CLeAR
Call for Less Antipsychotics in Residential Care

CLeAR Wave 2

Final Evaluation Report

August 2017

BC PATIENT SAFETY & QUALITY COUNCIL
Working Together. Accelerating Improvement.

REICHERT & ASSOCIATES
PROGRAM EVALUATION & RESEARCH

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Executive Summary

Reichert & Associates was contracted to evaluate the BC Patient Safety & Quality Council's (the Council) Call for Less Antipsychotics in Residential Care (CLeAR) Initiative – Wave 2. The initiative spanned the period between September 2015 and December 2016. The evaluation was designed to learn about the effectiveness of the implementation of the initiative, as well as to comment on the initiative's impacts as they relate to its stated goals and objectives. In addition to Wave 2, the evaluation reflected on the sustainability of improvements from Wave 1 sites.

About CLeAR

The overall objective of CLeAR Wave 2 was:

"To improve dignity for seniors who live in residential care with cognitive impairment through a focused collaborative and support for best practice care for behavioural and psychological symptoms of dementia (BPSD), leading to a reduction in the use of antipsychotics in this population."

To achieve this objective, the Council, with guidance from a Partnership Alliance and Clinical Faculty, supported multidisciplinary Action & Improvement Teams across 40 care homes in British Columbia. The initiative included a kick-off workshop, Improvement Advisor support, site visits, regional workshops, and regular webinars. Examples of strategies implemented across care homes included using non-pharmacological approaches to respond to residents' needs, establishing a medication review plan for residents on antipsychotic medications, and implementing best practices for prescribing antipsychotics appropriately.

CLeAR Wave 2's overall aim was to reduce antipsychotic use by 33% in participating care homes through evidence-based management of BPSD. To achieve this, four primary objectives were identified as "drivers" of change:

1. Promote appropriate antipsychotic use in residential care;
2. Increase use of best practice management for residents with BPSD;
3. Improve culture by enhancing teamwork and communication in workplace and workflow; and
4. Increase resident care planning for quality of life and safety.

About the Evaluation

The purpose of the evaluation is to provide summative findings of the Council's CLeAR Wave 2 initiative. The evaluation information is intended to be a resource for the Council and its partners to inform decisions regarding quality improvement approaches in residential care. Furthermore, the findings from Wave 2 provide evidence of the value of continuing to work to improve the dignity of older adults in residential care homes.

Evaluation Methods

The evaluation approach was designed in collaboration with the Council, with input from the CLeAR Clinical Faculty and Partnership Alliance. Multiple methods were used, including both qualitative and quantitative approaches. Information sources included monthly data reports compiled by care homes, Canadian Institute for Health Information (CIHI) Inter-RAI 2.0 data, and WorkSafe BC data. Key informants included Action & Improvement Team members and team leads, members of the Clinical

Faculty and Partnership Alliance, and Council staff, who provided input into the evaluation through surveys, focus groups, and interviews.

The monthly data reports from care homes that tracked the prescription and use of antipsychotics for all residents included in the initiative were the primary source of antipsychotic use data for the CLeAR initiative; CIHI data was an additional measure to assess impact at the system level. Since some homes only implemented CLeAR in certain parts of the home (e.g. in one unit), the CIHI data, which represent the whole care home, may therefore understate the initiative's impact.

Evaluation Findings

Forty-four care homes joined CLeAR Wave 2 in the spring of 2015, and 40 care homes completed the initiative with participating Action & Improvement Teams. There were a number of key stakeholder groups involved in the implementation and operation of CLeAR, and those who participated in the evaluation generally reported being satisfied with their involvement in the initiative. Factors that supported implementation included engaging multidisciplinary teams, involving pharmacists, and receiving support from the Clinical Faculty.

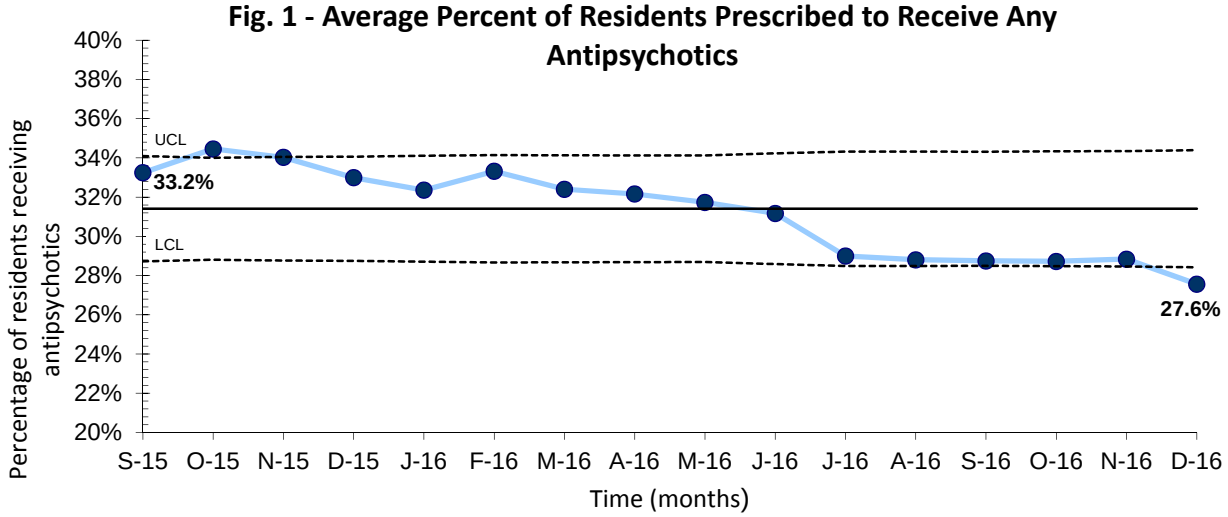
Summary of Key Findings

1. Decreased use of antipsychotic medication

By all measures, the CLeAR initiative made significant progress towards reducing the use of antipsychotic medications in participating care homes.

- A total of **1001** of the 1457 residents who had a prescription for antipsychotics had their medications discontinued or reduced during the initiative.
- Qualitative analysis revealed that care providers in participating care homes now have a better understanding of when to use antipsychotics, as well as the limitations of these medications.
- The monthly data tracked by the Action & Improvement Teams showed a 16.9% reduction in antipsychotic medication use. Specifically, CLeAR care homes decreased the percentage of residents on antipsychotics from 33.2% in September 2015 to 27.6% in December 2016 (Fig. 1).

Fig. 1 - Average Percent of Residents Prescribed to Receive Any Antipsychotics

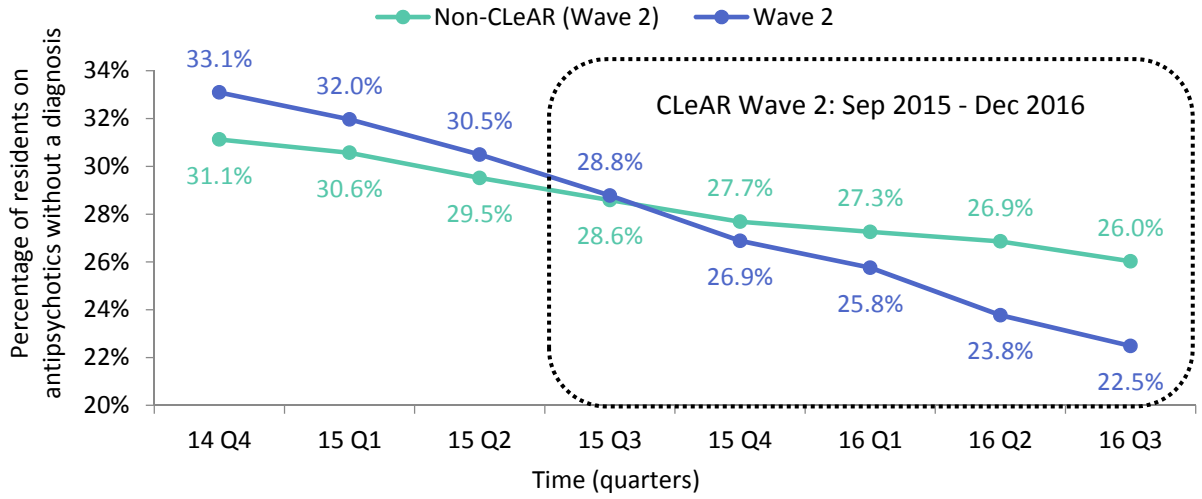


2. Decreased residents on antipsychotics *without a diagnosis of psychosis*

CLeAR care homes also showed a statistically significant reduction in the percentage of residents on antipsychotics without a diagnosis of psychosis, compared to care homes in BC that did not participate in the initiative.

- According to CIHI Inter-RAI data, CLeAR care homes decreased the percentage of residents on antipsychotics without a diagnosis of psychosis from 28.8% to 22.5% compared to the non-participating homes which decreased from 28.6% to 26.0%. In figure 2, the last data point on record (Q3 2016) shows a statistically significant difference of 3.5 percentage points between participating and non-participating homes ($p<0.05$).

Fig. 2 - Percent of Residents on Antipsychotics Without a Diagnosis of Psychosis in CLeAR Wave 2 and Non-CLeAR Wave 2 Homes from September 2015 to December 2016



3. Increased use of best practice management for residents with BPSD

To support the decrease in antipsychotic medications, CLeAR teams also focused on improving non-pharmacological approaches. Two key themes identified in analyses of interview and survey data were:

- Evidence of increased inquiry into behaviours and symptoms; and
- Increased use of recreation therapy approaches

As one team lead summarized, "*We changed our lens to look at the recreation programs. It's a big component when you take them off medication, they want something to do*."

4. Improved culture by enhancing teamwork and communication in workplace and workflow

The majority of Action and Improvement Team survey respondents reported that there was a change in their care home's culture during the CLeAR initiative (88%; 45 of 51). In addition, 73% (37 of 51) of survey respondents indicated they feel like part of a team and 69% (35 of 51) indicated that communication between health care providers improved during CLeAR.

A Nurse Educator from a participating care home provided an example: "*Our care staff are more aware of a common goal to decrease antipsychotic medications by implementing other non-pharmacological strategies – It has given our staff a sense of 'team'*."

5. Increased resident care planning for quality of life and safety

Key stakeholders identified that a significant change resulting from CLeAR has been an increased awareness and consideration of residents' personal history and background when developing care plans.

- 56% of Action & Improvement Team survey respondents (29 of 52) reported that residents/family members are more regularly involved in developing care plans
- 75% of respondents (39 of 52) reported using the care plans more often in their daily work

6. Built capacity for quality improvement

The evaluation found evidence of increased capacity for care home staff to understand and apply concepts of quality improvement as a result of participating in the initiative. Specifically, CLeAR provided an avenue for care home staff to learn about the language and application of tools for quality improvement. These skills can also be transferred to other improvement initiatives in the future, and contribute to opportunities for broader system change.

7. Improved quality of life for residents

Changes in Residents Noticed by Staff

"Some residents are brighter, mobilizing more, more interested in activities, less lethargic, and more social."

Seventy-six percent of survey respondents (38 of 50) agreed that the quality of life for residents had improved. Approximately half indicated that they were noticing less violence and aggression in their care home, and that residents were displaying fewer behavioural symptoms of dementia. In the analyses of CIHI Inter-RAI data, CLeAR Wave 2 care homes did not show statistically significant changes over time or differences compared to non-participating homes in quality indicators (QI). However, limitations of the data may understate the initiative's impact.

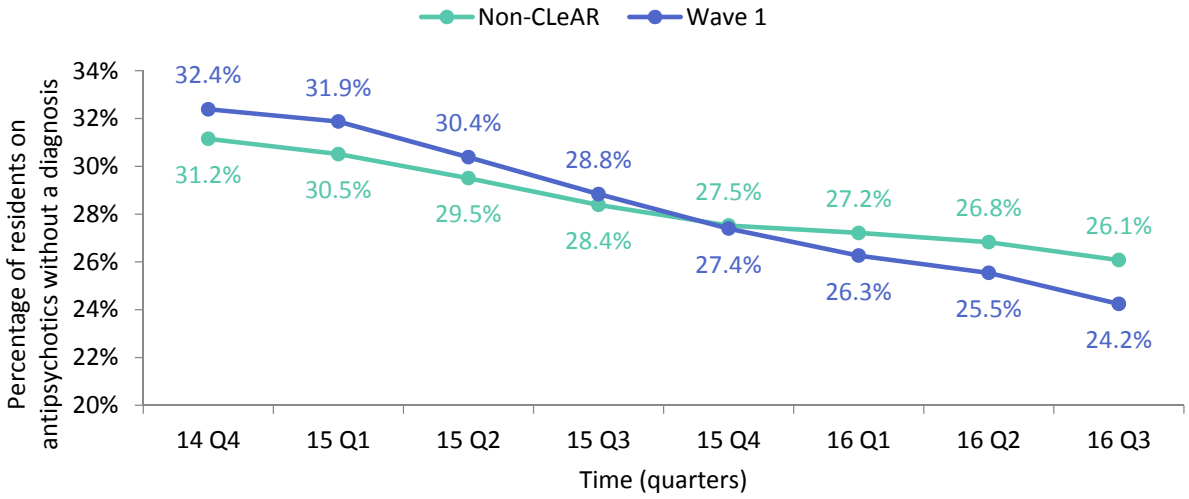
8. Changes resulting from CLeAR are considered sustainable

Most Action & Improvement Team survey respondents (96%; 46 of 48) indicated that the processes and outcomes of the CLeAR initiative would likely be sustained in their care homes. Respondents also indicated a strong interest to see the focus on CLeAR work continue in their care home (94%; 46 of 49) as well as spread to other homes (98%; 47 of 48).

Team leads from Wave 1 were also interviewed to further explore sustainability of CLeAR. The most commonly reported method to ensure sustainability was to ingrain the changes into the regular operations and processes of the care home. Another key to sustainability has been continuing to promote and discuss the importance of reducing antipsychotics when appropriate, as well as continuing to track the use of antipsychotics in the home. Lastly, Wave 1 teams noted that they are better able to prevent residents from needing or receiving antipsychotics.

Through analyses of CIHI Inter-RAI data, the Wave 1 care homes have continued to decrease the percentage of residents on antipsychotics without a diagnosis of psychosis over time, following a similar trend to the provincial average of non-participating homes (Fig. 3).

Fig. 3 - Percent of Residents on Antipsychotics Without a Diagnosis of Psychosis in CLeAR Wave 1 and Non-CLeAR Homes from January 2015 to December 2016



*Note: CLeAR Wave 2 homes were excluded from the non-CLeAR group for 2015 Q3 to 2016 Q3.

Opportunities for improvement in residential care

In addition to improvement opportunities identified within the CLeAR initiative, evaluation participants provided the following recommendations for further improvement in residential care:

- Sustaining support for CLeAR Wave 1 and 2 teams
- Exploring opportunities to improve appropriate antipsychotic use in acute care settings (e.g. improve communication about the reason a resident was put on antipsychotics)
- Continuing to promote and/or provide education opportunities about antipsychotic medication use
- Increasing focus on preventative approaches outside of the care home (e.g. offering non-pharmacological solutions in acute care and community settings)
- Increasing awareness among policymakers about initiatives like CLeAR
- Increasing formal partnerships and collaboration with other initiatives

Conclusion

CLeAR Wave 2 demonstrates that through concerted efforts and multidisciplinary teamwork, dignity of older adults can be promoted and a reduction in the use of antipsychotics for residents with BPSD can be achieved. In addition, this type of approach can build capacity for quality improvement work, and create sustainable change.

