprescribe antipsychotics (when appropriate), rather than continuing them indefinitely after admission.

The Quality Indicator Excludes Antipsychotic Use for Certain Conditions

Engagement input revealed that antipsychotics may have a role in symptom management for people in end-of-life care. The quality indicator excludes individuals with an end-stage disease (6 months or less to live) or people receiving hospice or palliative care in LTC homes. Other indications excluded from the quality indicator are people with a diagnosis of schizophrenia, Huntington chorea, as well as people experiencing hallucinations or delusions in LTC homes. Hence, antipsychotic use for any of the excluded conditions does not impact performance on the quality indicator, and the target and goal do not preclude LTC homes from using antipsychotics in these situations.

Final Thoughts

Inappropriate antipsychotic use is an ineffective and harmful approach to manage behaviours or conditions in LTC homes (e.g., behavioural and psychological symptoms of dementia), especially when used and continued without careful consideration of the risks and benefits and exhausting non-pharmacological approaches. With its sedative effect, antipsychotic use can affect quality of life and also undermine autonomy and an individual's right to participate in their care, which may already be compromised in individuals with dementia.[36]

In 2023-2024, CIHI reported an average of 24.5% of potentially inappropriate antipsychotic use in Canada, with many provinces above the national average.[9] The rising rate indicates a reversal of steady progress made by efforts to curb inappropriate antipsychotics use before 2020.[9]

Aligned with Appropriate Use Coalition priorities, CDA-AMC partnered with CWC to convene an expert panel to reach consensus on a target for LTC homes in Canada and an annual improvement target (relative reduction per year) for the quality indicator "Potentially Inappropriate Use of Antipsychotics in Long-Term Care." The consensus statements will be used to inform quality improvement efforts aiming to reduce inappropriate antipsychotic use in LTC homes in Canada.

The expert panel achieved consensus on 15% as the target for LTC homes across Canada and 15% for the annual improvement goal (relative reduction per year). The target for reducing potentially inappropriate antipsychotic use in LTC homes in Canada is ambitious but feasible with steady annual improvements. It is estimated that achieving the 15% target for LTC homes in Canada would result in over 21,000 fewer people receiving these potentially inappropriate medications across the country, compared to the 2023–2024 national rate for Canada.[Dr. John

Hirdes, interRAI Canada, University of Waterloo, Waterloo ON: personal communication, 2025 Feb 27] Aiming for this target for LTC homes in Canada may also help prevent further people from receiving potentially inappropriate antipsychotics in light of future changes to the LTC population and the increasing prevalence of dementia in Canada.

To support LTC homes' efforts to reduce potentially inappropriate use of antipsychotics in LTC in Canada, the following considerations provide key insights for the successful implementation of the target and annual improvement goal.

The Target is Not a Limit

LTC homes that have already reached the target are encouraged to continue decreasing inappropriate antipsychotic use if continuing efforts enhance safety and quality of life for those living in LTC homes without triggering unintended consequences. Top performing homes in 2023-2024 have achieved 15% or lower rates for the quality indicator 'potentially inappropriate use of antipsychotics in LTC', and LTC homes should feel inspired to reach or exceed the target, regardless of their size, location, or income.

The Target and the Annual Improvement Goal are Not Mandatory

The consensus statements provide evidence-informed guidance from a panel of experts and knowledgeable individuals, but they will not be mandatory for LTC homes. Setting a target for LTC Homes in Canada and annual improvement goal is meant to support quality improvement efforts to inform, motivate, and monitor change in the LTC sector. The Appropriate Use Coalition plans to use the consensus statements as a starting point for their efforts, such as aligning and developing quality improvement programs, tools, and resources.

The target reflects a level of excellence for the quality indicator that is intended to inspire changes in clinical practice in LTC homes. It represents a level of potentially inappropriate antipsychotic use that minimizes potential harms for people living in LTC (i.e., the proportion of people living in LTC homes across Canada receiving antipsychotic drugs without a diagnosis of psychosis should ideally be 15% or less). The target and annual improvement goal were designed to be used together to support safe and sustainable quality improvement initiatives in LTC homes.

Establishing the target for LTC homes in Canada and the related annual improvement goal was an initiative of the Appropriate Use Coalition (a grassroots group of organizations working collectively to improve health outcomes and reduce risks through appropriate prescribing and use of medications in Canada) and was supported by an engagement survey of respondents who recognized the need for a target for antipsychotic use rates in LTC homes in Canada.

Focus on Appropriate Use of Antipsychotics Through Person-Centred Care

The key objective of developing the consensus statements is to promote the appropriate use of antipsychotics and ensure people in LTC homes are provided high-quality care that prioritizes their safety and quality of life. Appropriate use means that "people are taking medications best suited for their needs in order to provide the greatest possible benefit and avoid potential harm (p. 14)."[72] What is appropriate for 1 person at 1 time, may not be appropriate for the same person at another time or for other people. Implementing person-centred care facilitates appropriate use of antipsychotics by ensuring care plans and treatment reflect and respect the unique needs and preferences of people living in LTC homes. Additionally, person-centred care reflects an individual's right to dignified care that respects an individual's personhood and autonomy, as well as recognizing their capacity and goals.[36,37] The panel acknowledged the role of family or caregivers in care teams as facilitators of person-centred care.

Gaps in the literature remain about which groups or individuals may be more likely to be provided antipsychotics or disproportionately harmed by antipsychotic use. Through this work, panel members and interest holders had the opportunity to highlight groups among the LTC population who may require special consideration for these reasons, such as immigrants and newcomers, and "younger" older adults. Improving data collection in LTC by including sociodemographic data can address this gap and better identify disparities in care to inform targeted, person-centred care efforts and quality improvement initiatives led by the LTC sector.

