Clear Wave 3

Technical Report

CONTENTS

EXECUTIVE SUMMARY

This report outlines the evaluation results of Wave 3 of the BC Patient Safety & Quality Council's (the Council) Clear initiative. The initiative spanned from December 2017 to May 2019.

About Clear

Clear is a long-term care quality improvement initiative intended to address the behavioural and psychological symptoms of dementia (BPSD), with a focus on reducing antipsychotics prescribed and used on people without a diagnosis of psychosis. Clear supports improving the dignity and quality of life for those living in long-term care homes by introducing and supporting person- and family-centred care, as well as promoting best practices for caring for those living with BPSD.

Clear was developed utilizing the Institute for Healthcare Improvement's (IHI) Breakthrough Series Collaborative model[1]. Fifty-four teams from across BC originally signed up to participate in Clear Wave 3 and 33 teams completed the collaborative. The Council supported these 33 teams, with guidance from Faculty and Partnership Alliance committees, to reduce and track the number of antipsychotics being used in participating long-term care homes. The initiative involved regional kick-off events, webinars, team coaching sessions with Improvement Advisors, regional workshops and cycles of reporting from the participating teams. **The aim of Clear Wave 3 was to reduce the rate of antipsychotic use in residents without a diagnosis of psychosis in participating care homes across the province from baseline to the national average (21.6%)[2] by April 30, 2019.**

To achieve this, four primary objectives, adapted from previous waves of Clear, were identified as "drivers" of change:

1. Appropriate antipsychotic use in long-term care;
2. Best practice management for residents with BPSD;
3. Enhance teamwork in the workplace and workflow; and
4. Resident care planning for quality of life and safety.

Methods

This evaluation is based on information collected throughout the initiative from paper and electronic surveys, storyboard posters, notes from coaching calls and discussions with teams, self-reported data, website analytics and comparison of outcomes to information provided by the Canadian Institute of Health Information (CIHI) database.

Findings

Decrease in Overall Antipsychotics Used

Overall, data from Clear Wave 3 indicate significant progress in reducing the use of antipsychotic medications in participating care homes.

A total of 237 of the 1834 residents (17.9%) who had a prescription for antipsychotics had their medications reduced or discontinued during the initiative.

The percentage of residents on antipsychotics without a diagnosis of psychosis decreased from 34.2% at the beginning of the initiative to 28.2% at the end (17.5% reduction).

Decrease in Both Scheduled and As Needed Antipsychotics Used

Instances of potentially harmful antipsychotic use were reduced for both scheduled and as needed antipsychotics.

- Scheduled antipsychotics decreased from 26.3% to 23.0% (12.4% reduction).
- As needed antipsychotics decreased from 13.2% to 10.2% (22.9% reduction).

Antipsychotic Use Among Clear Homes Closer to Provincial Average

Care homes participating in Clear Wave 3 showed a statistically significant reduction in the percentage of residents on antipsychotics without a diagnosis of psychosis over the course of the initiative. According to the CIHI Inter-Residential Assessment Instrument (RAI) data, Clear care homes decreased the percentage from 32.7% to 27.6%, while the rate among non-participating care homes remained unchanged at 22.6% from 2017 Q4 (December 2018) to 2019 Q1 (June 2019)[3].

Improving Culture through Teamwork & Communication

Clear promoted teamwork and communication at participating care homes. The learning opportunities, coaching and tools provided during Clear supported working in interdisciplinary teams, understanding non-pharmacological approaches to care and the importance of delivering person- and family-centred care. Reporting and surveys from teams reflect on the importance of:

- Adopting a person- and family-centred care approach that focused on the needs of the patient first;
- Working in interdisciplinary teams to ensure a diversity of disciplines are present in care conferences, care planning and delivery, and led to an increased understanding of care goals by all levels of staff and leadership;
- Aligning team members to a common purpose that included new non-pharmacological ways of providing care and increased human connection between clinicians, staff and residents; and
- Shifting the culture around medication use to include an understanding of the potential of other, non-pharmacological approaches.