During its operation, the initiative made significant progress towards its stated goals and objectives. Notably, participating care homes reduced antipsychotic use, and also decreased the percentage of residents on antipsychotics without a diagnosis of psychosis more than non-participating homes. Evaluation findings also indicated that the initiative supported homes to improve the application of best practices for BPSD, improved the culture within care homes, and increased use of resident care planning.

The opportunities and recommendations in this evaluation can guide future efforts to support quality improvement in residential care, and further improve quality of life and dignity of older adults.

Introduction

Reichert & Associates was contracted to evaluate the BC Patient Safety & Quality Council's (the Council) Call for Less Antipsychotics in Residential Care (CLeAR) Initiative – Wave 2. The initiative spanned the period between September 2015 and December 2016. In addition to Wave 2, the evaluation reflected on the sustainability and improvements from Wave 1 sites. The evaluation was designed to learn about the effectiveness of the implementation of the initiative, as well as to comment on the initiative's impacts as they relate to its stated goals and objectives.

About CLeAR

Background

CLeAR is a quality improvement initiative that supports teams from residential care homes in British Columbia to address the behavioural and psychological symptoms of dementia (BPSD) with a focus on reducing inappropriate use of antipsychotics. Care homes formed Action & Improvement Teams, and received support through shared resources, improvement coaching, mentorship, and opportunities to collectively learn and participate in local, regional, and provincial activities. The CLeAR approach builds on education and skill development opportunities available within the province (e.g. P.I.E.C.E.S., Gentle Persuasive Approach, Dementiability Training) to address BPSD using appropriate interventions, while improving culture and building capacity to enhance quality of care.[1]

CLeAR was developed in response to rising concerns over inappropriate antipsychotic use in residential care. The Canadian Institute for Health Information (CIHI) indicates that BC has an average proportion of residents in long-term care prescribed antipsychotic medications without a diagnosis of psychosis that is higher than the national average (28.0% in BC compared to 23.9% nationally).[2]

The focus of CLeAR aligns with the current provincial direction to improve quality of life of individuals with BPSD. The Ministry of Health is committed to continued improvement to dementia care in BC. In British Columbia, 62,000 people are living with dementia and this number is expected to rise to 87,000 by 2024.[3] A common challenge later in life is dementia, and the behavioural and psychological symptoms that accompany the disease. CLeAR, which focused on older adults and, in particular, the quality of life of individuals with BPSD, was therefore a timely and relevant initiative.

CLeAR Wave 1

Between October 2013 to December 2014, 48 care homes across British Columbia participated in the first wave of CLeAR. The aim of CLeAR Wave 1 was for participating care homes to achieve a province-wide reduction of 50% from baseline in inappropriate use of antipsychotics by December 31, 2014. Participating care homes achieved a steady percentage point decline in antipsychotic use (from 38% in October 2013 to 32% in December 2014) that contributed to improved quality of life for residents. CLeAR also had an impact on individuals and organizational culture: over 90% of respondents in two

[1] See Appendix D for a description of provincial initiatives and the above-mentioned education programs.
[2] Canadian Institute for Health Information (2016) Your Health System. Retrieved 2017, from: http://yourhealthsystem.cihi.ca/hsp/indepth?lang=en#/indicator/008/2/C9001/
[3] Provincial Guide to Dementia Care, 2014

anonymous surveys at the end of the initiative agreed that they had built new skills and knowledge regarding quality improvement; and over 80% indicated that they were comfortable leading and carrying out quality and safety initiatives in their organizations.[4]

Based on the Wave 1 findings, the Council and its partners continued to work towards reducing antipsychotics when appropriate while developing capacity for quality improvement and improved quality of life in residential care homes. This continuation was termed "CLeAR Wave 2."

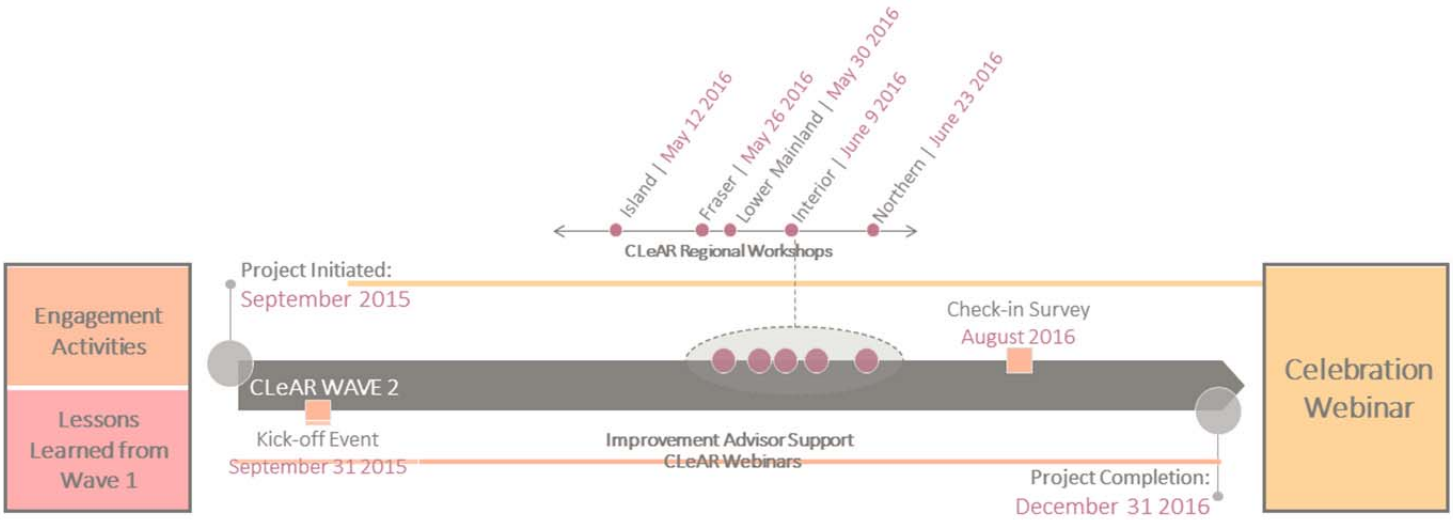
CLeAR Wave 2

The overall objective of CLeAR was to improve dignity for seniors who live in residential care with cognitive impairment through a focused collaborative and support for best practice care for BPSD, leading to a reduction in the use of antipsychotics in this population. The approaches of reducing antipsychotic use and addressing BPSD intended to improve the acceptability, appropriateness, effectiveness, and safety of care of residents. The Council supported care homes to achieve this objective using a slightly modified version of the International Healthcare Improvement's (IHI) Breakthrough Series approach.[5] This approach entails a collaborative effort over a relatively short time span (in this case, 15 months), to achieve significant change.

To this extent, the Council provided a backbone structure to the initiative, while Action & Improvement Teams were assembled within each participating care home site to implement the changes. Strategies within care homes included using non-pharmacological approaches to respond to residents' needs, establishing a medication review plan for residents on antipsychotic medications, and implementing best practices for prescribing antipsychotics appropriately. Sites were supported by an Improvement Advisor (IA) for customized coaching, and had access to Council supports such as webinars, workshops, improvement resources, and newsletters. Additional advisory support to the initiative was provided by two committees: the Clinical Faculty and Partnership Alliance.[6]

Sites and individuals could also participate as Organizational Partners if they did not formally join CLeAR as an Action & Improvement Team, enabling them to receive information about CLeAR (i.e. newsletters, invitations to webinars, etc.). However, these sites did not receive Improvement Advisor support, and they did not actively submit data regarding the percentage of residents receiving antipsychotics.

Fig. 4 – Timeline of the Initiative



Objectives and Drivers

Collectively, the objectives of the CLeAR Wave 2 initiative were:

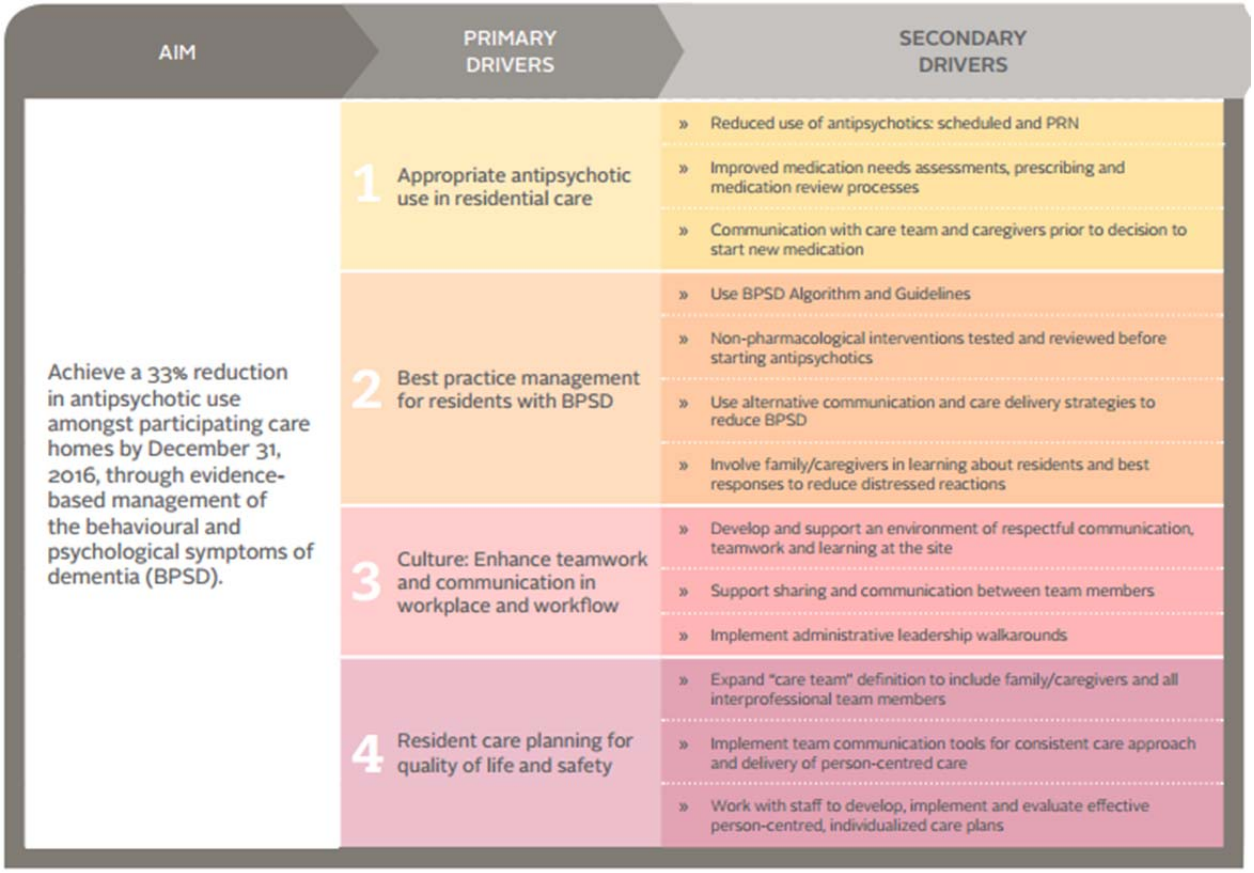
1. To improve dignity for seniors who live in residential care with cognitive impairment through a focused collaborative and support for best practice care for BPSD, leading to a reduction in the use of antipsychotics in this population;
2. To enhance support to achieve goals for work already underway;
3. To create opportunities for existing initiatives to work together; and
4. To build improvement capability and capacity in residential care.

To achieve these objectives, a logic model (the "driver diagram"; Fig. 5) identified areas for improvement and potential strategies to address each sub-goal. The "drivers" for the CLeAR Action & Improvement Teams participating in Wave 2 were:[7]

1. Appropriate antipsychotic use in residential care;
2. Best practice management for residents with BPSD;
3. Improve culture by enhancing teamwork and communication in workplace and workflow; and
4. Resident care planning for quality of life and safety.

Fig. 5 – The Driver Diagram

[7] CLeAR Guide for Success: Driver Diagram (2015)



Wave 2 Antipsychotic Use Aims

In CLeAR Wave 1, antipsychotic use was measured for residents who were in participating care homes at the start of CLeAR, as well as residents who were admitted during the initiative. As a result, the overall impact on antipsychotic use was diluted by new residents who arrived already being prescribed antipsychotics. This also made it difficult to compare results to other initiatives (such as the Canadian Foundation for Healthcare Improvement's antipsychotic reduction initiative). Therefore, for Wave 2, participating homes divided residents into two cohorts: the original cohort, which included residents admitted prior to the start of CLeAR on September 30, 2015 (n=2705), and an additional cohort of residents admitted to participating homes after September 30, 2015 (n=1198).

CLeAR Wave 2's overall aim was to achieve a 33% reduction in antipsychotic use across both cohorts through evidence-based management of the behavioural and psychological symptoms of dementia (BPSD) by December 31, 2016.

About the Evaluation

Approach

Generally, the evaluation was designed to provide summative information to the initiative. That is, it provided an opportunity to learn about the effectiveness of operational processes as well as comment

on the initiative's impacts as they relate to the stated goals and objectives. The evaluation approach was designed in collaboration with the Council, with input from the CLeAR Clinical Faculty and Partnership Alliance. Multiple methods were used, including both qualitative and quantitative approaches.

Evaluation Objectives

The key objectives of the evaluation were:

1. To evaluate CLeAR Wave 2 within the context of its stated aims and objectives;
2. To assess how well the Council supported participating teams to meet their aims, as well as increase care homes' capability and capacity for quality improvement work;
3. To draw conclusions and make recommendations to further support residents and/or care staff in residential care homes; and
4. To assess sustainability of the improvements resulting from CLeAR, including reflecting on sustainment of changes from Wave 1 sites.

Methods

This section provides an overview of the methods included in the CLeAR evaluation.

Post-Event Evaluation Forms

Following the kick-off workshop, regional events, and webinars, short evaluation forms were provided to participants to gauge their perception of the event.

Table 1: Post-Event Evaluation Forms Response Rates

Event	Response Rate
Kick-off event	119 feedback forms / 161 attendees (74%)
Regional Workshops	97 feedback forms / 114 attendees (85%)

Action & Improvement Team Survey

A survey was distributed to all Action & Improvement Team members, including nurses (nurse practitioners, registered nurses, and licensed practical nurses), care aides, pharmacists, physicians, social workers, and allied health providers (recreation therapists, physiotherapists, occupational therapists). The survey was available both electronically (via email) as well as in hard copy, between Jan. 10 – Feb. 10, 2017. In total 52 team members responded to the survey (response rate: 36%). An incentive was available for respondents who completed the survey within the first 2 weeks to encourage participation.

The survey results provided a broad understanding of how the initiative operated at the care home level, as well as to gather general feedback on the impact of the initiative. The themes identified in the survey were further explored in the key informant interviews.

Key Informant Interviews

The evaluation included semi-directed and open-ended telephone interviews with select stakeholders. The purpose of the interviews was to capture the stakeholders' perspectives on the initiative strengths, challenges and activities, as well as future priority areas. All team leads in Wave 1 and 2 were invited to participate in the evaluation, as well as all Council staff who were directly involved in the initiative.