The panel described success related to antipsychotic use in LTC homes as, "having people appropriately on these medications and appropriately taken off these medications when they are no longer required." They emphasized that focusing too much on lowering rates for the quality indicator without considering whether care is appropriate may lead to unintended consequences (e.g., increased coding of exclusions, undertreatment of people who many benefit from antipsychotics). Likewise, reductions in the quality indicator rates should reflect improvements in care (e.g., personalized schedules, access to recreation activities, appropriate opportunities for deprescribing) and health outcomes (e.g., improved quality of life, increased engagement with activities of daily living or recreational activities) versus changes in practice that may compromise care.

Emphasize Safety and Reducing Harm

A driving factor for reducing potentially inappropriate use of antipsychotics in LTC is to increase safety and decrease the risk of harm for people living in LTC homes. Antipsychotic medications have well-documented risks of adverse events for older adults with dementia[4-7,14-28] and there is limited evidence of their effectiveness to manage specific symptoms of dementia.[4,5] Canadian clinical practice guidelines therefore recommend non-pharmacological approaches to manage the behavioural and psychological symptoms of dementia instead.[13,43,73-75] A 15% target for LTC homes in Canada to reduce potentially inappropriate antipsychotic use provides LTC homes with a tangible objective for quality improvement initiatives aiming to decrease these associated

harms. The pairing of the target with the 15% annual improvement goal is intended to further support safety for those living in LTC by guiding sustainable progress towards the target at a reasonable pace.

Champion Change

To reach the target, the panel recognized the need for change in LTC homes. They noted that it will require creative ideas and novel solutions (e.g., organizing LTC homes differently) to support this shift towards working differently (e.g., implementing personalized schedules, offering non-pharmacological therapies). However, the panel acknowledged the challenge of balancing the needs of the people living in LTC, with the needs of the staff, and the needs of the LTC home. Regularly engaging people living in LTC homes and their families or caregivers, including through resident and family councils, can help ensure change is in the right direction.

Canada's LTC sector has previously shown its capability to implement changes and reduce inappropriate antipsychotic use, and the interRAI analysis suggests that it is possible for homes of all sizes, locations, and incomes to be top performing homes. The 15% target for LTC homes in Canada and 15% annual improvement goal set clear expectations of where Canada should be regarding appropriate use of antipsychotics, and achieving the target for Canada requires collective action from the LTC sector. Through a coordinated response, the members of the Appropriate Use Coalition and the LTC homes can play a role in shaping this change to improve the quality of care for people living in LTC.

About the Expert Panel

The biographies of the 17 panel members are on the CDA-AMC website. Declarations of conflicts of interest can be found in Appendix 4.

Panel Members

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In Partnership

Choosing Wisely Canada is the national voice for reducing unnecessary tests and treatments in Canada.

CDA-AMC is a non-for-profit organization responsible for providing Canada's health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs and medical devices in the health care system.

CDA-AMC and Choosing Wisely Canada have partnered to convene the expert panel tasked with developing the target for LTC homes in Canada and the annual improvement goal for the quality indicator "potentially inappropriate use of antipsychotics in long-term care" in support of the Appropriate Use Coalition.

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Appendix 1: 'Potentially Inappropriate Use of Antipsychotics in LTC' Quality Indicator

Data Definition

Name: Potentially Inappropriate Use of Antipsychotics in Long-Term Care

Other name: Percentage of Residents on Antipsychotics Without a Diagnosis of Psychosis (DRG01)

Description: "This indicator looks at how many long-term care residents are taking antipsychotic drugs without a diagnosis of psychosis. These drugs are sometimes used to manage behaviours in residents who have dementia. Careful monitoring is required, as such use raises concerns about safety and quality of care." The result on the quality indicator is expressed as a percentage (i.e., numerator/denominator), and is reported as an unadjusted and an adjusted rate.

Numerator: People living in LTC who received antipsychotic medication on at least one day in the week before their valid target assessment.

Denominator: People living in LTC with valid assessments

Inclusions in the measurement of the quality indicator:

- Residents with valid assessments. To be considered valid, the target assessment must
- Be the latest assessment in the quarter
- Be carried out more than 92 days after the Admission Date
- Not be an Admission Full Assessment or First Assessment

Exclusions from the measurement of the quality indicator:

- Residents who are end-stage disease (with 6 months or less to live) or who are receiving hospice/palliative care
- Residents who have a diagnosis of schizophrenia or Huntington chorea, or those experiencing hallucinations or delusions

Method of Adjustment: Stratification, direct standardization, indirect standardization

Covariates used in Risk adjustment:

Individual covariates: Motor agitation; moderate/impaired decision-making problem; long-term memory problem; Cognitive Performance Scale (CPS); combination Alzheimer's disease/other dementia; age younger than 65

Facility-level stratification: case mix index

Appendix 2: Panel Demographics

Table 2: Results from Survey 1 Questions about Panel Member Demographics

Demographic Characteristic	Responses	Number of Panelists (%)
Role in the Healthcare or LTC System in Canada*	Physician – specialty in family medicine	3 (17.6%)
	Physician – specialty in geriatrics or gerontology	2 (11.8%)
	Physician – specialty in dementia and/or mental health	3 (17.6%)
	Pharmacist	3 (17.6%)
	Nurse practitioner	1 (5.9%)
	Registered nurse	3 (17.6%)
	Personal support worker	0
	LTC home senior executive/administrator/manager	1 (5.9%)
	Quality improvement practitioner, champion, or adviser	3 (17.6%)
	Deprescribing practitioner, champion, or adviser	6 (35.3%)
	Researcher	4 (23.5%)
	Academic professor	4 (23.5%)
	Person living in a LTC home or their caregiver/family member	2 (11.8%)
	Other[a]	5 (29.4%)
Years of personal or professional experience working or interacting with the LTC setting in Canada	0 to 5 years	2 (11.8%)
	6 to 10 years	2 (11.8%)
	Over 10 years	13 (76.5%)
Province(s) or Territory(ies) of Professional or Personal Experience involved in the LTC system or have personal experience with LTC*	Newfoundland and Labrador	2 (11.8%)
	Prince Edward Island	2 (11.8%)
	Nova Scotia	3 (17.6%)
	New Brunswick	4 (23.5%)
	Quebec	2 (11.8%)