Key Learnings

Unlike previous waves of Clear, Wave 3 was unique in that it specifically targeted 123 care homes that were overprescribing antipsychotics on residents without diagnoses of psychosis. There is evidence around the key components of effective collaboratives based on the Breakthrough Series model; however, these learnings assume that high performing, early adopters and motivated teams constitute most of the membership of the collaborative. As such, the following are consolidated learnings of special consideration when running a collaborative based on the Clear Wave 3 recruitment model as reflected in the evaluation:

1. **Be clear on the time commitment required.** Ensure teams enrolled in the collaborative have a clear understanding of the time commitments required to be successfully participate. This was proven especially true of those 'voluntold' sites in which leadership may have been eager to commit without giving adequate thought to the resources and capacity required to support teams to be successful. Incorporating a readiness assessment would explore the overall potential and capacity for change at sites.
2. **Plan for lower levels of engagement.** The collaborative approach is specifically designed and targeted at high performing teams that have the capacity, interest and engagement to create change and take on quality improvement work. Careful consideration should be given prior to applying the collaborative model to enforce or incentivize low performing or struggling sites. Without a high level of engagement and interest, the collaborative will not meet the threshold of momentum required for action.

3. Understand where you are starting so you know where to go. Conduct a broad-based survey of team attitudes and knowledge toward the initiative topic as a baseline for measuring impact at the conclusion of the collaborative. Improvement in team morale, engagement and job satisfaction were reflected in teams participating in the collaborative. In sites that may be struggling, involvement in a collaborative may provide additional positive outcomes around team and individual performance. A baseline survey or assessment of these components may help track some of these additional benefits of team participation.
4. Consider complimentary initiatives and their impact on participation. During Wave 3 of Clear, there were a number of similar initiatives happening in the province. While these may have positively impacted the results of Clear, they may have also impacted the capacity of care homes to fully participate in the collaborative. Prior to embarking on improvement work with lower-capacity teams, it may be helpful to conduct an environmental scan of complementary initiatives and consider their potential impact on participation.
5. Make participation easy. Staff turnover and time to plan and execute tests of change were consistently cited as barriers for Wave 3 teams. Help remove barriers to participation by enabling step-by-step milestones to guide improvement. Provide resources and tools to facilitate engagement and participation for teams that may have additional barriers to success.
6. Keep measurement simple and accessible. Data collection was frequently noted as a major burden for participating teams. Integrating a progress survey, identifying midway touch points and more universal process measures for teams may help teams gain traction in early stages of the collaborative. These low barrier measures will help teams build energy for change. This increased sensitivity and responsiveness in measures may help increase engagement.
7. Build relationships and be prepared for turnover. Lower performing teams also seemed to experience a high degree of turnover. Teams experiencing high turnover can struggle with gaining momentum for change. Plan for turnover and help mitigate its impact by maintaining relationships with all participants, creating a contact database, ensuring shared leadership, developing transition tools and documentation and ensuring effective communication at all levels. Carefully track involvement throughout the initiative to ensure communication with the appropriate people, especially as teams transition or experience turn-over.
8. Ensure support from leadership. Leadership support helps to remove barriers to participation and enable team members to have protected time to participate by collecting data, reporting on progress and attending initiative events. Establish a formalized letter of commitment from leadership at the launch of the collaborative, as well as a clear reporting process to help maintain engagement. Build progress reporting into leadership meetings at the local and regional levels and set out clear expectations for participation at the onset of the collaborative. Establish a formal process for reviewing and addressing systemic barriers that may surface during the collaborative. Offer a certificate, ceremony, or accreditation to help incentivize team progress and participation.

Conclusion

Notable progress was made towards the goals and objectives of this collaborative. Ultimately, long-term care homes participating in Clear Wave 3 showed a statistically significant reduction in the percentage of residents on antipsychotics without a diagnosis of psychosis over time. While the collaborative did not achieve the goal, the average rate of antipsychotics being used at participating care homes was closer to the provincial average at the end of the initiative compared to the beginning.

The recommendations of this evaluation and discussion in this report can be used to further other initiatives that aim to improve quality of care for older adults as well as to inform future collaboratives, especially those aimed at engaging sites that are underperforming, or where the site traditional collaborative model and modes of engagement are less effective.