Table 2: Key Informant Interviews

Stakeholder Group	Number of Interviews (response rate)
Wave 2 Action & Improvement Team Leads	n=11 (25%)
Wave 1 Action & Improvement Team Leads	n=6 (18%)
Partnership Alliance[8]	n=1
Council Staff (Incl. Improvement Advisors)	n=10 (100%)

Focus Groups

Two focus groups were hosted to reach the members of the Clinical Faculty and Partnership Alliance. Since the members are located across the province, the focus groups were held via teleconference. The focus groups were facilitated to allow all participants the opportunity to provide their insight into the value of the initiative, their engagement in the work, and areas of further opportunity. Each focus group lasted one hour.

Table 3 Focus Groups

Stakeholder Group	Number of Participants
Partnership Alliance	n=3
Clinical Faculty	n=7

Administrative Data Analysis

The monthly data reports from care homes were the primary sources of antipsychotic use data for the CLeAR initiative; CIHI data was an additional measure to assess impact at the system level.

Monthly Data Reports

Action & Improvement Teams within each home tracked the prescription and use of antipsychotics for all residents included in the initiative, and reported these findings monthly to the CLeAR team. As part of the evaluation strategy, the evaluation team reviewed data collected from the care homes.

[8] One member of the Partnership Alliance was unable to participate in the focus group, and instead an interview was scheduled.

Canadian Institute for Health Information (CIHI)

Data requested from CIHI's Continuing Care Reporting System included the Inter-RAI 2.0 data. These data were collected and submitted by care homes in British Columbia, and were provided for the time period between January 2015 to December 2016 (eight quarters from 2014 Q4 to 2016 Q3). Specific indicators included:

Table 4: Requested Inter-RAI 2.0 Indicators

Demographics	
Average Age, Sex	
QI Indicators	
ADL06	% of residents who improved or remained independent in early-loss ADL
ADL05	% of residents who improved or remained independent in mid-loss ADL
ADL1A	% of residents who improved or remained independent in late-loss ADL
BEHI4	% of residents who improved behavioural symptoms
COG1A	% of residents who improved cognitive ability
COM1A	% of residents who improved communication
FAL02	% of residents who fell in last 30 days
MOB1A	% of residents who improved locomotion
DRG01	% of residents on antipsychotics without a diagnosis
Medication Use: % on antipsychotics, antianxiety, antidepressants, hypnotics, analgesics	
Resource Utilization - Hospital Stay: % with at least one hospital stay, at least one emergency visit	

The evaluation team reviewed the CIHI data to understand whether changes in antipsychotic use as a result of the CLeAR initiative made a difference to select quality indicators. The analysis tested the following questions:

- Have care homes that participated in CLeAR Wave 2 seen a change in QI Indicators compared to homes that did not participate? (Is there a difference between the two groups?)
- Have care homes that participated in CLeAR Wave 2 seen a change in QI indicators over time/throughout the course of the CLeAR Wave 2 initiative?
- Have care homes that participated in CLeAR Wave 1 maintained changes?

See Appendix E for further details of each hypothesis tested.

Constraints and Limitations

Limitations to the collected data are reported according to the evaluation method used:

Action & Improvement Team Survey

The evaluation gathered feedback from CLeAR Action & Improvement Teams within the care homes through an email survey. This required team leads to identify who within the home was considered part of the team and pass along the survey link. As a result, there was a low response rate from physicians and care aides, who were not always considered to be part of the Action & Improvement Team, although they may have participated in the work.

The survey was primarily distributed by email, making it less likely to be filled out by frontline staff without access to a computer during their work hours. The survey was made available in hard copy to mitigate this concern, and three people took advantage of this option. There also may have been response bias, meaning that people who were more involved or engaged in the initiative were more likely to respond to the survey. This could impact perceptions of satisfaction reported in the findings.

Interviews

The evaluation team encountered challenges connecting with Wave 1 teams. Three former team leads responded to interview requests to report that they no longer work at the care homes. Of those who did not respond, it is expected that there were more that no longer worked in the same care homes, due to turnover in these roles. This limitation highlights the reliance of both the initiative and the evaluation on the team leads within each facility to connect with and provide site-level information.

Monthly Data Reports

Data collected directly from care homes were generally well documented, however there were opportunities for data inaccuracies, biases (in qualitative data), and incompleteness, due the variety and number of different people providing data and time commitment constraints. To minimize the impact of this limitation, a standard template was developed by the Council from the outset of Wave 2 and training was provided to teams in order to improve data accuracy.

Administrative Data

CIHI: The data requested through the Ministry of Health/CIHI database (Inter-RAI 2.0) were available only as aggregate data; in essence, these data presented information that represented the whole care home. Since some homes only implemented CLeAR in certain parts of the home (e.g. in one unit), the data may therefore understate the initiative's impact.[9] In addition, because it can take months to fully discontinue a resident's antipsychotic medications, a time lag is expected for changes to be observed in the data.

WorkSafe BC: During the evaluation design phase, there was an interest in assessing WorkSafe BC data regarding workplace incidents and violence/aggression faced in care homes to assess whether CLeAR has had an impact on these rates. Data from WorkSafe BC provided the average number and cost of accepted claims for CLeAR and non-CLeAR care homes, as well as a subset of claims linked to violence or force.[10] Due to limitations of the WorkSafe BC dataset, data from this analysis were not used to evaluate the impact of CLeAR. Challenges with the data included:

- Claim numbers are collected by employer, not home, and WorkSafe accounts aren't linked by site (some homes have three or four accounts linked to them, typically because of contracting of services). This makes it difficult to parse out CLeAR homes' data and make comparisons.
- Workplace injury, let alone accepted time-loss claims, is always an outlier event. Because of the small numbers of claims at each care home, it was unlikely that statistically significant and/or meaningful results would be found.

[9] On average, 74% of residents within each home participated in CLeAR (the scale of implementation ranged from 20-100%). Half of the homes had at least 95% of their residents included in CLeAR.

[10] This data was requested because the CLeAR Partnership Alliance wanted to investigate whether rates of violence and aggression were different once antipsychotics were decreased.

- Behavioural challenges that result in a time-loss injury to a worker are not always categorized as "acts of force or violence."

Lack of Resident/Family Member Perspective

The initiative focused on improving care for residents with dementia. In many cases, the resident would not be able to self-report how CLeAR had made a difference for them. In addition, family members/caregivers may not be aware of the initiative, and therefore unable to accurately report on the impact. The evaluation therefore relied on the case studies, as well as staff reports and CIHI quality indicators to assess the impact on residents.

Evaluation Findings – Implementation & Engagement

Implementation & Engagement

Forty-four care homes joined CLeAR Wave 2 in the spring of 2015, including 19 health authority owned/operated sites and 25 contracted sites.[11] Sites ranged in size from 34 to 260 residents, and were spread across the five regional health authorities. Each site had an Action & Improvement Team, designated to lead the change within their home. Each Action & Improvement Team determined the scale of implementation, which ranged from 20% - 100% of all residents. On average, 74% of residents within each home participated in CLeAR. Half of the homes had at least 95% of their residents included in CLeAR.

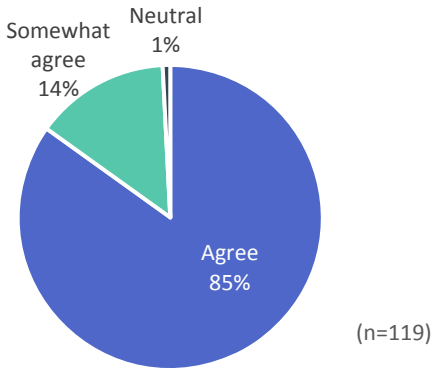
The initiative was composed of five main components – a kick-off workshop, Improvement Advisor support, site visits, regional workshops, and webinars. A diagram outlining the timeline and key activities of the initiative can be found in figure 4.

Kick-Off Workshop

161 participants from across the province attended the kick-off workshop on September 30, 2015. Those who provided feedback (119 of 161; 74% response rate) indicated that the event was a valuable use of their time. The majority (85%; 101 of 119) agreed that the event enabled them to learn about the CLeAR initiative and how to implement it at their site (Fig. 6).

Interviewees also commonly reported that the kick-off event was one of the most valuable aspects of the initiative, because it fostered engagement and excitement in the initiative.

Fig. 6 - "The kick-off workshop enabled me to gain insight into the overall aims, approaches and what's possible in CLeAR"



[11] Four of the 44 initial sites did not complete the initiative, instead opting to participate as Organizational Partners rather than Action & Improvement Team sites.

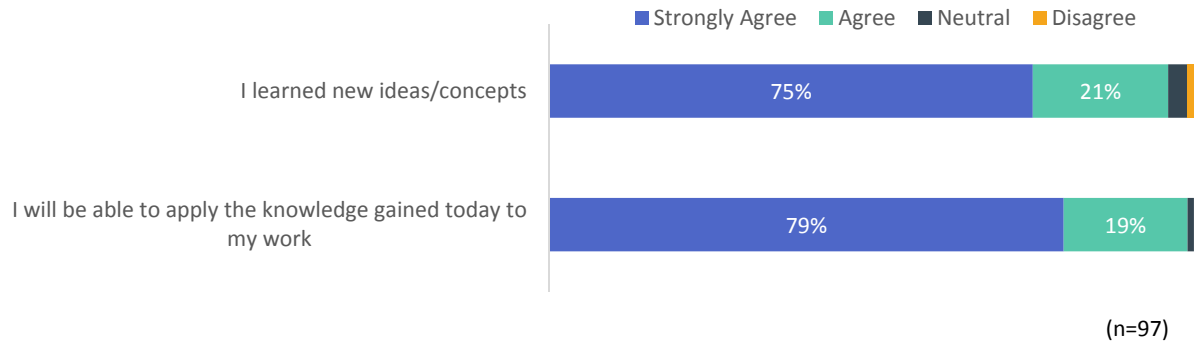
Improvement Advisor Support & Site Visits

Each team was paired with an Improvement Advisor from the Council to guide and support the quality improvement work occurring at each site. The Improvement Advisors supported teams by providing regular check-ins, providing feedback on the teams' monthly reports, and visiting the sites. Specific improvement support included assisting teams with PDSA cycle plans, networking teams with each other to share ideas, connecting teams with faculty for clinical support, assisting with data collection and interpretation, as well as helping teams identify aims and complete the team charter.

Regional Events

Five regional events were hosted across the province, with a total of 114 Action & Improvement Team members attending.[12] Attendees who completed the post-event evaluation forms reported that the events were effective ways to learn new ideas/concepts, and that they will be able to apply the knowledge they gained in practice.

Fig. 7 - Regional Event Feedback



Webinars

During CLeAR Wave 2, 22 webinars were hosted ranging from clinical topics such as antipsychotic use, delirium and drug interactions, to non-pharmacological approaches and person-centred care, as well as quality improvement and measuring change.[13] The webinars also provided an opportunity for homes to share successes and challenges with one another.

Stakeholder Engagement

There were a number of key stakeholder groups involved in the implementation and operation of CLeAR, including care home staff providing direct care, as well as management, physicians, and pharmacists. Implementation was supported by two advisory groups: the Clinical Faculty and

[12] A list of regional event locations and dates can be found in Appendix B.
[13] A list of webinar topics and dates can be found in Appendix C.

Partnership Alliance. Generally, stakeholders who participated in the evaluation reported being satisfied with their level of engagement and participation in the initiative.

Satisfaction with Participation

- 94% of Action & Improvement Team survey respondents (49 of 52) reported being somewhat or very satisfied with their involvement in the CLeAR initiative.
- Action & Improvement Team leads who were interviewed (n=11) reported that they appreciated the opportunity to participate in the initiative, and were satisfied with the opportunity to learn and challenge themselves. One lead commented, "*It was rewarding for me and I will take it forward wherever I go.*"
- Clinical Faculty members (n=7) reported in a focus group that they appreciated being part of the CLeAR initiative. In particular, they perceived that there was value in participating in a provincially-led, collaborative initiative that improved both clinical and quality improvement skills within residential care.
- Partnership Alliance members (n=4) reported in a focus group and interviews that being part of the initiative was valuable to their organizations, enabling them to be more aware of current advances in the work. A common response from the Partnership Alliance members was that they wished they personally had more time to engage with the initiative, but were generally satisfied with their involvement and the opportunity to be involved.

Strengths of Stakeholder Engagement

The evaluation found that the multidisciplinary approach taken at the care home level supported the implementation of the initiative. Throughout the interviews with Action & Improvement Team leads, it was commonly reported that in homes that engaged a broad spectrum of staff (including care aides, nurses, and recreation staff), there was greater opportunity for culture change and a shift in attitudes. In homes with fewer people involved in the work, there may have been a shift in the reported rates of antipsychotics, however the team leads of these homes identified that they have a greater risk of losing the gains they made once the initiative is over. An Improvement Advisor summarized, "*CLeAR works best as an approach for multidisciplinary teams… plus, involving people is important for sustainability.*"

Strengths of Stakeholder Engagement

- ✓ Engaging multidisciplinary teams
- ✓ Involving pharmacists
- ✓ Being supported by the Clinical Faculty

A specific stakeholder that was frequently cited by interviewees as a key team member was the pharmacist. Since the focus of CLeAR was to change the perceptions on the need for antipsychotics and appropriate use, it is logical that care homes engaged their pharmacists to support the initiative; however, it is not clear if this occurred at every site. Homes that did closely involve the pharmacist noticed that it improved communication between staff and the pharmacist, as well as supported the pharmacist to contribute to quality improvement efforts.

Another stakeholder group that was identified in the evaluation to have had a large, positive impact on the initiative was the Clinical Faculty. In particular, the Council identified that, as an organization, the Council is able to provide information and support on quality improvement, while the faculty was able to supply specific clinical knowledge of the work. In addition, the Clinical Faculty were seen as an attractive element for participating teams. A Council staff member noted, "*Having a strong Clinical Faculty drew people to the project, and to attend webinars. They were amazing speakers and could*

highlight the meaning of the work."

Challenges in Stakeholder Engagement

The most commonly reported challenge for stakeholders in surveys, interviews, and focus groups, was a lack of time to commit to the initiative within the context of competing demands and busy schedules. While this challenge was common across stakeholder groups, several specific groups were identified in interviews and focus groups as being not adequately involved within the initiative. These included family physicians, family members/caregivers of residents, and the Partnership Alliance.

Evaluation participants identified that family members/caregivers could have been made more aware of the initiative. Team leads noted that increased awareness would have made it easier to initiate conversations with families about decreasing antipsychotics, and may have also encouraged some family members to advocate for reduced medications, reinforcing the efforts of the initiative. Individual care homes made efforts to communicate with family members, in particular those whose loved ones were having their medications changed. However, team leads noted that they would have appreciated more support, such as communication materials, to share with family members to increase awareness.

Secondly, the low involvement of family physicians was noted by all Council staff interviewees, as well as 3 of 11 team leads. Challenges related to the engagement of physicians included:

1. The physicians are generally connected to care homes on a resident-by-resident basis, not through care home initiatives. The teams connected with physicians on that basis during CLeAR.[14]
2. The CLeAR development work occurred within the care homes during work hours that were not necessarily accessible for family physicians to participate.

Recommendations to Improve Stakeholder Engagement

The improvement opportunities identified in the table below were suggested by interviewees and focus group participants.