Demographic Characteristic	Responses	Number of Panelists (%)
	Ontario	9 (52.5%)
	Manitoba	2 (11.8%)
	Saskatchewan	2 (11.8%)
	Alberta	4 (23.5%)
	British Columbia	3 (17.6%)
	Yukon	0
	Northwest Territories	1 (5.9%)
	Nunavut	0
	All provinces and territories	1 (5.9%)
Indigenous	Yes[b]	1 (5.9%)
	No	16 (94.1%)
Main ethnic origin(s) or race*	Black	1 (5.9%)
	Caribbean/West Indies	1 (5.9%)
	East Asia	0
	Southeast Asia	3 (17.6%)
	Eastern Africa	0
	Northern Africa	0
	Southern Africa	1 (5.9%)
	Western Africa	0
	Hispanic	0
	Middle East	0
	Pacific Islands	0
	Western Europe	2 (11.8%)
	Eastern Europe	2 (11.8%)
	White	9 (52.9%)
	Prefer not to answer	0

Demographic Characteristic	Responses	Number of Panelists (%)
	Prefer to self-describe[c]	2 (11.8%)
Persons with a Disability	No	17 (100%)
	Yes	0
Gender identity*	Men	5 (29.4%)
	Women	12 (70.6%)
	Non-Binary/gender fluid	0
	Transgender	0
	Two-spirit	0
	Queer	0
	Prefer to self-describe	0
	Prefer not to answer	0

Note: In the Round 1 Survey, we gathered data about the demographics of panel members to better understand and describe the diversity and perspectives represented in the panel.

* Respondents could select all responses that applied.

[a] Respondents self-described as a physician trained outside of Canada, coach for quality improvement programs, retired nurse or nurse manager, association executive, advocate for people in LTC, and a physician with expertise in elderly care, dementia and BPSD management.

[b] The respondent self-described as mixed white and Mohawk.

[c] Of the 2 respondents, 1 self-described as "Jewish" and 1 as "Mohawk".

Appendix 3: Summary of the Online Consensus-Building Process

The modified online consensus-building process consisted of 3 rounds, including 2 online surveys (Round 1 and Round 2), and 1 online workshop with structured discussions and live ranking and voting (Round 3).

In the surveys, panelists were asked to rate their level of agreement with proposed items on a 5-point Likert scale and to provide the rationales for their rating in open-ended responses. After Round 1 and Round 2, panelists were provided with a quantitative summary of their personal and group ratings (e.g., median and bar charts with the percentage for each rating) and a narrative summary of the open-ended responses.

Round 1 – Survey 1 Results

We received completed responses from all 17 panelists.

Target for LTC homes in Canada – Round 1 Results

- None of the 7 potential values for the target reached the consensus threshold for disagreement.
- 8 panel members suggested new potential values for consideration for the target, and 4 of these values (i.e., 13%, 15%, 17%, 20%) were included in the Round 2 survey.
- A total of 11 values for the target proceeded to Round 2 (Survey 2).

Annual Improvement Goal – Round 1 Results

- 1 of the 5 potential values for the annual improvement goal (i.e., 9%) reached consensus for disagreement (i.e., at least 80% of panel members rated the value with "strongly disagree" or "disagree") and was removed from the Round 2 survey.
- 4 of 5 potential values did not reach the threshold for consensus.
- 5 panel members suggested new potential values for consideration for the goal, and 3 of these values (i.e., 10%, 15%, 20%) were included in the Round 2 survey.
- A total of 7 values for the annual improvement goal proceeded to Round 2 (Survey 2).

Figure 6 and Figure 7 present the overall Round 1 survey results for the target for LTC homes in Canada and the annual improvement goal, respectively.

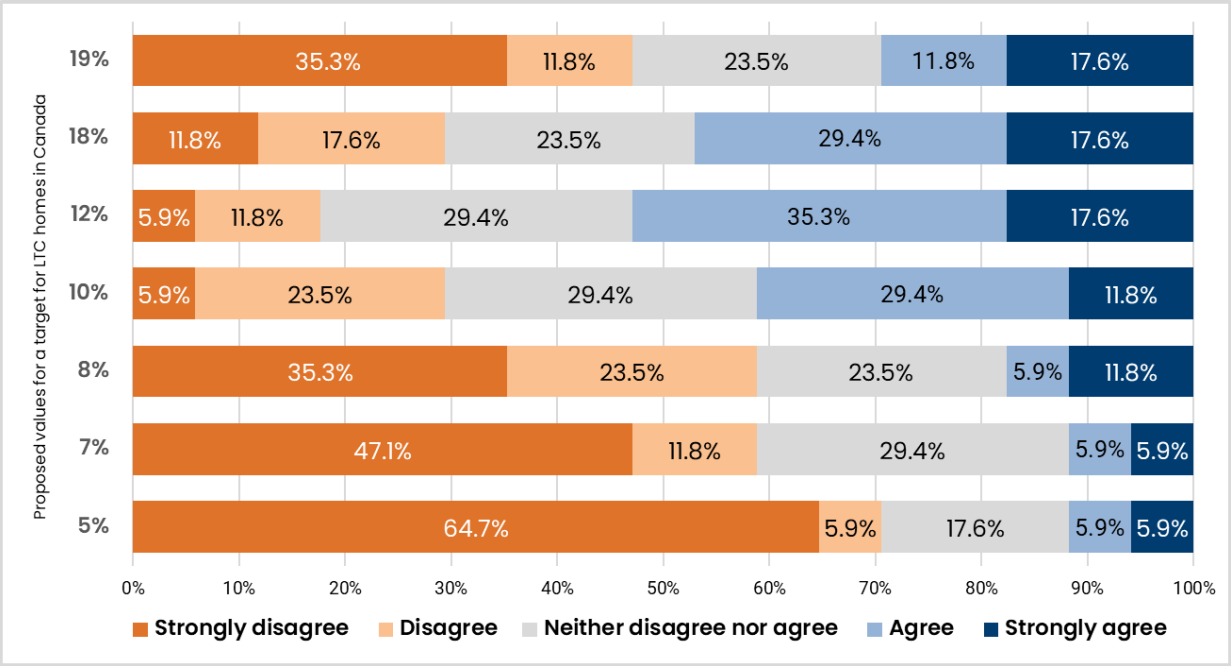

Figure 6. Summary of the Level of Agreement for the Proposed Values for the Target for LTC homes in Canada – Results from Round 1

Note: The percentages on the bars indicate the proportion of panel members that selected each option for their level of agreement with the proposed value for the target. The consensus threshold was set at 80% for agreement (i.e., agree and strongly agree) and for disagreement (i.e., disagree and strongly disagree).