INTRODUCTION

This is an evaluation of the BC Patient Safety & Quality Council's (the Council) Clear Wave 3 initiative, which spanned the period between December 2017 to May 2019. The evaluation was designed to learn about the effectiveness of Clear Wave 3. As the recruitment strategy and design of Wave 3 was fundamentally different from prior waves, this evaluation specifically highlights how these differences may have impacted the success and outcomes of the collaborative overall.

ABOUT CLEAR

Background and Rationale

Dementia and the behavioural and psychological symptoms of dementia (BPSD) are common challenges for people later in life. In British Columbia, 62,000 people are living with dementia and this number is expected to rise to 87,000 by 2024.

Clear was a quality improvement initiative that involved teams from long-term care homes in BC to address BPSD. It was developed utilizing the Institute for Healthcare Improvement's (IHI) Breakthrough Series Collaborative model and focused on reducing antipsychotics prescribed and used on people who do not have a diagnosis of psychosis. The initiative also supported improving the dignity and quality of life for those living in long-term care homes by introducing and supporting person- and family-centred care practices, as well as promoting best practices for caring for those living with BPSD.

Clear was developed in response to rising concerns over inappropriate antipsychotic use in people without diagnoses of psychosis in long-term care facilities. British Columbia's average rate of residents in long-term care homes who are prescribed antipsychotics without a diagnosis is 25.7% [2]. The initiatives' third wave aimed to reduce this rate to below the national average of 21.6% [2]. Clear aligns with the current provincial direction to improve quality of life of older adults and individuals with BPSD.

Wave 1

Between October 2013 and December 2014, 48 care homes across British Columbia participated in the first wave of Clear [4]. The aim of Wave 1 was for participating care homes to achieve a province-wide reduction of 50% from baseline in inappropriate use of antipsychotics. Participating care homes achieved a steady decline in antipsychotic use (from 38% in October 2013 to 32% in December 2014 – a 16% reduction).

Clear also had an impact on individuals and organizational culture: over 90% of respondents in two anonymous surveys at the end of this wave agreed that they had built new skills and knowledge in quality improvement and over 80% indicated that they were comfortable leading and carrying out quality and safety initiatives in their organizations.

Based on these findings, the Council and its partners proceeded with Wave 2.

Wave 2

Between September 2015 and December 2016, 40 care homes across British Columbia participated in the second wave of Clear [5]. This time, participating care homes aimed to achieve a province-wide reduction of 33% from baseline in inappropriate use of antipsychotics. Participating care homes achieved a 16.9% reduction in antipsychotic medication use (from 33.2% in September 2015 to 27.6% in December 2016).

Clear also had an impact on individuals and organizational culture: 88% of respondents in an anonymous survey at the end of the initiative reported that there was a change in their care home's culture during the initiative; 69% indicated that communication between health care providers improved. Seventy-six percent agreed that the

quality of life for residents had improved and 96% indicated that the processes and outcomes of Clear would likely be sustained in their care homes.

Table 1: Wave 1 & 2 Summary

Wave	Timeframe	# of Participating Care Homes	Reduction in Antipsychotic Medication Use
Wave 1	October 2013 – December 2014	48 care homes	38% down to 32%
Wave 2	September 2015 – December 2016	40 care homes	29% down to 23%

Wave 3

This report primarily focuses on the results of Wave 3 of Clear, which ran from December 2017 until May 2019 (Fig. 1). It aims to highlight the key differences in outcomes around the effectiveness of Wave 3 compared with prior waves.

Fig. 1 Timeline of Major Events During Clear Wave 3

WAVE 3 OVERVIEW

In December 2017, the provincial average for the use of antipsychotics in people without the diagnosis of psychosis in long-term care homes in BC was 25.7%, which was above the national average of 21.6% [2]. One hundred and twenty-three of BC's long-term care homes had rates higher than the provincial average, which focused our efforts to work with homes with the greatest opportunity for improvement.

The aim of Clear Wave 3 was to reduce the rate of antipsychotic use in residents without a diagnosis of psychosis in participating care homes across the province from baseline to the national average (21.6%) by April 30, 2019.