Table 5 – Opportunities to Improve Stakeholder Engagement

Stakeholder Group	Opportunities
All	• Supporting face-to-face engagement where possible • Providing opportunities for different stakeholders engaged in the initiative to network with one another, thus creating/facilitating "networks within networks"
Clinical Faculty	• Increasing clarity of the role, responsibility, or expectations of Clinical Faculty participants • Providing opportunities to participate in site visits
Partnership Alliance	• Formalizing partnerships with organizations engaged in the alliance • Increasing clarity of the role, responsibility or expectations of partners • Increasing communication to, and for, the Partnership Alliance that would

[14] CLeAR's Clinical Lead promoted CLeAR via physician-focused provincial initiatives such as the GPSC Residential Care Initiative (RCI) or the Shared Care Polypharmacy Risk Reduction Initiative.

	allow them to make informed decisions in their own organizations (i.e., briefing notes, data updates, etc.)
Family physicians	• Early and formal engagement with other provincial initiatives such as RCI/Polypharmacy risk reduction • Providing opportunities for physicians to be engaged at the clinical level in ways that are meaningful and take advantage of their unique skills • Providing additional, targeted education opportunities for physicians • Supporting interactions between family physicians/care home staff outside of traditional office hours
Family members/ caregivers	• Education opportunities for family members about the use of antipsychotics • Communication materials for care homes (posters or pamphlets/brochures, etc.) • Opportunity to have greater involvement from Patient Voices Network, since the Network has been re-established and is supported by the Council
Health authorities	• Engaging with health authorities to promote and enable the spread of CLeAR to other care homes

Evaluation Findings - Outcomes

The central objective of CLeAR was to improve dignity for seniors who live in residential care with cognitive impairment through a focused collaborative and support for best practice care for BPSD, leading to a reduction in the use of antipsychotics in this population. To measure reduction in antipsychotic use, Action & Improvement Teams within each home tracked the prescription and use of antipsychotics for all residents included in the initiative, and reported these findings monthly to the CLeAR team.

Decreased Use of Antipsychotic Medication

The original aim for Wave 2 was to reduce the percentage of residents prescribed any antipsychotics by 33% within participating care homes by December 31, 2016. In consideration of baseline percentages, that would mean the goal was to decrease the percentage of residents prescribed any antipsychotics from 33.2% to 22.2%.

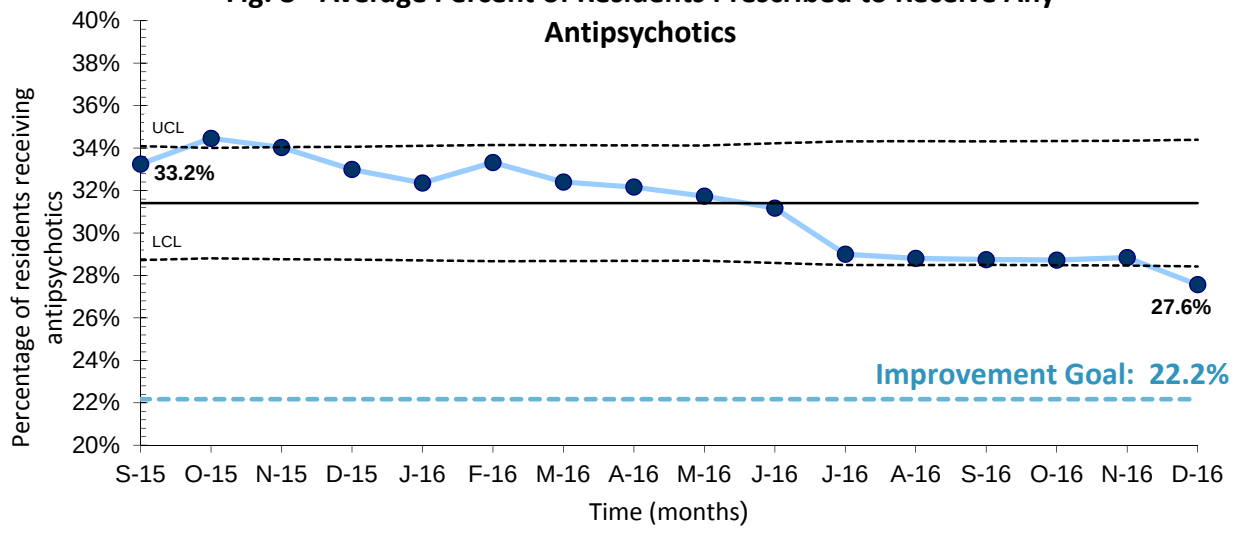
The overall monthly data tracked by the Action & Improvement Teams show that this percentage decreased from 33.2% in September 2015 to 27.6% in December 2016, a 5.6 percentage point decrease (Fig. 8). Stated another way, this means the percentage change between values was a 16.9% reduction in antipsychotic use within CLeAR Wave 2 care homes.[15] While the original goal of a 33% reduction was not achieved, the 16.9% reduction represented in the data demonstrates significant improvement in the system.[16]

Impact of CLeAR on Decreased Use of Antipsychotic Medication

A total of 1001 residents who had a prescription for antipsychotics had their medication discontinued or reduced during the initiative.

system is not stable and demonstrating improvement (decreasing rate). Special cause variation identified in the overall rate of antipsychotic use (Fig. 8) shows an overall decreasing rate of use, beginning with 9 consecutive

Fig. 8 - Average Percent of Residents Prescribed to Receive Any Antipsychotics



Overall, 68.8% of residents had their medications discontinued or reduced (1001 of 1457). This includes:

- 37.2% of residents had their antipsychotic medications discontinued (542 of 1457)

The measurement strategy of CLeAR Wave 2 divided residents into two cohorts, for more detailed analysis. Within each CLeAR Wave 2 cohort, the following results were achieved: [17]

Original Cohort—Residents admitted prior to September 30th, 2015 (n=2705)
Of the original cohort, 33.1% of residents were on antipsychotics in September 2015 (895 of 2705). By the end of the initiative, 18.6% of those same residents were on antipsychotics (502 of 2705).

Of the original cohort's residents who were being prescribed antipsychotics, 79.2% had their medications reduced or discontinued over the course of the initiative (709 of 895). This includes:

- 43.9% of residents had their antipsychotic medications discontinued (393 of 895)
- 35.3% of residents had their antipsychotic medications reduced (316 of 895)

Additional Cohort—Residents admitted to participating homes after September 30th, 2015 (n=1198)
Of the additional cohort, 47.0% of residents on admission to a participating CLeAR care home were on antipsychotics (562 of 1198). By the end of the initiative, 34.5% of those same residents were on antipsychotics (413 of 1198).

Of the additional cohort's residents who were being prescribed antipsychotics, 52.0% had their medications reduced or discontinued over the course of the initiative (292 of 562). This includes:

points above the mean, 9 consecutive points decreasing, and one point below the lower control limit. These control chart rules indicate a statistically significant reduction and improved results.

[17] The rationale for reporting the original cohort separately is to enable a fixed population cohort analysis. This approach reduces the variable impact of time on the outcomes of the initiative, since all members of a fixed population cohort have been study participants for the same amount of time (15 months), whereas additional cohort participants were involved between 1-14 months.

- 26.5% of residents had their antipsychotic medications discontinued (149 of 562)
- 25.4% of residents had their antipsychotic medications reduced (143 of 562)

The percentage of scheduled antipsychotic use decreased from 26.5% to 24.1% (2.4 percentage point decrease), while the percentage of PRN antipsychotic use decreased from 17.1% to 14.6% (2.5 percentage point decrease).[18]

Drivers of Change

Four objectives were identified as the primary "drivers" of the overall CLeAR goal:

1. Promote appropriate antipsychotic use in residential care;
2. Increase use of best practice management for residents with BPSD;
3. Improve culture by enhancing teamwork and communication in workplace and workflow; and
4. Increase resident care planning for quality of life and safety.

Action & Improvement Teams within each care home prioritized and worked towards at least one of these improvement areas (See Table 6).

Table 6: Number of homes that focused on each driver (homes could choose more than one driver)

Driver	# of Homes (n=39)
To promote appropriate antipsychotic use in residential care	36
To increase use of best practice management for residents with BPSD	24
To improve culture by enhancing teamwork and communication in workplace and workflow	16
To increase resident care planning for quality of life and safety	23

Driver 1: Promoted appropriate antipsychotic use in residential care

CLeAR focused on improving care for people with dementia and BPSD in residential care through person-centred care planning and non-pharmacological approaches. This approach is supported by the Canadian Choosing Wisely statement: [19]

"People with dementia often exhibit challenging behavioural symptoms such as aggression and psychosis. In such instances, antipsychotic medicines may be necessary, but should be prescribed cautiously as they provide limited benefit and can cause serious harm, including premature death. Use of these drugs should be limited in dementia to cases where non-pharmacologic measures have failed, and where the symptoms either cause significant suffering, distress, and/or pose an imminent threat to the patient or others. A thorough assessment that includes identifying and addressing causes of behaviour change can make use of these medications unnecessary. Epidemiologic studies suggest that typical (i.e. first generation) antipsychotics (i.e. haloperidol) are associated with at least the same risk of adverse events. This recommendation does not apply to the treatment of delirium or major mental illnesses such as mood disorders or schizophrenia."

[18] Pro re nata (PRN) - A Latin term that means "as required"
[19] Reference: http://www.choosingwiselycanada.org/recommendations/psychiatry/

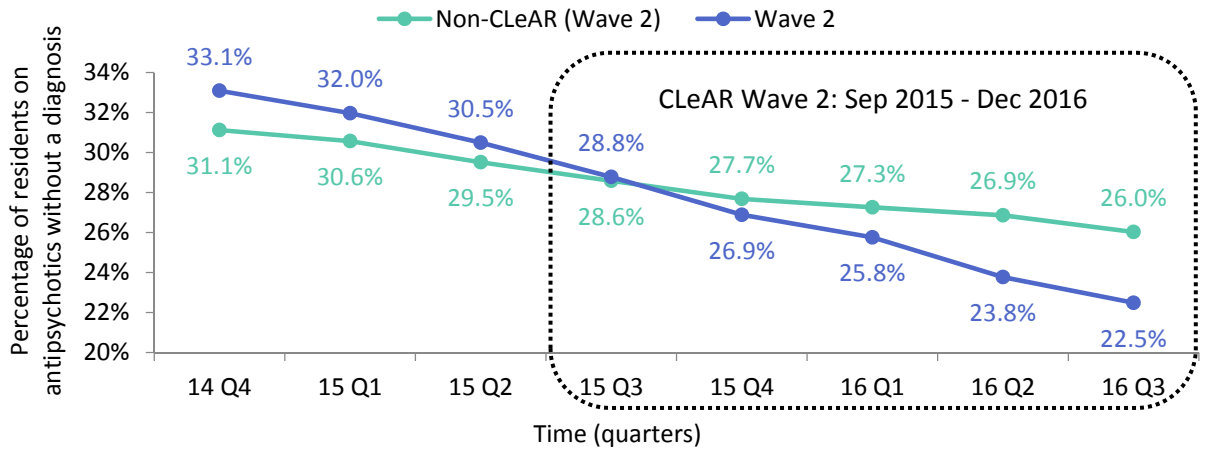
CIHI reports inappropriate use of antipsychotics as use when there is not a diagnosis of a psychotic disorder, based upon diagnoses listed in the Inter-RAI for residential care tool. In 2016, CIHI reported that the rate of inappropriate antipsychotic use in BC was 28.0% for residents living in residential care. At the beginning of CLeAR Wave 2, 28.8% of residents in participating care homes were identified to be prescribed an antipsychotic without a diagnosis of psychosis.[20] By the end of CLeAR, 22.5% were included in this category.[21] Moreover, qualitative analysis revealed that care providers have a better understanding of when to use antipsychotics, as well as the limitations of the medications.

> *"[CLeAR] has increased the awareness of everything around antipsychotics. From the number we are using, why they are used, and what could be used instead"*
> – Clinical Faculty member

Through analyses of CIHI Inter-RAI data, CLeAR Wave 2 care homes showed an effect on the percentage of residents on antipsychotics without a diagnosis of psychosis. The figure below illustrates that both CLeAR and non-participating care homes decreased the percentage of residents on antipsychotics without a diagnosis of psychosis over the course of the initiative (Fig. 9). In Wave 2, the CLeAR group decreased this percentage from 28.8% to 22.5% (6.3 percentage point difference) compared to the non-CLeAR group which decreased from 28.6% to 26.0% (2.6 percentage point decrease). Stated another way, this means there was a 21.9% reduction in the CLeAR group compared to a 9.1% reduction in the non-CLeAR group. Using percentage change to report reduction offers an interpretation that takes into account the original baseline percentages in each group. The reduction was therefore greater in the CLeAR group of care homes.

Looking at the last data point on record (Q3 2016), there is a statistically significant difference of 3.5 percentage points between participating and non-participating homes (n=264; t=2.02; p<0.05).[22] This test is appropriate for a number of reasons. For one, tests show the percentages of residents on antipsychotic medication without a diagnosis of psychosis were approximately equal between participating and non-participating homes *before* the CLeAR initiative began (28.8% and 28.6%). This would suggest that any differences found after the implementation of the program were likely a result of the CLeAR initiative. Second, this difference was observed despite the time lag associated (approximately 3 months) with discontinuing a resident's medication due to the slow tapering of dosage.

Fig. 9 - Percent of Residents on Antipsychotics Without a Diagnosis of Psychosis in CLeAR Wave 2 and Non-CLeAR Wave 2 Homes from September 2015 to December 2016



Furthermore, appropriate antipsychotic use includes not only discontinuing medication, but also decreasing the dose of antipsychotics. Decreasing the dose of antipsychotics can help reduce the negative side effects of antipsychotic medications, while providing benefits to residents and their care givers. During CLeAR Wave 2, 459 residents who were on antipsychotics (31.5%) had their dose decreased. A key theme revealed in interview responses indicated that slowly decreasing the amount of antipsychotics, or titrating a resident's dose, was the most appropriate path to discontinuing medications. See case example 1 (below) which describes the impact of discontinuing medication for a resident as a result of the CLeAR initiative. Case examples in this report are stories of significant change provided to the evaluation team during interviews with key stakeholders (names of residents have been changed).

Case Example 1 - "*He wasn't the same person*"

When Frank came to the care home from the hospital he was over medicated and had behaviour issues. Providers soon realized they had no reason for him to continue medication, but were scared to stop because they didn't know if there was a reason. It took about a month of talking with him and getting him stable to decrease his medication, and he noticeably perked up and became lucid. It was the antipsychotics that were clouding his judgement, making him foggy and out of it. After six months, Frank wasn't the same person who entered the care home. This Frank did not need to be in long-term care, so he was able to go home completely off antipsychotics and live with his wife, which was their ultimate goal of care. They were so thankful! A few weeks later, while his wife was at work, Frank came back to deliver donuts to the care home. He was cracking jokes and doing very well.