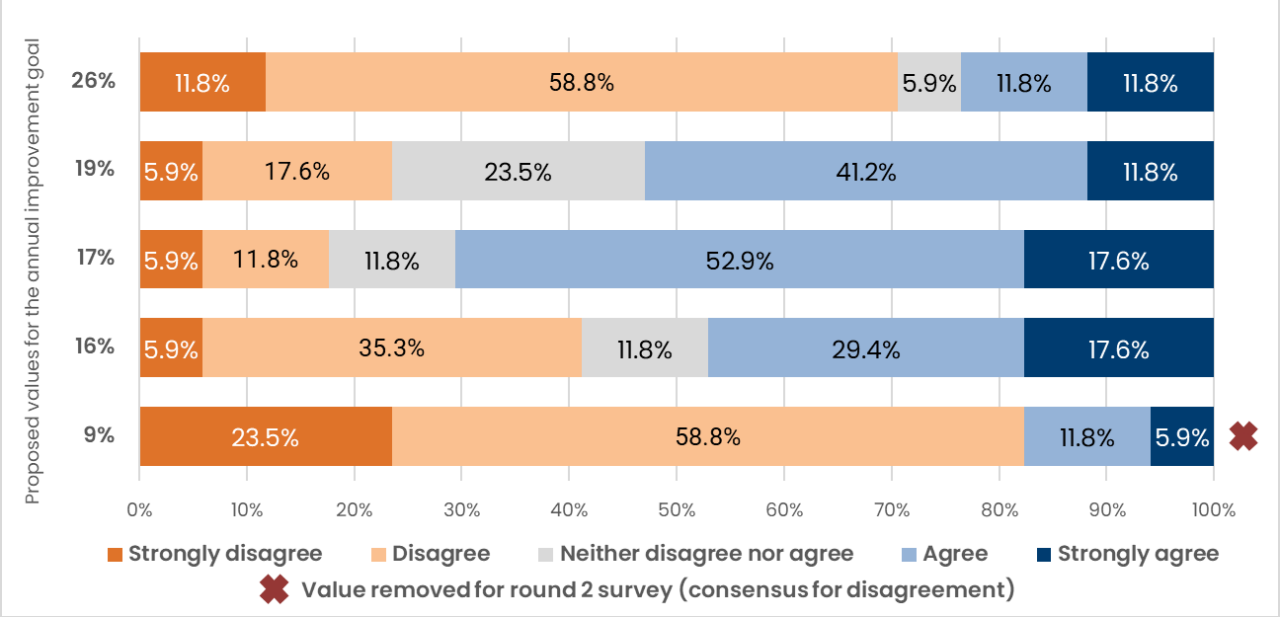

Figure 7. Summary of the Level of Agreement for the Proposed Values for the Annual Improvement Goal – Results from Round 1

Note: The values for the annual improvement goal are expressed as a percent relative reduction, annually. The percentages on the bars indicate the proportion of panel members that selected each option for their level of agreement with the proposed value for the annual improvement goal. The consensus threshold was set at 80% for agreement (i.e., agree and strongly agree) and for disagreement (i.e., disagree and strongly disagree).

Table 3: Round 1 Summary of Potential Barriers and Facilitators to Reducing Potentially Inappropriate Antipsychotic Use in LTC homes

Themes	Barriers to Reducing Potentially Inappropriate Use	Facilitators to Reducing Potentially Inappropriate Use
Staff and Continuity of Care	Staff shortages and high staff turnover hinders the reduction of antipsychotics in LTC homes because it results in: • Decreased capacity for appropriate use efforts (e.g., staff upskilling, non-pharmacological approaches), especially with other competing priorities. • Discontinuity of care that leads to a disconnect between staff and people in LTC. Staff lack time to build trust with people in LTC and knowledge of care needs unique to each person (e.g., tailored communication strategies). This disconnect can trigger responsive behaviours. • Unfavorable and unsupportive conditions that promote inappropriate antipsychotic use to balance workloads and address work pressures. High management turnover can also derail improvement efforts. During transitions in leadership, unformalized policies, systems, and guidelines that reduce inappropriate use can be easily lost and deprioritized. LTC homes also struggle to understand how reducing inappropriate use can help with capacity issues as it reduces the support people in LTC homes need (e.g., support during meals).	Adequate number of staff and staff consistency allows continuity of care and provides the capacity to ensure meaningful long-term success of appropriate use efforts. Increasing capacity in LTC homes can be achieved by: • LTC managers ensuring staff continuity at the administrative level. • Leveraging volunteer programs to assist staff with certain tasks (e.g., providing meals, organizing/hosting activities for people in LTC, participating in 1-on-1 time with people in LTC). • Extending hours for recreation workers during shifts with reduced nursing staff (e.g., nights shifts).
Resources	Lack of funding for LTC homes.	Providing care partners with resources and funding opportunities (e.g., Healthcare Excellence Canada) to develop and implement innovative programs.
Skill Development for Staff and Health Care Professionals	Limited access to educational resources and training leads to a lack of knowledge among LTC staff to reduce inappropriate use, specifically in the following areas: • Appropriate approaches to address responsive behaviour such as non-pharmacologic approaches (e.g., music therapy). • Person-centered care, inclusive of culturally safe, trauma informed care. This was also	Training empowers LTC staff and management to reduce inappropriate use by: • Using non-pharmacological interventions and deprescribing antipsychotics at key opportunities (e.g., "admission from acute care," "acute change in status"). • Having meaningful discussions with prescribers. • Building expertise in dementia or geriatric care, specifically among nurses. Nurses have a holistic approach to care that