Driver 2: Increased best practice management for residents with BPSD

To support the decrease in antipsychotic medications, CLeAR teams also focused on improving non-pharmacological approaches to address the needs of the residents with BPSD as expressed by their behaviours. As residents were taken off antipsychotics, there were increased opportunities to explore non-pharmacological approaches, such as recreation therapy (See Case Example 2). An Action & Improvement Team lead commented "*It's more enjoyable to work with residents when they are alert and active [off medications], they are human beings with wants and feelings, removing drugs humanizes them*." Through the change ideas provided by CLeAR, as well as additional education programs (such as P.I.E.C.E.S., Gentle Persuasive Approach, and others), care home staff reported increased use of best practice management for residents with BPSD (Action & Improvement Team survey, n=51, Fig. 10).

Case Example 2 - "*Getting started with colouring*"

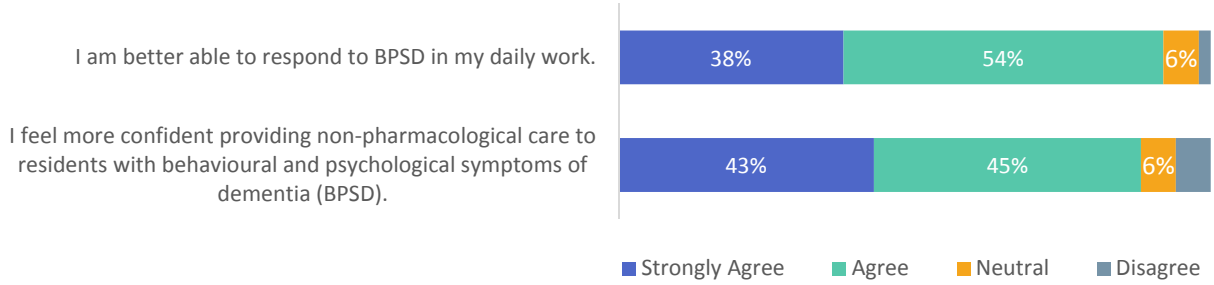
For Susan, the simple activity of colouring turned out to be more than just something to do. Susan had not used her right hand since a stroke and didn't think she ever would again. When they took her off antipsychotics, she needed something to occupy her time, so the recreation staff patiently held her hand and guided her colouring until she could do it on her own. From working on the colouring, Susan increased the strength in her hand, until she could fully use it again. She even began to feed herself, which hadn't happened since the stroke and while on medications. Seeing progress like Susan's has changed staff attitudes about recreation therapy and alternative approaches to care.

Two key themes related to best practice management emerged from the qualitative analysis:

- Increased inquiry into behaviours and symptoms; and
- Increased use of recreation therapy approaches.

Evidence of **increased inquiry** in care staff was noted as a significant change by at least half of the Improvement team leads. Specifically, this included questioning "why" a behaviour was occurring, looking for the root cause of a behaviour, and trying alternative approaches (such as pain medication or music) before requesting antipsychotics. Tools that supported teams to investigate behaviours included the P.I.E.C.E.S. questions as well as the Dementia Observation Scale (DOS).

Fig. 10 - Increased Knowledge regarding BPSD



Increased use of **recreation therapy** was also noted by team leads as a significant change. As one team lead summarized, "We changed our lens to look at the recreation programs. It's a big component when you take them off medication, they want something to do." Examples of changes included increased use of music, snoezelen rooms (special rooms designed to provide calming sensory stimulation), and self-directed activities (such as folding laundry or colouring, see Case Example 2).

Barriers to providing best practices in non-pharmacological approaches were also identified by interviewees. These included lack of staff time and/or lack of funding to hire more staff (such as a recreation therapist) and purchase equipment (such as iPods or other supplies).

Case Example 3 - "*The power of inquiry and creative solutions*"

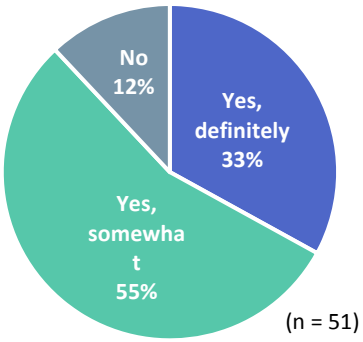
Why is Betty pacing? Betty is a resident always on the move, walking and walking around the care home, interrupting other residents. The staff wondered if this responsive behaviour was perhaps caused by pain, and found some comfortable shoes for her feet. Almost immediately, her disruptive behaviours decreased. Betty improved so much over the next few days that before giving her a dose of antipsychotics, they made sure she was wearing shoes. Often, with shoes on they could avoid using the PRN ('as required' medication). Betty still enjoys walking, but now she'll sit down for a chat and a bite to eat before she's on the move again.

Is there another way to manage these behaviours? Alice is a resident who comes to the nurses and asks frequently if the train is coming. This illogical question frustrated the staff, until they came up with a creative answer. The nurses made a note saying, "With great apologies, the train company informs you that the train isn't coming due to weather," so when she is being repetitive they can show her the note and this settles her down. Because of the creative change strategies shared by CLeAR, staff have been thinking more about creative ways to manage behaviours without medication.

Driver 3: Improved culture by enhancing teamwork and communication in workplace and workflow

When asked to comment on culture change within care homes, over half of interviewees noted that culture change is a slow process, and that it requires effort to ensure changes are maintained. In the Improvement Team Survey, 88% respondents (45 of 51) reported that there was a change in their care home's culture during the CLeAR initiative (Fig. 11). Some examples of change included:

Fig. 11 - Changes in Culture?



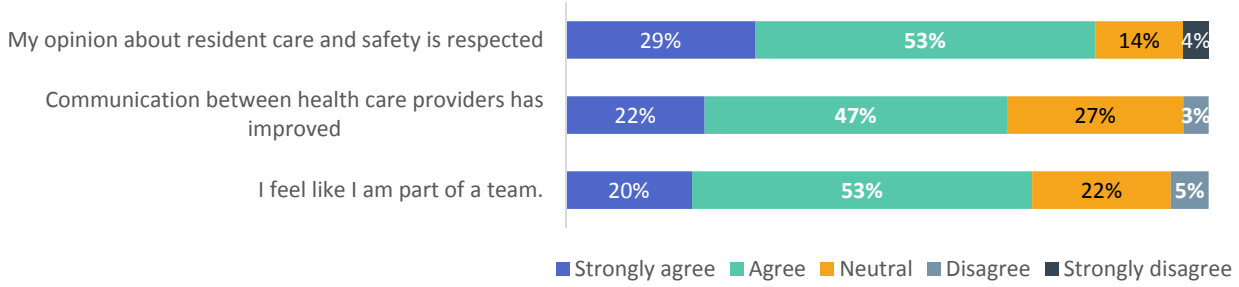
- Increased awareness of staff of BPSD, and best practices in caring for residents with BPSD.
- Supported the shift towards person-centred care.
- Willingness to question the use of antipsychotic medications, and speak with physicians about reducing medications, and seek alternatives.
- Better team work and communication between

team members.

- Greater understanding of quality improvement processes, including seeing the value in using data to inform work.

In regards to teamwork and communication, 73% of Implementation Team survey respondents (37 of 51) indicated that they feel like part of a team, and 69% (35 of 51) indicated that communication between health care providers has improved during CLeAR (Fig. 12). Interviewees confirmed that CLeAR supported collaborative team development, by involving an interdisciplinary approach. Management staff noticed that care staff are more confident participating in discussions regarding medication use with physicians and pharmacists.

Fig. 12 - Increased Teamwork and Communication



Examples of Culture Change:

"Our staff are now more aware of the appropriate use of antipsychotic medications that they are now starting a Dementia Observation Scale (DOS) prior to referral from a GP." – Nurse Educator

"Our care staff are more aware of a common goal to decrease antipsychotic medications by implementing other non-pharmacological strategies – It has given our staff a sense of 'team'." – Nurse Educator

"We are less focused on the resistance, but on WHY [the resident] is resistant" – Team Lead

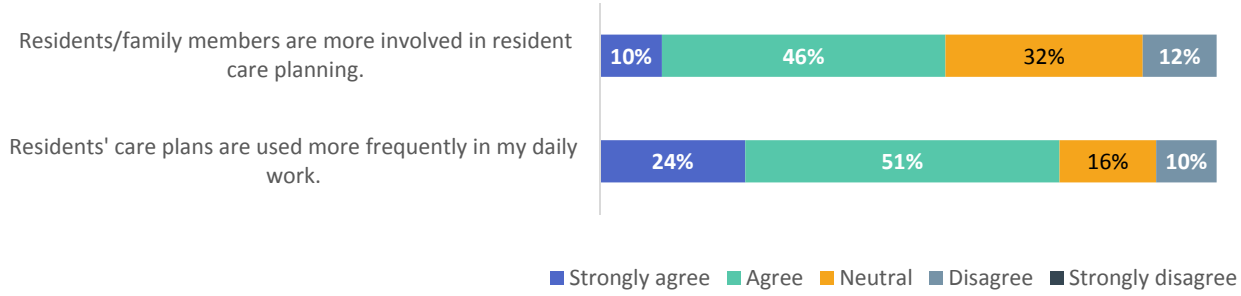
Driver 4: Increased resident care planning for quality of life and safety

Key stakeholders identified that a significant change resulting from CLeAR has been an increased awareness and consideration of resident's personal history and background when developing care plans. As one team lead confirmed, "*CLeAR taught us to look at the resident story, individualize their care plan, and look at significant events from their past.*" In addition, 56% (28 of 50) of survey respondents indicated that residents and family members are now more involved in care planning (Fig. 13).

Case Example 4 – Considering the Past

Care home staff had been struggling with Moira, who would often load up her walker with food from the dining area and take it back to her room. The food she hoarded was turning mouldy, and the staff were frustrated with this behaviour. After all, there was always plenty of food available in the dining area. During her next care planning meeting, it was identified that Moira had survived a war in her home country as a child. Hoarding the food was likely a reflex from living in scarcity. Care staff now provide Moira with non-perishable items to keep in her room, which has reduced tension and improved the relationship between Moira and the staff.

Fig. 13 - Changes in Workflow



Are these changes correlated with improvements in quality of life for residents?

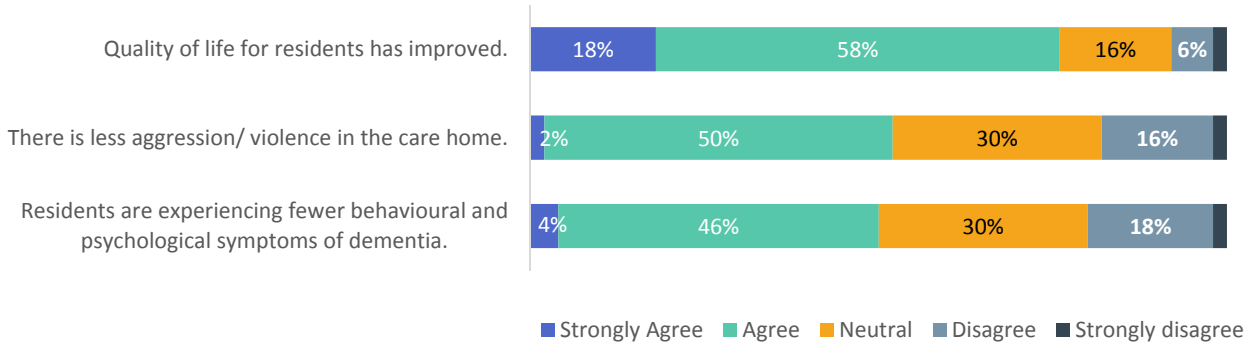
Seventy-six percent of respondents (38 of 50) agreed or strongly agreed that the quality of life for residents had improved (Fig. 14). Improvements in quality of life included residents being more active, engaged and interested in activities, as well as being more social, alert and coherent. Others noted that there was a decreased risk of falls, and residents had regained skills and abilities, such as walking and being able to feed themselves. These improvements enable residents to be more independent, have more daily enjoyment, and communicate with their family and friends.

Changes in Residents Noticed by Staff:

"Some residents are brighter, mobilizing more, more interested in activities, less lethargic, and more social"

"Families remarked on how much more alert their family member is."

Fig 14. - Quality of Life in Residential Care Homes



In addition, 52% (26 of 50) of survey respondents indicated that they were noticing less violence and aggression in their care home, and that residents were displaying fewer behavioural and psychological

symptoms of dementia (Fig. 14).

To further assess impact on quality of life, the evaluation analysed CIHI data collected through the Inter-RAI 2.0 within care homes. The analysis found that CLeAR Wave 2 care homes did not show statistically significant changes over time or in comparison to non-participating homes for these indicators.[23] It is possible that marginal trends were not detected due to limitations in the CIHI data and their subsequent analyses (as discussed in the Constraints and Limitations section). Similar initiatives, however, have documented results that changes in antipsychotic rates do have an impact on residents' functions, behaviours, and, ultimately, their quality of life. In order to assess impact of CLeAR on quality of life indicators in subsequent waves of the initiative, it would be necessary to collect data that is specific to the residents who are participating in CLeAR.

Impact of BC Patient Safety & Quality Council Involvement

The Council offered the following supports and resources to participating teams:

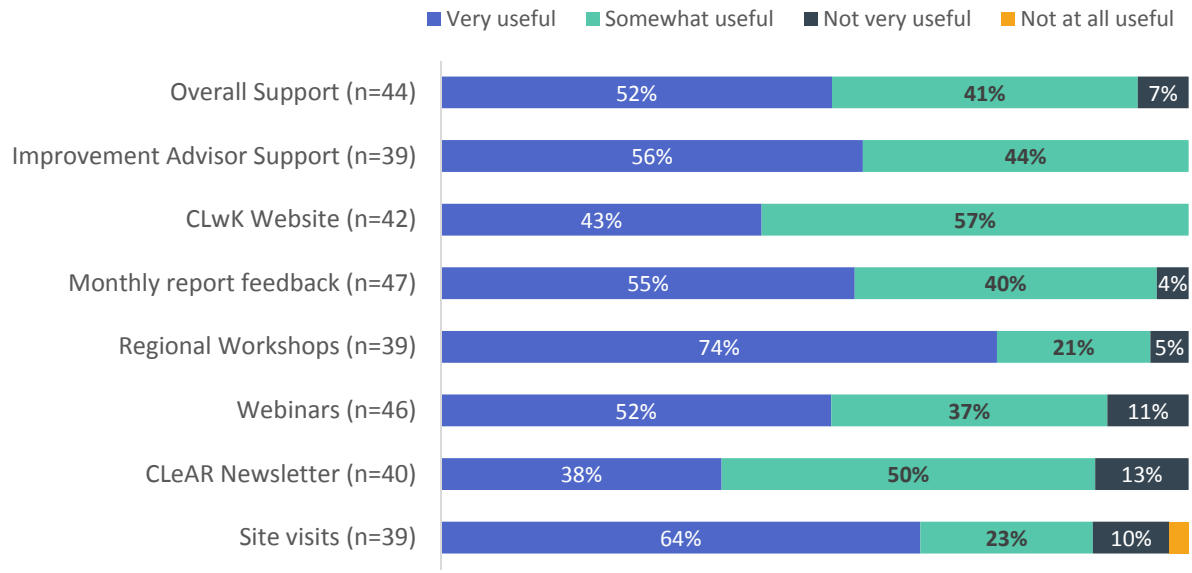
- Support from an Improvement Advisor, which included customized coaching (via phone or email), monthly reporting feedback, and site visits;
- Kick-off meeting at the start of the initiative, and regional workshops held in five geographical locations throughout the province once during the initiative;
- Support to understand and complete data collection tools;
- Ongoing clinical and quality improvement education via webinars;
- Learning portal/community of practice website (Connecting Learners with Knowledge – CLwK.ca) and newsletter.

Seventy-nine percent of Action & Improvement Team members who responded to the survey (41 of 52) reported that the support they received from the Council was somewhat or very useful. Figure 15 outlines the specific supports provided to the participating homes, and their corresponding value to respondents.

[23] See Appendix E for details of quality indicators

Fig. 15 - Value of Council Supports

Based on survey respondents who had accessed the support



To further explore the value that the Council brought to the initiative, qualitative analysis of interviews with team leads revealed that teams valued learning about how to approach quality improvement, including having support to collect and understand data. Additionally, team leads valued the accountability that participating in CLeAR fostered, as well as the opportunity to participate in a provincial initiative.

Building Capacity for Quality Improvement

> *"It was really effective for us to have the BCPSQC support in this initiative. It got us acquainted with what quality improvement is, what some of the tools are. Plus, it was nice to have a central body helping to coordinate and be a resource to get things going."* – Team Lead
>
> *"I really appreciated CLeAR bringing the language of quality improvement"* – Clinical Faculty member

The most common impact of having support from the Council during the implementation of CLeAR within the participating care homes was the opportunity to learn about and apply quality improvement techniques. Specifically, CLeAR provided an avenue for care home staff to learn the language of quality improvement, as well as specific tools they can apply (such as PDSA cycles). Several interviewees shared examples of how they have used the quality improvement skills in other aspects of their work. One care home improved their use of the Dementia Observation Scale, and they were able to get increased funding for one-on-one support for residents from their health authority. Another home went through accreditation for the first time, and noted that the quality improvement skills that they learned during CLeAR supported their ability to complete the accreditation process.

In particular, team leads appreciated the support available to understand and complete the data collection tool. Care homes that participated in both waves of CLeAR noted that there was additional support available in this wave to learn how to use the data collection template, which helped them

understand how to best use the tool. Having built-in run chart features also enabled team leads to share their progress with other key stakeholders at their homes, such as senior managers, directors of care, and care home boards. Team leads indicated that these visual tools were powerful for sharing results and communicating about the initiative with these stakeholders, who will ultimately be making decisions pertaining to the spread and ongoing support of the initiative.

Accountability

Interviewees also noted that the Council made care homes more accountable for their antipsychotic use, which was perceived as a strength of the initiative. By reporting monthly on outcomes, care homes increased their focus on the use of medications, and were motivated to make changes. A challenge identified by team leads for sustainability was that, once CLeAR ends, there will no longer be required reporting, which may decrease teams' focus on antipsychotics amidst the myriad of other priorities within a busy care home.

Provincial Collaborative Initiative

Lastly, interviewees and survey respondents identified that there was value in participating in a provincial, centrally led initiative. Moreover, the Council provided a collaborative structure for the initiative. Team leads shared that they noticed a sense of pride in their staff at being involved in a BC Patient Safety & Quality Council initiative, with one lead specifying, *"It makes the team feel important, that they are part of something bigger. It's good for staff morale and they are proud to be part of a BCPSQC project*." Another team lead shared that they received positive feedback from family members and caregivers of their residents about their participation in CLeAR because of its affiliation as a Council initiative.

Areas of Improvement

Team leads also provided insight into how the support from the Council could be improved:

- Increased time spent with teams. Survey results indicate that site visits were not the most valued support offered by the Council; however, interviewees indicated that additional one-on-one support and input from the Improvement Advisor would be valuable.
- Increased communication during Improvement Advisor transitions between the Council and affected teams. It was noted by team leads who experienced staffing transitions within the Council that communication during these periods could have been stronger.
- Strengthening the community of practice. Interviewees suggested improving the accessibility of collaborative platforms for sharing successes and challenges between/amongst teams. 80% of final survey respondents reported that they had accessed the CLwK online platform during the initiative, and all of these respondents indicated that it was somewhat or very useful.

Sustainability

Sustainability in Wave 2 Teams

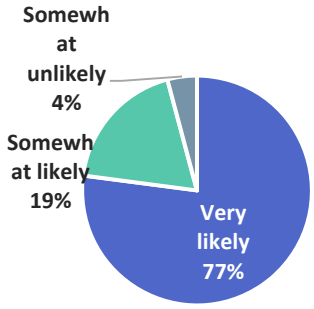
46 of 48 Action & Improvement Team survey respondents (**96%**) indicated that the processes and outcomes of the CLeAR initiative would likely be sustained in their care homes (Fig. 16).

Furthermore:

- **94%** (46 of 49) indicated that they would like to see their home continue CLeAR work
- **95%** (37 of 39) indicated they would like to see the initiative spread to other areas of their care home[24]
- **98%** (48 of 49) indicated that they think CLeAR should be spread to other care homes

Fig. 16 - Sustainability

"Moving forward, how likely is it that you will be able to continue working on reducing use of antipsychotics for residents with BPSD?"



(n = 48)

Barriers to Sustainability

Barriers identified by survey respondents that would impede them from continuing the CLeAR work in the future included:

- Lack of senior management support and leadership.
- Lack of time: *"Without the monthly commitment to monitoring our progress and submitting our data, I am concerned that other priorities will get in the way of this work."* – Action & Improvement Team lead.
- Care home staff transitions.
- Staff and recreation time/resources to provide engaging activities for residents.
- New residents coming from acute care on high doses of antipsychotics.

Support Needed to Sustain—*From Wave 2 Action & Improvement Teams*

- Ongoing education, especially during staff turnover/transitions
- Team meetings to promote communication
- Being able to attend webinars/have short in-services

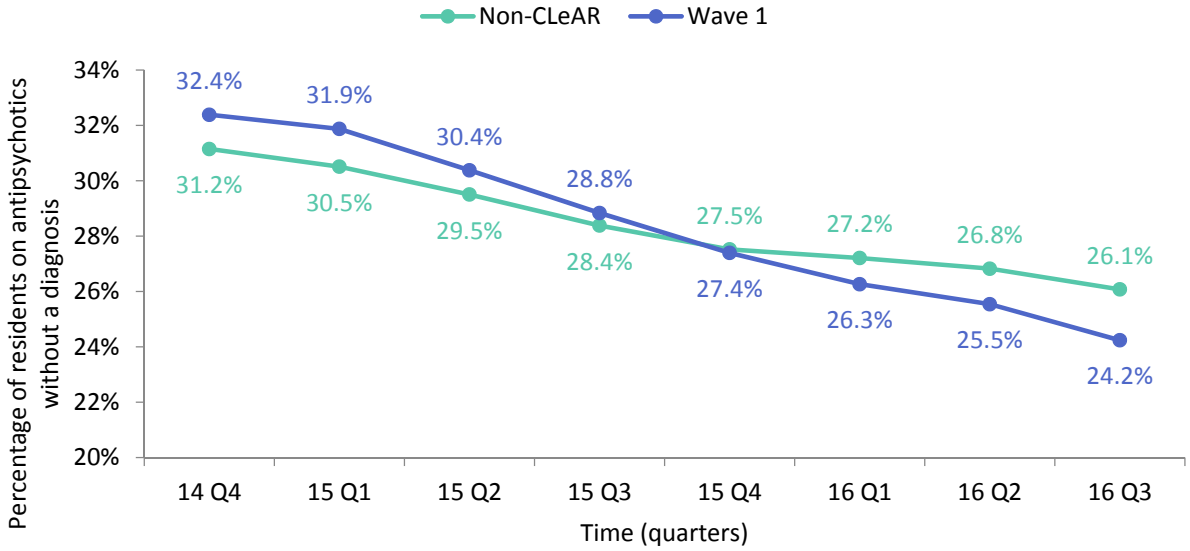
Sustainability in Wave 1 Teams

As reported in the CLeAR Wave 1 Evaluation Report (2015), CLeAR Wave 1 care homes achieved a steady decline in antipsychotic use (from 38% in October 2013 to 32% in December 2014) and improved the quality of life for residents. To measure changes after the end of the Wave 1 initiative, CIHI data were analysed to assess whether the decreased percentage of residents on antipsychotics without a diagnosis of psychosis was maintained post-initiative. From this analysis, the findings indicated that the CLeAR Wave 1 group has continued to decrease the inappropriate use of antipsychotics over time, following a

[24] n=9 respondents were excluded from this question because their entire care home participated in CLeAR.

similar trend to the provincial average of non-CLeAR care homes (Fig. 17).[25] While the Wave 1 group's rate decreased at a marginally higher rate than the non-CLeAR care homes, the difference in rates was not statistically significant.

Fig. 17 - Percent of Residents on Antipsychotics Without a Diagnosis of Psychosis in CLeAR Wave 1 and Non-CLeAR Homes from January 2015 to December 2016



*Note: CLeAR Wave 2 homes were excluded from the non-CLeAR group for 2015 Q3 to 2016 Q3.

To further explore the sustainability of CLeAR, team leads from Wave 1 (who did not participate in Wave 2) were invited to participate in an interview. Six team leads volunteered to be interviewed.[26] Five of the six interviewees indicated that reduced antipsychotics have remained a priority within their homes since CLeAR ended 2 years ago. The remaining home noted that they had undergone significant organizational changes and that reducing antipsychotics was not a priority during this turnover.

Wave 1 interviewees shared how they were able to sustain the changes gained during CLeAR:

Integrating the changes into a regular process

The most commonly asserted technique to ensure sustainability was to ingrain the changes into the regular operations and processes of the care home. As a Wave 1 lead emphasized "*It [CLeAR] is no longer part of a project, it is part of a process. Quality improvement is only sustainable when it becomes part of the everyday*." Wave 1 teams noted that CLeAR helped them develop processes to look for antipsychotic use and diagnosis at admission, and to have a reduction plan in place.

[25] See Appendix E for analysis details
[26] Response rate of 18% (n=34)

"Keeping it on the radar"

Another key to sustainability for Wave 1 teams has been continuing to promote and discuss the importance of reducing antipsychotics, as well as continuing to track the use of antipsychotics in the home. One way homes have kept CLeAR "on the radar" is to post the rates of antipsychotic use for their families and residents to see. This has created a sense of accountability, which team leads indicated is important to maintain momentum.

Focus on Prevention

Lastly, Wave 1 teams noted that preventing residents from needing or receiving antipsychotics has been a path to success. As one lead articulated, "*our numbers have stayed down because we try hard not to put them on antipsychotics*". Prevention includes involving all team members in scrutinizing the reasons for requesting an antipsychotic, to ensure it is truly needed, as well as relying on alternative approaches such as recreation therapy to minimize responsive behaviours.

Interviewees noted that the ability to prevent medication use is challenged by new residents arriving on antipsychotics, as well as residents returning from acute care on antipsychotics.

Lessons Learned – Factors that Contributed to Success

What factors contributed to the success of the initiative?

The evaluation considered enablers to success across the three levels of implementation: site level, initiative level, and system level.

Site Level

At the care home level, several findings were consistently reported by Action & Improvement Team leads and team members, as well as Improvement Advisors.

Start Small

Over half of the team leads (6 of 11) who were interviewed reported that they were able to achieve success within the initiative by starting small. This included identifying a few residents at a time to target and work with to reduce their antipsychotic medications. One lead specified that they worked on reducing medications for two residents at a time. This allowed the team to focus, and not feel overwhelmed by the changes.

Two additional team leads mentioned in interviews that, in hindsight, they would have started with fewer residents, or focused on just one unit within their care home. This may be valuable advice for other care homes who are working to reduce antipsychotic use.

Set up a Process

Another common factor that supported care homes to be successful was focusing on and defining the process for providing antipsychotics. Processes commonly included both a chain of command for ordering antipsychotics, as well as a protocol for titrating and reducing use of antipsychotics for

residents who did not have psychosis. As one team lead explained, "*So that we don't fall into the trap of thinking behaviour needs to be medicated, all referrals for antipsychotics now go through a team, and our philosophy is 'less is best'"*. Examples of process improvements included: flagging residents on admission who are on antipsychotics; increasing use of behaviour monitoring tools and sharing findings with physicians and family members prior to prescribing; and, if medications are required, starting on the lowest possible dose.

Engage a Multidisciplinary Team

Homes that prioritized engaging multidisciplinary teams reported that the initiative was more likely to be successful and sustainable. Well-rounded teams included care home managers, care aides, nursing staff, medical directors, recreation therapists, physiotherapists, and occupational therapists, family physicians, geriatricians and pharmacists, as well as family members/caregivers and residents themselves.

Align with Complementary Approaches

Several care homes indicated that CLeAR reinforced complementary non-pharmacological approaches to care within their homes, such as the Eden Alternative, Montessori approach, or no-restraint policies. The culture of these care homes that have employed these approaches were aligned with the CLeAR objectives, and therefore mutually reinforced one another. In addition, the CLeAR initiative encouraged recreation therapy, which benefits all residents, not only those with BPSD.

Initiative Level

Initiative level factors that contributed to the success of CLeAR included the following:

Clearly Articulated Objectives

"*The driver diagram helped care homes broaden their perspective, and see the work they were doing. And groups could focus on what was meaningful to them"* – Clinical Faculty member

Several stakeholders commented that the Driver Diagram enabled a clear understanding of the overall objective of CLeAR, while providing guidance on how each care home could make small changes to contribute to the collective whole. The Driver Diagram provided evidence-based changes that could be tested and implemented to support improved care. Having flexibility to focus on the most relevant aspects to each care home made CLeAR meaningful at each care home, while maintaining a degree of consistency amongst care homes.

Use of a Collaborative Approach

A strength of the initiative was providing individuals in similar settings chances to share learnings, expressed by one Improvement Advisor as an opportunity to "*explore ways to tackle the same challenge, how has someone else overcome something in ways [they] haven't thought of*." The collaborative approach was promoted through the kick-off meeting, regional workshops, and webinars. In each of these settings, teams were encouraged to share their successes and challenges, and learn from one another.

The strength of the collaborative approach also extended to how the Council approached the

development of the initiative, seeking input and building on what was learned in the first wave of CLeAR.

Voluntary Participation

Overall, the voluntary nature of CLeAR was found to be a strength of the initiative by those who were involved. It allowed teams to opt-in to participate, which signified their interest and willingness to make changes in this area. Being a voluntary program was perceived by two team leads to have allowed homes to take more ownership of the changes, and is expected to facilitate sustainability due to internal accountability. However, it was noted that not all team members volunteered to be part of the initiative—in some cases, a manager or director made the decision to enroll in CLeAR, and frontline staff may not have felt that it was voluntary.

System Level

At a systems level, several contextual factors were identified that have enabled CLeAR to make progress:

Provincial Focus on Older Adults

Focus on the needs of, and gaps in care for, older adults has increased in the province in the past few years, with seniors' care now identified as one of five BC Ministry of Health priority areas.[27] The Ministry of Health is committed to continued improvement to dementia care in BC. CLeAR, which focused on older adults and, in particular, the quality of life of individuals with BPSD, was therefore a timely and relevant initiative. In addition, a provincial Seniors Advocate has been appointed to provide oversight to seniors' health and well-being issues provincially.