Themes	Barriers to Reducing Potentially Inappropriate Use	Facilitators to Reducing Potentially Inappropriate Use
	indicated as relevant for health care providers. • Antipsychotics use, including appropriate indications, as-needed use (e.g., "trazodone or lorazepam before personal care instead of Haldol injections") and potential adverse effects. • Work-life balance to help manage stress from work. • Knowledge of the CIHI/InterRAI quality indicator. Like staff, unsupported management could benefit from receiving training to better support appropriate use efforts and balance their overwhelming workloads.	complements the medical expertise of prescribers. • Learning skills to navigate the stressors of LTC with training related to teamwork and work-life balance. • Preventing errors in MDS & RAI coding with training related to building knowledge of the CIHI/InterRAI quality indicator. • Sharing examples and outcomes of successful programs and initiatives can support learning across the health system.

LTC work culture, care coordination, and communication	Work culture, fragmented care, and communication can hinder the reduction of antipsychotics. The contributing factors include:
	• Unsupportive LTC management unable to employ a culture of person-centred care.
	• A culture of blame and belief in the status-quo. Staff attitudes and views can influence antipsychotic use in LTC homes, especially for BPSD.
	• Lack of professional representation, specifically for PSWs. Most PSWs in Canada are women that identify as part of racialized groups. Without professional recognition, PSWs are vulnerable to abuse and generally not seen as professional equals, which leads to job satisfaction, resignation, and high turnover.
	• "Lack of resilience at the LTC provider level" as stated by a panelist.
	• Siloed care (e.g., certain activities only performed by recreation workers) because of:
	  • Poor communication (top down and bottom up) that can lead to some teams feeling disenfranchised and forgotten (e.g., night staff).
	  • Lack of team empowerment and overseeing input from health care aides, dietary staff, families, and other partners in care.
	  ○ Example: there can be hesitance to question antipsychotic use, specifically
		Work culture, coordinated care, and communication facilitate antipsychotic reduction when:
		• Leadership is engaged and supportive by ensuring adequate and stable staffing, providing opportunities for education, encouraging interdisciplinary collaboration (e.g., interprofessional teams, including primary care providers), and employs a culture of person-centred care.
		• Care teams learn, collaborate, and work as a cohesive team (e.g., using collaborative techniques, such as team huddles, to develop solutions for responsive behaviour).
		• Care teams use technology for communication and collaboration (including the person receiving care), such as tracking progress and accessing virtual care.
		• There is a climate of inclusion, opportunity, and change, that encourages innovation and self-directed teams to challenge status quo (e.g., being flexible with institutionalized operations) and apply person-centered care.
		  ○ Example: teams revisit standard schedules and tailor times for meals or sleeping. By doing so, they avoid potential triggers to reactive behaviours, which are mostly caused by operational norms and interactions that

Themes	Barriers to Reducing Potentially Inappropriate Use	Facilitators to Reducing Potentially Inappropriate Use
	when it is prescribed by geriatric psychiatrist. ○ Example: PSWs role is vital to implementing person-centred care, however such role is generally not acknowledged in practice by interprofessional care teams.	were implemented to benefit staff. • Professional recognition of people who provide hands-on care, specifically PSWs. • LTC homes that regularly engage with robust resident/family council to help people and their families or caregivers transition into LTC homes and assist in new initiatives or developing policies (e.g., family council in Australia that report on antipsychotic use in LTC).
Access to Specialized Care for People Living in LTC	Lack of access to care can hinder the reduction of antipsychotic use, specifically care from: • Physicians, especially those with knowledge of dementia and antipsychotics, as well as an understanding of their role within LTC homes. LTC homes struggle to access physicians because the hours they spend in LTC homes is supplemental to their own private practice. • Nurse practitioners and pharmacists for consultation. • Specialty clinicians, such as behaviour support, psychogeriatric resource consultants, geriatric psychiatry, and outreach mental health services. • Recreation workers to address the lack of meaningful activities for people living in LTC homes. LTC homes in rural areas can experience greater challenges accessing specialized care.	Using technologies for virtual care can facilitate access to specialized care that can help promote appropriate use.
Deprescribing incentive and disincentives	Challenges in identifying eligible individuals for deprescribing can hinder reductions in inappropriate use given: • Some LTC homes are not utilizing medication review processes involving an interdisciplinary team. • LTC homes lack access to technologies that can support drug review or assessments. • The limited documentation with record of reason/indication, initiation date, and other relevant information about antipsychotic use across the care continuum. • The absence of care plans that detail clear timelines for re-evaluation and thresholds for stopping use at the time of prescribing antipsychotics.	Medication review and treatment plans can support deprescribing of antipsychotics. These processes can be supported by: • Leveraging technology and engaging the medical technology sector to alleviate barriers to medication review. • Strengthening information sharing by documenting medication histories, as well as any previous medication review and attempts to taper or deprescribe antipsychotics with details of the outcome. • Using decision support tools to remind staff and help them monitor people taking antipsychotics in LTC homes. • Establishing clear timelines and thresholds for reassessments at the time

Themes	Barriers to Reducing Potentially Inappropriate Use	Facilitators to Reducing Potentially Inappropriate Use
	○ For short-term (2-8 weeks) use in clinically appropriate indications (e.g., psychotic symptoms, aggression), the care plan should have a goal to deprescribe and an improved approach to care. Fear of worsening behaviours from deprescribing can discourage participation in reduction efforts. In Ontario, LTC homes fear potential monetary penalties and compliance orders (related to their duty to protect) when reducing antipsychotics results in worsening aggression and results in safety issues for people in LTC.	of prescribing or during the early stages of antipsychotic use. • Instituting regular stop dates on antipsychotics (similar to antibiotics) along with a recommended tapering plan to help with withdrawal symptoms. • Implementing high standards for continuing antipsychotics in care plans. • Having the data available in one easily accessible location. • Providing monetary incentives to LTC homes.
Health Care System Alignment and Collaboration	A misaligned and fragmented health care system can hinder reductions in inappropriate antipsychotic use, specifically discrepancies between: • Provincially regulated LTC and national initiatives or priorities • National and provincial data collection processes	Health care system collaboration and coordination can support appropriate use efforts and can be encouraged by: • Developing unified national standards and policies related to inappropriate use of medication. • Facilitating opportunities for idea sharing and supporting quality improvement initiatives. • Communication between provincial health authorities and health organizations. • Formalized associations between provincial authorities (e.g., Ontario Long Term Care Association, New Brunswick Association of Nursing Home Inc.) to facilitate information sharing and support quality improvement programs. • The willingness of community partners (e.g., Alzheimer Society Canada) and education providers/consultants "to support the mandate to decrease inappropriate antipsychotic use." • Integrating LTC homes with their communities so activities are shared among community members to foster socialization and mental wellness. • Aligning efforts to focus on person-centred care delivery.
Demographic shifts and LTC home population	The LTC population is experiencing demographic shifts, including an increase in: • The proportion of young people living in LTC with intellectual disability. • Cultural and language diversity. Language barriers between LTC staff and people in	NA

Themes	Barriers to Reducing Potentially Inappropriate Use	Facilitators to Reducing Potentially Inappropriate Use
	LTC homes may be drivers of responsive behaviours due to increased likelihood of unmet need. The CIHI/InterRAI indicator was designed as a tool to support the reduction of potentially inappropriate use. It is not a direct barrier to reducing inappropriate use. However, the quality indicator might position LTC homes at a disadvantage in quality improvement initiatives, specifically LTC homes: • Smaller in population size. • With a higher proportion of individuals with approved indications (e.g., end-stage disease) leading to smaller population for inclusion and clinically appropriate indications (e.g., bipolar disorder, treatment resistant, depression) that are included in the quality indicator.	

BPSD = behavioural psychological symptoms of dementia; CIHI = Canadian Institute of Health Information; LTC = long-term care; MDS = Minimum Data Set.

Note: This table summarizes panel members' input regarding the barriers and facilitators to reducing potentially inappropriate antipsychotic use in LTC homes from the Round 1 Survey. This table was included as part of survey 1 results provided to the panel.

Round 2 – Survey 2 Results

We received completed responses from all 17 panelists.

Target for LTC homes in Canada – Round 2 Results

- 4 of the 11 proposed values for the target for LTC homes in Canada that panelists rated in Round 2 (i.e., 20%, 19%, 7%, and 5%) reached consensus for disagreement (i.e., at least 80% of panel members rated the value with "disagree" or "strongly disagree") and were removed and not included in the Round 3 workshop.
- 7 of the 11 proposed values for the target did not reach the threshold for consensus and proceeded to the Round 3 workshop.

For the target, in general the panelist ratings shifted towards agreeing with central values (i.e., 12%, 13%, 15%, and 17%) and disagreeing with the values at the higher and lower ends of the options (i.e., 20% and 5%). This included 3 of the values that had been suggested by panelists in Round 1 (i.e., between 12% and 18%).

Annual Improvement Goal – Round 2 Results

- 1 of the 7 proposed values for the annual improvement goal (i.e., 26%) reached consensus for disagreement (i.e., at least 80% of panel members rated the value with "disagree" or "strongly disagree") and was removed and not included in the Round 3 workshop.
- 6 of 7 proposed values for the annual improvement goal did not reach the threshold for consensus and proceeded to the Round 3 workshop.

For the annual improvement goal, the panelists' ratings generally remained consistent compared to the previous round, with panelists agreeing with central values (i.e., 15%, 16%, 17%, and 19%), which included 1 of the values suggested by panelists in Round 1 (i.e., 15%), and panelists disagreeing with the higher and lower options for the annual improvement goal (i.e., 26%, 10%).

Overall Trends in Round 2

For both the target and the annual improvement goal, the panelist ratings and rationales suggest that the panel aimed to identify a level of excellence for clinical practice and an achievable rate of change based on the evidence of what has been achieved previously in Canada (e.g., quality indicator data, results from quality improvement initiatives), their own experience of the current context of LTC (e.g., staffing and resource levels), and a desire to avoid risks and unintended consequences associated with a suboptimal target or annual improvement goal. They were also influenced by the positions of other panelists and considered the overall panel objective to reach consensus on a single value for the target and a single value for the annual improvement goal, that was ultimately reflected in a shift toward central tendency in Round 2.

Figure 8 and Figure 9present the overall Round 2 survey results for the target for LTC homes in Canada and the annual improvement goal, respectively.