Increased Awareness of Polypharmacy and Antipsychotic Use

Along with a heightened focus on seniors in general, there has been a concurrent recognition of the risks of polypharmacy and potentially inappropriate antipsychotic use among older adults. British Columbia, in particular, ranks highly for the use of antipsychotics without a diagnosis of psychosis, and the Office of the Seniors Advocate (OSA) has been promoting improvements in this area. Of note, a November 2016 report from the OSA highlights that BC continues to have comparatively high rates of antipsychotic use without a diagnosis of psychosis, and that antipsychotic prescription within the first seven days of admission is a concern.[28]

CLeAR also operated alongside educational opportunities within the province that support dementia care, such as the provincially-available P.I.E.C.E.S., as well as other training programs including Dementiability and the Gentle Persuasive Approach, among others.[29] Furthermore, the CLeAR initiative is operating alongside other provincial initiatives, such as Polypharmacy Risk Reduction and the Residential Care Initiative, which also promote awareness of the potentially harmful use of medications in general. A strength of the CLeAR initiative has been aligning with these other projects and education programs to provide a cohesive message about the importance of appropriate medication use and alternative approaches to BPSD.

[27] Reference: http://www2.gov.bc.ca/gov/content/health/about-bc-s-health-care-system/health-priorities

[28] Office of the Seniors Advocate, "Making Progress: Placement, drugs and therapy update", November 2016, https://www.seniorsadvocatebc.ca/app/uploads/sites/4/2016/11/PDT-Update-Report-Final-November-2016.pdf

[29] While P.I.E.C.E.S. is supported provincially, the others are fee-for-service trainings not available throughout the province. See Appendix D for provincial initiatives.

Quality Improvement in Health Care

In addition, the Council is uniquely positioned to promote quality improvement within a system that is increasingly interested in providing high quality care. In particular, interviewees noted that health authorities are becoming more interested in quality improvement approaches, and in being able to use data to make decisions. Members of the Partnership Alliance also shared that language and skills of quality improvement are becoming increasingly more common within their own organizations as well.

These findings indicate that individuals working within the health care system are becoming more ready to learn and apply quality improvement, as it becomes a common and familiar language. The CLeAR initiative benefited from this cultural shift by providing an opportunity to apply a quality improvement approach to a clinical issue within care homes.

Lessons Learned – Challenges and Barriers

What challenges were faced implementing CLeAR?

The evaluation considered challenges across the three levels of implementation: site level, initiative level, and system level.

Site Level

Time Commitment and Resources

The most challenging aspect of CLeAR, as reported by those involved, was having the time to commit to the initiative, in the face of competing priorities and busy schedules. It was sometimes challenging for participating teams to find time to add new activities, such as tracking behaviours, attending webinars, or reporting back to the Council. Teams that reported that time was less of a challenge indicated that they were able to spread out the responsibilities among a variety of team members (rather than relying solely on the team lead to ensure all activities, deliverables and reporting were completed). This further supports the finding that engaging multidisciplinary teams strengthened implementation.

In the Action & Improvement Team survey and subsequent interviews, respondents were also keen to have access to additional resources, such as additional education, promotional materials and funding. One of the ways they would like to use additional funding is to backfill positions so staff could attend education and engagement opportunities.

Data Entry and Reporting Requirements

Teams that participated in both Wave 1 and 2 reported that the data collection tool had become easier to use and that there was additional coaching support available on how to best use the tool. However, Wave 2 teams still indicated that minimizing and simplifying data collection and reporting would be welcomed. Suggestions included utilizing the RAI data that is already collected by care homes, or being able to draw reports from the EMR systems, where available.

Initiative Level

BC Patient Safety Quality Council Staff Changes

Changes within the staff at the Council working on CLeAR was noted as a challenge by all Council staff who were interviewed (n=10). Over the course of Wave 2, teams in Northern BC and the Lower Mainland had three different Improvement Advisors. The impact of these changes appears to have influenced the commitment of these teams in regards to completing the data collection and measurement for the initiative, with fewer care homes from those regions providing complete data back to the Council.

In addition, the initiative experienced a change in leadership near the beginning of implementation. During this leadership transition, the rest of the team kept the initiative moving forward through a strong collaborative effort.

Build in more One-on-One time

Improvement Advisors and team leads both consistently reported that they would have benefited from increased one-on-one time with one another. In some cases, this was not achieved due to busy schedules, where in others it was identified that more availability of in-person one-on-one would have been valuable. Recommendations from Council staff and team leads indicated that developing a plan with each site at the beginning of the initiative that reflects their preferred form of communication (i.e., email, phone, in person), and outlines the time needed to commit to CLeAR would be beneficial.

System Level

While the CLeAR team addressed site level and initiative level challenges as they were identified during implementation, there were additional, system-level challenges and barriers that impacted the work.

Care homes are busy places

The high workload of care homes was a recurring theme throughout the interviews and surveys with care home staff. This commonly cited challenge impacted the ability of care home staff to add new routines to their day, have time to participate in webinars, or complete monthly reports for the Council. However, interviewees generally reported that the initiative was worth the effort, and that the Council respected the competing priorities and demands for their time.

Built Environment

Seventeen of the care homes that participated in CLeAR (39%) opened prior to 1987, which means they were designed and built over 30 years ago.[30] While improving recreation therapy and using P.I.E.C.E.S. can help mitigate some responsive behaviours, others would be prevented through more appropriate environmental factors. One team lead directly stated, “it’s the building that causes the issues.” The layout of older buildings typically doesn’t support wandering, may be noisy, and has limited spaces for different activities.

[30] Residential Care Directory Public Release Spreadsheet 02-03-2017 (Feb 2017)

Communication at Admission

Another system-level challenge that was identified by team leads was lack of communication about antipsychotic use at admission. This included admissions from the community in some cases, but more frequently, a lack of communication with acute care. When asked to elaborate, several team leads clarified that there is not enough information about why the resident is on antipsychotics, what symptoms they were experiencing, when they were started, or whether they have a history of antipsychotic use. Improving this system challenge of poor communication between care sites would enable care home staff to confidently reduce antipsychotic doses and be an overall benefit to continuity of patient care.

Suggestions for Improvement/Recommendations

What recommendations for next steps can be made to further support residents and/or care staff in residential care homes?

Interviewee and focus group participants were encouraged to share ideas for further improvement in residential care, beyond what is currently addressed within CLeAR. The following recommendations reflect their opinions.

1. **Sustaining support for CLeAR Wave 1 and 2 teams.** Team leads interviewed from both Wave 1 and 2 noted that ongoing access to webinars and reminders about the importance of CLeAR would be beneficial. In order to support sustainability, teams were also interested in developing ways to remain accountable for the work, such as having an Improvement Advisor check in on their progress.
2. **Exploring opportunities to improve antipsychotic use in acute care settings**. Throughout the evaluation, it was identified that care homes are routinely faced with residents coming from acute care settings who are already on antipsychotic medications. This occurs for new residents admitted from acute care, as well as when a current resident has an acute care admission, and they return to the home on antipsychotics. Often, there is little communication about the reason a resident was put on antipsychotics, and titrating someone off the medication can be a slow process.
3. **Continuing to promote and/or provide education opportunities** about antipsychotic medication use. Particular stakeholder groups that were singled out for additional education included family members/family councils, family physicians, and acute care staff.
4. **Increasing focus on prevention.** This is aligned with offering additional education to acute care and family physicians, who are typically the ones writing prescriptions for antipsychotics prior to patients being admitted to residential care. Taking a preventative approach outside of the care home can help reduce the number of residents presenting at care homes already on antipsychotics. This would include offering non-pharmacological solutions in acute care and community settings.
5. **Increasing awareness among policymakers about initiatives like CLeAR**. The Partnership Alliance noted that the reports they read often include the problems but not what is happening provincially to change them – "*the issues [problems] are talked about more than the good work that is being done around the province*". In addition, a team lead suggested making reports from the Office of the Seniors Advocate, as well as other relevant reports, more accessible to frontline staff. When asked to elaborate, ideas included shorter reports, such as 1-page fact sheets or short videos. Another team lead felt that it was important to communicate the context of the changes to policy makers,

using patient stories and examples, so that there was more meaning and value compared to seeing just the numbers.

6. **Increasing formal partnerships and collaboration with other initiatives.** At least half of all evaluation participants recommended increased collaboration with the RCI and the Shared Care Polypharmacy Risk Reduction initiatives. In the Clinical Faculty focus group, a participant directly stated, "*there are multiple initiatives, but a lack of connectedness*." Some suggestions for how to best leverage other initiatives included connecting with the RCI initiative to support the engagement and involvement of family physicians to participate in medication management, as well as to identify physician leaders within communities that could champion CLeAR.

Conclusion

CLeAR Wave 2 demonstrates that through concerted efforts and multidisciplinary teamwork, dignity of older adults can be promoted and a reduction in the use of antipsychotics for residents with BPSD can be achieved. In addition, this type of approach can build capacity for quality improvement work, and create sustainable change.

During its operation, the initiative made significant progress towards its stated goals and objectives. Notably, participating care homes reduced antipsychotic use, and also decreased the percentage of residents on antipsychotics without a diagnosis of psychosis more than non-participating homes. Evaluation findings also indicated that the initiative supported homes to improve the application of best practices for BPSD, improved the culture within care homes, and increased use of resident care planning.

The opportunities and recommendations in this evaluation can guide future efforts to support quality improvement in residential care, and further improve quality of life and dignity of older adults.

Acknowledgements

Reichert & Associates would like to recognize those who participated in and supported this evaluation. In particular, we would like to thank the CLeAR Action & Improvement Teams, BC Patient Safety & Quality Council staff, Clinical Faculty members and Partnership Alliance for their participation, guidance and expertise. The CLeAR care homes have strengthened resident care and quality of life through commitment, creativity, and collaboration. Your work has improved care for over 1000 residents!

CLeAR Clinical Faculty

- Angela Nguan, *Physician*
- Anita Wahl, *Clinical Nurse Specialist*
- Ann Marie Leijen, *Director of Care*
- Azmina Khimji, *Recreation Manager*
- Bincy George, *Director of Care*
- Carol Ward, *Geriatric Psychiatrist*
- Dacia Reid, *Educator and Program Practice Manager*
- Elisabeth Drance, *Geriatric Psychiatrist*
- Jasjit Gill, *PIECES Representative and Educator*
- Johanna Trimble, *Patient/Family Representative*
- Marcia Bertschi, *Quality Improvement Advisor*
- Michelle Porter, *Nursing Care Coordinator*
- Paula Diaz, *Pharmacist*

Partnership Alliance Organisations

- Alzheimer's Society of BC
- BC Care Providers
- BC College of Family Physicians
- BC Psychogeriatric Association
- Denominational Health Association
- Division of Geriatric Psychiatry, UBC
- Ministry of Health
- Office of the Seniors Advocate
- Public Guardians & Trustee of BC
- Safe Care BC

Residential Care Homes

Each of these residential care facilities committed to making improvements in CLeAR Wave 2:

- Acropolis Manor
- Bradley Centre (Chilliwack General Hospital)
- Brandt's Creek Mews
- Brookside Lodge
- Buchanan Lodge
- Capilano Care Centre
- Chemainus Health Care Centre
- Christenson Village
- Crescent Gardens
- Dania Home
- Dogwood Lodge
- Dr. Andrew Pavilion (Summerland Health Centre)
- Dufferin Care Center
- Evergreen Baptist Care Home
- Fischer Place / Mill Site Lodge
- Haven House
- Heritage Village
- Hilton Villa
- Jubilee Lodge
- Kin Village
- Lakeview Care Centre
- Langley Memorial Hospital
- McKinney Place (South Okanagan General Hospital)
- Mount Ida Mews
- Mountain Lake Seniors Community
- MSA Manor
- Noric House
- Normanna
- Richmond Lions Manor Bridgeport
- Royal City Manor
- Shorncliffe
- Sunnybank Centre
- SunPointe Village
- The Heights at Mt. View
- The Pines Complex Care Facility
- The Views (St. Joseph's Hospital)
- Totem Lodge
- Village at Mill Creek
- Village at Smith Creek
- Westview Place (Penticton Regional Hospital)

Additional residential care Organizational Partners:

- David Lloyd Jones Home
- Jackman Manor
- Spring Valley Care Centre
- Weatherby Pavilion (Peace Arch Hospital)

Appendix A: Glossary

Throughout the report, the following key terms are referred to:

Action & Improvement Teams

A group of individuals within the organization who are tasked with making changes that result in improvement within their care home, while engaging staff and others along the way. An improvement team usually includes a day-to-day leader, staff involved in the care process, and members with other roles. These teams are often interprofessional and multidisciplinary.

Aim Statement

An aim statement is a written and measurable description of a desired improvement. It targets a specific population and describes the amount of time needed to achieve the aim. The purpose of an aim statement is to provide quality improvement teams with clear, well-defined, yet ambitious goals.

Appropriate Use of Antipsychotics

CLeAR based appropriate use of antipsychotics on the Canadian Choosing Wisely statement (http://www.choosingwiselycanada.org/recommendations/psychiatry/).

Behavioural and Psychological Symptoms of Dementia (BPSD)

Refers to symptoms of disturbed perception, thought content, mood, or behaviour that frequently occur in patients with dementia.

CLeAR

Call for Less Antipsychotics in Residential Care, provincial initiative facilitated by the Council.

Driver Diagram

A powerful tool to translate a high-level improvement goal into a logical set of underpinning drivers and change ideas; a logic model that identifies areas for improvement and potential strategies to address sub-goals.

Non-Pharmacological Approaches

Care should be person-centred and tailored to the individual; it should also be guided by the resident's background, likes and dislikes, culture, linguistic and religious factors, and life experiences, as well as by the skills and resources available at the residential care facility (e.g. providing structure, scheduling events to adjust for a resident's needs, involving relatives in care planning, and shifting agitated residents into activities they like, such as going for a walk or listening to music, to produce a calming effect).

PRN (PRO RE NATA)

A Latin term that means "as required".

Quality Improvement

Systematic, data-guided activities designed to bring about immediate improvement in a health care setting. Dimensions of Quality care are defined in the BC Health Quality Matrix (http://ow.ly/KddZX): effectiveness, appropriateness, accessibility, acceptability, safety, equity, efficiency.

Quality Indicators

QIs are intended to measure the quality of care delivered by continuing care facilities.

PDSA Cycles

Plan-Do-Study-Act, a cycle for learning and improvement based on the scientific method. It is fully described in the book “The Improvement Guide: A Practical Approach to Enhancing Organizational Performances” by Langley et al.