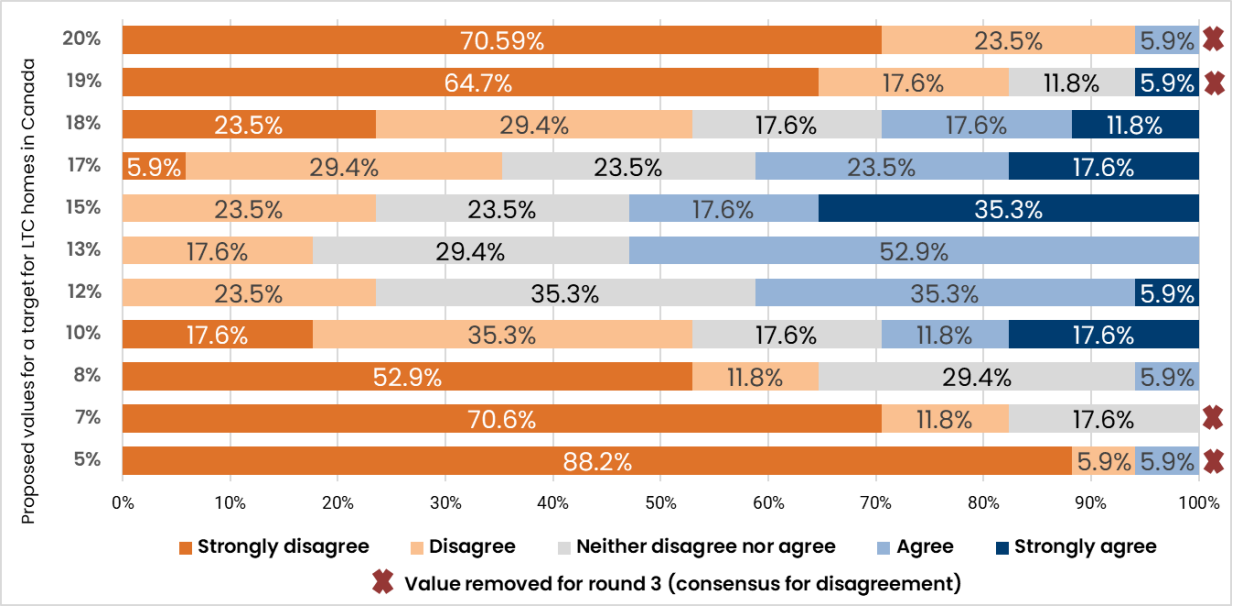

Figure 8. Summary of the Level of Agreement for the Proposed Values for the Target for LTC homes in Canada – Results from Round 2

Note: The percentages on the bars indicate the proportion of panel members that selected each option for their level of agreement with the proposed value for the target. The consensus threshold was set at 80% for agreement (i.e., agree and strongly agree) and for disagreement (i.e., disagree and strongly disagree) The following values were added to the Round 2 survey based on suggestions by panelists: 20%, 17%, 15%, 13%.

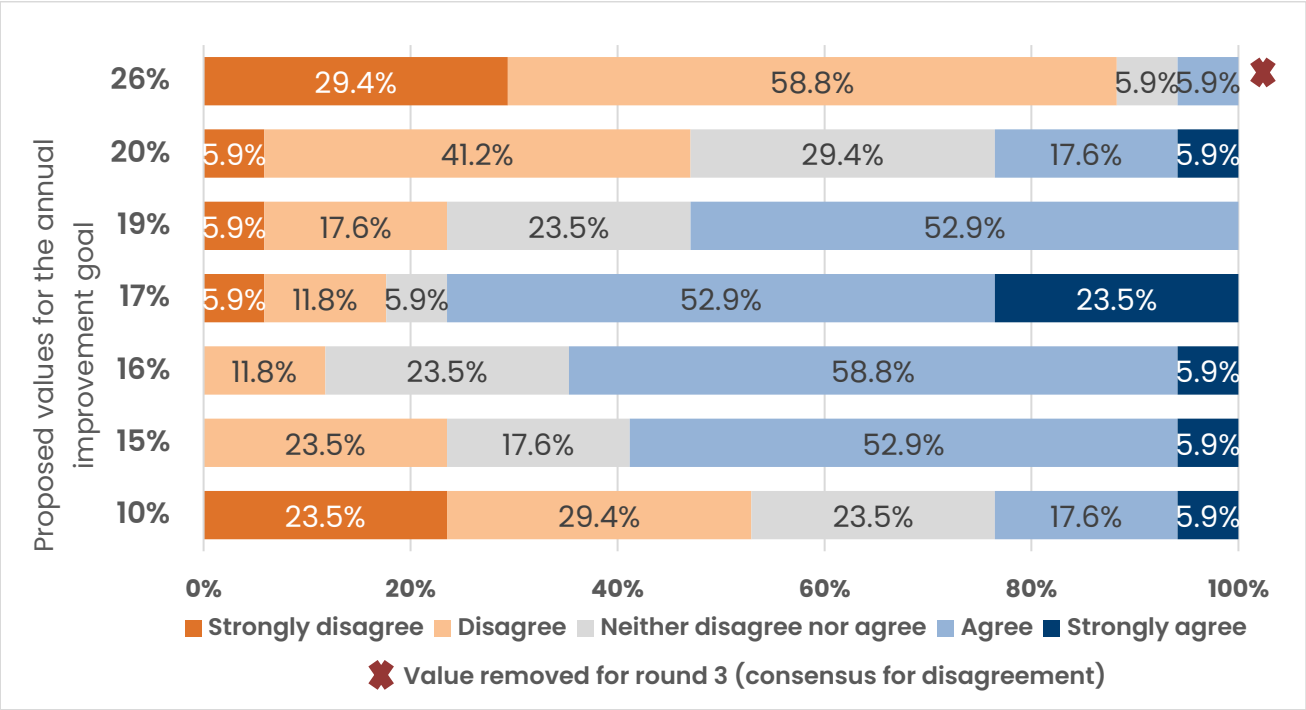

Figure 9. Summary of the Level of Agreement for the Proposed Values for the Annual Improvement Goal – Results from Round 2

Note: The values for the annual improvement goal are expressed as a percent relative reduction, annually. The percentages on the bars indicate the proportion of panel members that selected each option for their level of agreement with the proposed values for the annual improvement goal. The consensus statement threshold was set at 80% for agreement (i.e., agree and strongly agree) and for disagreement (i.e., disagree and strongly disagree). The following values were added to the Round 2 survey based on suggestions by panelists: 20%, 15%, 10%.

Round 3 – Workshop Results

All 17 panelists attended the online workshop and completed the ranking and voting exercises.

The online workshop included 2 sets of discussions and live ranking, followed by live voting to confirm consensus on agreement with the top ranked value for the target and the annual improvement goal, and to confirm the final consensus statements. During the discussions, panelists were asked to share their perspectives and why they agreed or disagreed with the proposed values for the target and the goal. We used slido to conduct the ranking and live voting.