Appendix B: List of Regional Events Hosted in CLeAR Wave 2

Table 7. Regional Events

Session#	Date	Region	Location
1	12-May-2016	Island	Chemainus
2	26-May-2016	Fraser	Surrey
3	30-May-2016	Lower Mainland	Vancouver
4	9-Jun-2016	Interior	Kelowna
5	23-Jun-2016	Northern	Terrace

Appendix C: List of Webinars Hosted in CLeAR Wave 2

Session#	Date	Topic
1	8-Oct-2015	Process Mapping

Table 8. Webinars

2	20-Oct-2015	Tracking and Sharing Progress
3	3-Nov-2015	BPSD algorithm
4	17-Nov-2015	Antipsychotics
5	1-Dec-2015	Family Engagement
6	15-Dec-2015	Practice and Culture Change in Long Term Care
7	28-Jan-2016	Using a Person-centred Approach
8	11-Feb-2016	Measurement Support
9	10-Mar-2016	Pain Assessment
10	24-Mar-2016	Rosewood Update and Round Table
11	7-Apr-2016	Polypharmacy
12	21-Apr-2016	Non-Pharma Approaches
13	2-Jun-2016	CFHI Collaborative
14	14-Jun-2016	PRNs Part 1
15	19-Jul-2016	Quality Improvement Teamwork Approach to AP Use Reduction
16	23-Aug-2016	Open Mic
17	20-Sep-2016	Reducing Antipsychotics from NL
18	1-Nov-2016	Delirium and Antipsychotics in Residential Care
19	8-Nov-2016	Meaningful Med Reviews and Common Drug Interactions
20	22-Nov-2016	PRNs Part 2
21	6-Dec-2016	Studentship Presentations
22	31-Jan-2016	CLeAR Closing Webinar

Appendix D: Other Provincial Initiatives

There is a lot of work happening across the province that aligns with CLeAR. One of the benefits of CLeAR is it creates an opportunity to find more ways to work together across these initiatives. These include:

- **Shared Care Polypharmacy Risk Reduction** – an initiative of the Shared Care Committee. Polypharmacy occurs when the individual theoretical benefit of a medication is outweighed by the collective negative benefit of the number of medications a senior is taking. The initiative aims to improve the quality of life and decrease hospital admissions for the seniors population through de-prescribing unnecessary medications and preventing adverse drug reactions.

- **Medication Reconciliation in Residential Care** – reconciliation of seniors' medications on

admission, discharge, and transfer of care is known to improve seniors' wellness. Health care providers need much education and support to implement medication reconciliation as part of everyday practice.

- **Clinical Care Management: 48/6 in Acute Care** – focuses on screening, assessment, and care planning for 6 care areas in the first 48 hours of an acute hospital stay. The 6 care areas are: functional mobility; cognitive function; bladder and bowel management; nutrition and hydration management; pain management; and medication management.

- **Seniors Action Plan** – response to the Office of the Ombudsperson's report on seniors' care in British Columbia. The plan outlines actions to address many of the ombudsperson's findings and recommendations.

- **Provincial Guide to Dementia Care in British Columbia**– outlines province-wide priorities for improved dementia care through health system and service re-design work currently underway in BC. The plan supports collaborative action by individuals, health professionals, health authorities, and community organizations to achieve quality care and support for people with dementia, from prevention through to end of life.

- **P.I.E.C.E.S. Initiative** – The P.I.E.C.E.S. (Physical, Intellectual, Emotional health; Capabilities, Environment, Social self) initiative is part of the enhancement of dementia care training for residential care providers within British Columbia. This training provides a framework for assessment and supportive care strategies for clients with behavioural and psychological symptoms of dementia.

- **General Practice Services Committee (GPSC) Residential Care Initiative** – aims to ensure that each resident in a residential care home has a dedicated GP MRP (Most Responsible Physician). For this initiative, a dedicated GP MRP is defined as one who delivers care according to five best practice expectations:
    - 24/7 availability and on-site attendance, when required;
    - Proactive visits to residents;
    - **Meaningful medication reviews;**
    - Completed documentation; and
    - **Attendance at case conferences.**

Other educational opportunities that support dementia care (fee-for-service trainings not available throughout the province):

- **Gentle Persuasive Approach:** Strategies and approaches for resident-centred care.

- **Dementiability:** Evidence-based knowledge about how to effectively support and empower those living with dementia, and to provide the day-to-day resources needed by those providing the care. The DementiAbility Methods are a philosophy of care. https://www.dementiability.com/our-mission

Appendix E: CIHI Data Analysis of CLeAR Wave 2

About the data set:

Data was provided by an analyst from the Canadian Institute for Health Information's (CIHI) Continuing Care Reporting System (CCRS). This database contains demographic, clinical, functional, and resource utilization information on individuals receiving continuing care services in hospitals or long-term care homes in Canada. The data in question contains quality indicators (QIs), clinical data, and other demographics. Clinicians use the Inter-RAI's Residential Assessment Instrument Minimum Data Set (RAI-MDS 2.0) to generate QIs, clinical measures, and other reports.

The data set contained measures for 271 care homes in British Columbia for eight quarters from 2014 Q4 to 2016 Q3 (January 2015 to December 2016 inclusive). The CLeAR Wave 2 initiative falls within quarters 2015 Q3 to 2016 Q3 (September 2015 to December 2016) and data were available for 39 of 40 participating homes.

The QI indicators were risk-adjusted to account for factors outside of the care home's control. Doing so took into account the unique characteristics of the population under study (e.g. a care home may have appeared to have had poorer performance only because they had higher-risk residents). The risk-adjusted rates used in this analysis allowed for fair comparison between care homes.[31]

There were several limitations associated with this data set (as discussed in the Constraints and Limitations section).

Results:

The 6 tables below report the hypotheses, statistical tests, and results for the following questions:

Wave 2 Analysis

1. Decrease of falls in the care home? (Table 13)
2. Experienced fewer hospitalizations and/or ER visits? (Table 14)
3. Decrease in the percentage of residents on antipsychotics without a diagnosis of psychosis? (Table 15)
4. Increase in the percentage of residents with improved ADLs, cognitive function, behavioural symptoms, and communications abilities? (Table 16)
5. Is there a change in antipsychotics correlated with an increase in other medications (e.g. antidepressants, antianxiety, hypnotics, analgesics)? (Table 17)

Wave 1 Analysis of Sustainability[32]

1. Have Wave 1 teams maintained any changes that occurred during CLeAR Wave 1 (September 2013 to December 2014)? (Table 18)

The tables below outline the statistical tests that were run on the RAI data set's quality indicators. They show statistically significant decreases over time for one indicator: the percentage of residents on antipsychotics without a diagnosis of psychosis for both CLeAR and non-CLeAR care homes. The rate of

[31] CIHI, 2013

[32] CLeAR Wave 2 homes were excluded from the non-CLeAR group for 2015 Q3 to 2016 Q3.

decrease for this indicator was steeper for CLeAR Wave 2 care homes than non-CLeAR care homes. By the end of the initiative, the difference between these two groups was statistically significant ($p = 0.048$, equal variances not assumed). The analyses show that the participating and non-participating homes were statistically indistinguishable before the initiative starts, but divergent at the end of the initiative, which is evidence that the program had an effect (see figure 9). At the end of CLeAR Wave 2 (Q3 2016), it is observed that the initiative contributed to a 3.5 percentage point difference in the percentage of residents on antipsychotics without a diagnosis of psychosis in CLeAR care homes compared to non-CLeAR care homes.

In addition, the data analysis also showed that the CLeAR Wave 1 care homes have continued to decrease the inappropriate use of antipsychotics (percent of residents on antipsychotics without a diagnosis of psychosis) over time, following a similar trend to the provincial average of non-CLeAR care homes. While the Wave 1 homes have been decreasing at a marginally higher rate than the provincial average, the difference between groups was not found to be statistically significant. All other findings were not statistically significant for CLeAR care homes.

Table 9. Decrease of falls in the care home?

Indicator: Percent of residents who fell in the last 30 days

Context: Falls may indicate presence of adverse drug events or other medication effects.

Hypothesis	Statistical Test	Significance
Fall rates for CLeAR and non-CLeAR homes are different	Independent samples t-test	Not significant
Fall rates are different before and after CLeAR	Paired t-tests comparing 2015 Q3 to 2016 Q3 data	Not significant
Result:	There is no statistically significant difference between the falls rate of CLeAR and non-CLeAR care homes over the course of the initiative.	

Table 10. Experienced fewer hospitalizations and/or ER visits?

Indicators:

(a) Percent of residents with a hospital stay in the last 90 days or since last assessment if less than 90 days
(b) Percent of residents with an emergency room visit in the last 90 days or since last assessment if less than 90 days

Context: When a resident requires medical care that cannot be provided by the care home, they are transferred to a facility to receive appropriate acute care.

Hypothesis	Statistical Test	Significance
Hospital stays/ER visits for CLeAR and non-CLeAR care homes are different	Independent samples t-test	Not significant
Hospital Stays/ER Visits are different before and after CLeAR	Paired t-tests comparing 2015 Q3 to 2016 Q3 data	Not significant

Result:	There is no statistically significant difference in the percent of residents with (a) Hospital Stays or (b) ER Visits for CLeAR and non-CLeAR care homes over the course of the initiative.

Table 11. Decrease in the percentage of residents on antipsychotics without a diagnosis of psychosis?

Indicators: Percent of residents on antipsychotics without a diagnosis of psychosis

Context: The reduction of antipsychotics is the primary goal of CLeAR. It is hypothesized that the CLeAR care homes reduced their antipsychotic rates at a greater pace compared to the non-CLeAR care homes.

Hypothesis	Statistical Test	Significance
Antipsychotic rates for CLeAR and non-CLeAR homes are different	Independent samples t-test	Borderline significant results: 2016 Q3 -3.54% difference between CLeAR and non-CLeAR (**p=0.048** - equal variances not assumed, std. error = 1.8244)
Antipsychotic rates are different before and after CLeAR (for CLeAR and non-CLeAR)	Paired t-tests comparing 2015 Q3 to 2016 Q3 data	Significant results comparing 2015 Q3 to 2016 Q3: CLeAR is 28.8% in 2015 Q3 compared to 22.5% in 2016 Q3 **(p=0.000**, std. error = 1.170**)** Non-CLeAR is 28.6% in 2015 Q3 compared to 26.0% in 2016 Q3 **(p=0.000**, std. error = 0.502**)**

Result:	Both CLeAR and non-CLeAR care homes have observed statistically significant decreases in antipsychotic rates over time. The CLeAR care homes have made progress in reducing their antipsychotic rates in comparison to the non-CLeAR homes. The CLeAR homes decreased the rate by 6.3% (28.8% to 22.5%) and the non-CLeAR homes decreased by 2.6% (28.6% to 26.0%) over the course of the initiative (p=0.000). At the start of the initiative, the two groups had nearly identical percentages of residents on antipsychotics without a diagnosis of psychosis (28.8%; 28.6%). In the last quarter of the initiative, participating CLeAR homes lowered their percentages by approximately 3.5 percentage points more compared to non-CLeAR homes (p=0.048; equal variances not assumed).

Table 12. Increase in the percentage of residents with improved ADLs, cognitive function, behavioural symptoms, and communications abilities?

Indicators:

(a) Percent of residents whose mid-loss ADL functioning (transfer and locomotion) improved or who remained completely independent in mid-loss ADLs
(b) Percent of residents whose early-loss ADL functioning (dressing and personal hygiene) improved or who remained completely independent in early-loss ADLs
(c) Percent of residents whose late-loss ADL functioning (bed mobility, transfer, eating and toilet) improved
(d) Percent of residents whose behavioural symptoms improved
(e) Percent of residents whose cognitive ability improved
(f) Percent of residents whose ability to communicate improved
(g) Percent of residents whose ability to locomote improved

Context: Changes in antipsychotic rates were thought to impact residents' functions, behaviours, and ultimately, their quality of life. It is therefore important to look at the various QIs (quality indicators) to determine how CLeAR has impacted residents on a broader level.

Hypothesis	Statistical Test	Significance
QIs for CLeAR and non-CLeAR care homes are different	Independent samples t-test	Significant result for two indicators in timeframes that preceded the CLeAR Wave 2 initiative timeframe: <u>Mid-loss ADL:</u> 2015 Q2 CLeAR with 35.1% compared to non-CLeAR with 32.1% (**p = 0.050**, std. error = 1.52) 2015 Q3 CLeAR with 35.2% compared to non-CLeAR with 32.2% (**p = 0.046**, std. error = 1.54) <u>Early-loss ADL:</u> 2014 Q4 CLeAR with 25.7% compared to non-CLeAR with 22.0% **(p=0.049**, std. error = 1.837**)**
QIs are different before and after CLeAR (for CLeAR and non-CLeAR)	Paired t-tests comparing 2015 Q3 to 2016 Q3 data	Not significant

Result	There were no statistically significant differences between the two groups within the CLeAR initiative's timeframe. While there were statistically significant differences between the percentages of indicator (a) and (b) of CLeAR and non-CLeAR homes, the differences were in a timeframe that were before the start of the Clear Wave 2 initiative and, as such, were not relevant to the analysis.

Table 13. Is there a change in antipsychotics correlated with an increase in other medications (i.e. antidepressants, hypnotics, analgesics)?

Indicators:

(a) Percent of residents who used antipsychotic medication on 1 or more days in the 7 days before their target resident assessment
(b) Percent of residents who used antianxiety medication on 1 or more days in the 7 days before their target resident assessment
(c) Percent of residents who used antidepressant medication on 1 or more days in the 7 days before their target resident assessment
(d) Percent of residents who used hypnotic medication on 1 or more days in the 7 days before their target resident assessment
(e) Percent of residents who used analgesic medication on 1 or more days in the 7 days before their target resident assessment

Context: Changes in antipsychotic medications may have impacted the use of other medications. It was hypothesized that reducing antipsychotics may be creating a demand for other medications. Changes in the use of medication classes are examined in order to answer this question.

Hypothesis	Statistical Test	Significance
A change in antipsychotics is not correlated with a change in other medications before and after CLeAR.	Linear Pearson correlation (bivariate)	For the non-CLeAR Care Homes: Moderate positive linear correlation between antipsychotics and antidepressants (r=0.363). A change in antipsychotics explains 13.2% of the variation observed seen in the change in antidepressants. Weak positive linear correlation between antipsychotics and analgesics (r=0.286). A change in antipsychotics explains 8.2% of the variation observed seen in the change in analgesics.
Result:	Change in the use of antipsychotics is not correlated with a change in the use of other medications in the CLeAR care homes. In the non-CLeAR group, a moderate positive linear correlation was found between the use of antipsychotics and antidepressants and a weak positive linear correlation between antipsychotics and analgesics. That is, an increase or decrease in antipsychotics use is associated with a respective minimal increase or decrease in antidepressants and analgesics.	

Table 14. Have Wave 1 teams maintained any changes that occurred during CLeAR Wave 1? (Sept 2013-Dec 2014)

Indicators:

Percent of residents on antipsychotics without a diagnosis of psychosis.

Context: The key indicator for assessing sustainability of CLeAR improvement work is the percent of residents on antipsychotics without a diagnosis of psychosis. Similar to the provincial trend and with the Wave 2 group, the Wave 1 group has been decreasing antipsychotics over time. Similar statistical tests were performed on this data. It is posited that the Wave 1 teams should be holding their gains and continuing to decrease antipsychotics.

Hypothesis	Statistical Test	Significance
Antipsychotic rates for Wave 1 and non-CLeAR homes are not different.	Independent samples t-test	Not significant
HA: Antipsychotic rates are different from 2014 Q4 to 2016 Q3 (for Wave 1 and non-CLeAR).	Paired t-tests comparing 2014 Q4 to 2016 Q3 data	Significant results comparing 2014 Q4 to 2016 Q3: CLeAR is 32.4% in 2014 Q4 compared to 24.2% in 2016 Q3 **(p=0.000**, std. error = 1.455**).** Non-CLeAR is 31.2% in 2014 Q4 compared to 26.1% in 2016 Q3 **(p=0.000**, std. error = 0.712**).**
Result:	The Wave 1 group has continued to decrease the inappropriate use of antipsychotics (percent of residents on antipsychotics without a diagnosis of psychosis) over time, which is following a similar trend to the provincial average. While the Wave 1 group has been decreasing at a marginally higher rate than the provincial average, the difference between the two groups was not found to be statistically different.	