Target for LTC Homes in Canada – Round 3 Results

After the first round of discussions (which focused on the remaining items after the Round 2 survey), panelists independently ranked the potential values for the target from 1 to 7, where 1 represented the top choice. After the initial ranking, the bottom 3 values based on overall panel rankings were dropped, and not considered further. After a second round of discussion, panelists individually ranked the remaining values for the target from 1 to 4, where 1 represented the top choice. **Table 4** presents the overall panel results for both ranking exercises for the target.

Table 4: Results of the Round 3 Ranking Exercises for the Proposed Values for the Target for LTC homes in Canada

First Ranking Exercise		Second Ranking Exercise	
Rank	Value (%)	Rank	Value (%)
1	15	1	15
2	13	2	13
3	12	3	12
4	17	4	17
5	18	—	—
6	10	—	—
7	8	—	—

Annual Improvement Goal – Round 3 Results

After the first round of discussions (which focused on the remaining items after the Round 2 survey), panelists independently ranked the potential values for the goal from 1 to 6, where 1 represented the top choice. After the initial ranking, the bottom 3 values based on overall panel rankings were dropped, and not considered further. After a second round of discussion, panelists individually ranked the remaining values for the target from 1 to 3, where 1 represented the top choice. Table 5 presents the overall panel results for both ranking exercises for the annual improvement goal.

Table 5: Results of the Round 3 Ranking Exercises for the Proposed Values for the Annual Improvement Goal

First Ranking Exercise		Second Ranking Exercise	
Rank	Value (% relative reduction)	Rank	Value (% relative reduction)
1	15	1	15
2	16	2	16
3	17	3	17
4	19	—	—
5	20	—	—
6	10	—	—

Appendix 4: Expert Panel Members Declarations of Conflict of Interests

The following are the disclosures from each of the expert panel members as per the CDA-AMC Conflict of Interest Policy:

Aswathy Jayashree, Ashley King, Dr. Geneviève Lemay, and Shirin Vellani reported no conflicts of interest.

Dre. Marie-Andrée Bruneau received funding or honorariums for speaking engagements from Janssen, Lifespeak Inc., Canadian Coalition for Seniors' Mental Health, Baycrest, Fédération des médecins omnipraticiens du Québec, Médecins francophones du Canada, and Congrès Québécois sur la maladie d'Alzheimer. In addition, Dre. Bruneau received travel or other expense payments from Otsuka/Lundbeck and Congrès Québécois sur la maladie d'Alzheimer. Dre. Bruneau received payment as an advisor or consultant from Ostuka/Lundbeck. Dre. Bruneau is the Co-Director of the Behavioural and Psychological Symptoms of Dementia committee at the Québec Ministry of Health and participates as a consultant for 'Optimizing Practices, Use, Care, and Services-Antipsychotics' (OPUS-AP) in Long-Term Care Centers in Québec.

Ian DaSilva is the COO of the Canadian Support Workers Association.

Lisa Dawson is a volunteer and board member of the Independent Long-Term Care Councils Association of BC (ILTCCABC). Lisa also serves as a chair at the Vancouver Coastal Family Councils.

Dr. Vivian Ewa is a current employee at Alberta Health Services and the University of Calgary. Dr. Ewa received payment for being a guideline development panel member at the Canadian Coalition for Seniors' Mental Health and receives research funding from CIHR for various projects.

Dr. Sid Feldman is currently employed at both Baycrest Health Sciences and the University of Toronto. Dr. Feldman receives payments for advising or consulting positions at Baycrest Global Solutions, McMaster University, Ontario College of Family Physicians, and Choosing Wisely Canada. In addition, Dr. Feldman receives travel or other expense payments as a conference invited speaker for Ontario Long Term Care Clinicians.

Dr Carole A Goodine is employed by Horizon Health Network and Dalhousie University. Carole Goodine has received research funding or grants paid to her institution from the Public Health Agency of Canada and the Government of New Brunswick Health Seniors' Pilot Project, AGE-WELL and ResearchNB for research on deprescribing in LTC using the electronic decision support tool MedSafer.

Dr. Andrea Luva Moser receives payments for consulting at the Institute for Safe Medication Practices Canada. Dr. Moser previously served as the interim course director at Ontario Long

Term Care Clinicians. Dr. Moser currently receives payments for speaking and curriculum development at Ontario Long Term Care Clinicians.

Dr. Dallas Seitz receives research funding or grants at the University Health Foundation. Dr. Seitz is also the co-chair at the Canadian Coalition for Senior's Mental Health and a board member at the Alzheimer Society of Alberta and Northwest Territories.

Cynthia Sinclair receives payment as a coach and consultant at Healthcare Excellence Canada.

Dr. Wade Thompson receives funding or honorariums for writing articles or editorials for Pharmacy Practice Plus. Dr Thompson serves as the co-lead of the website Deprescribing.org.

Dr. Shanna C. Trenaman receives funding or grants from the Drug Evaluation Alliance of Nova Scotia. Dr. Trenaman also has a non-financial affiliation with the Drug Evaluation Alliance of Nova Scotia to work on a descriptive study. Dr. Trenaman received payments for consulting at the Canadian Coalition for Seniors' Mental Health as well as a grant from CIHR to hold a patient engagement session. Dr. Trenaman also reviewed treatments for anxiety, one of which was antipsychotics, as a guideline development consultant for the Canadian Coalition for Seniors' Mental Health.

Dr. Ahmed Vanker is currently employed at Extendicare Inc. In addition, Dr. Vanker's manuscript on strategies to reducing inappropriate use of antipsychotics was accepted and will be published by the Journal of the American Medical Directors Association.

Julie Weir received an honorarium from Choosing Wisely Canada to provide advice and leadership to the long-term care group in a co-lead capacity. Julie also receives payments from Healthcare Excellence Canada for coaching activities related to aging in place, nursing homes without walls, and the appropriate use of antipsychotics initiatives.