Broadly, the initiative can be thought of in seven major sections (descriptions follow):

- Governance: leadership support, faculty and Partnership Alliance
- Targeted recruitment of teams
- Regional kick-offs
- Webinars and coaching calls
- Improvement advisor support and site visits
- Regional workshops
- Reporting

Governance: Leadership Support, Faculty and Partnership Alliance

Following invitations to the 123 care homes identified as being above the national average, a series of five leadership webinars were hosted between December 2017 and January 2018. The webinars provided overviews on Clear, expectations for collaborative participation and reporting expectations for teams. The sessions also highlighted how to set teams up for success.

A faculty was formed that included nurses, pharmacists and two physician clinical leads (Appendix C). This group met regularly to provide guidance on coaching, resource development and webinar curriculum development, while also actively participating in Clear events.

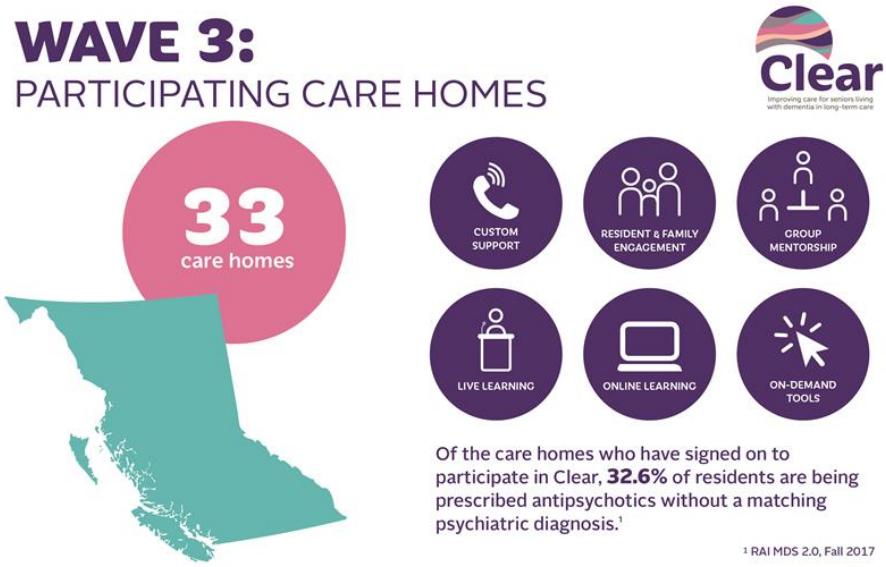
A Partnership Alliance was also created, bringing together stakeholders whose objectives aligned with Clear, in order to ensure optimization of resources and progress towards objectives (Appendix C). This group met quarterly throughout Clear and included Ministry of Health representation, which enabled the group to provide advice on emerging policy development needs as it related to dementia care.

Targeted Recruitment of Teams

Care homes across the province whose use of antipsychotics (without a diagnosis of psychosis) was higher than the BC average of 25.9% were targeted for recruitment. These 123 care homes included both affiliated and health authority owned-and-operated care homes. Team spots were reserved for care homes with more than 25% of their residents prescribed antipsychotics without a diagnosis of psychosis to allow this targeted approach to move forward. Leadership at these sites were sent letters inviting them to be part of the initiative. Leadership teams were then invited to participate in a series of webinars providing an overview and outlining the work involved, rationale and reporting techniques.

Between December 2017 and April 2019, 54 care homes across British Columbia signed up to participate in the third wave of Clear. Thirty-three teams remained active in the Clear Collaborative between December 2017 to April 2019. Of the care homes that signed up to participate in Clear, 32.6% of residents were being prescribed antipsychotics without a matching psychiatric diagnosis (Fig. 2).

Fig. 2 Wave 3 Participating Care Homes



Kick Off Events

Every care home participated in a day-long session where topics included Clears' objectives, reporting structure, and education on quality improvement methodologies. Following the kick-off events, teams were supported to run a series of Plan-Do-Study-Act (PDSA) cycles, supported through phone and email communication with their Improvement Advisors and in some cases, their health authority designated supports. Some care homes also received in-person Improvement Advisor visits when capacity allowed.

The kick-off events were held between January and March 2018 in Nanaimo, Vancouver, Surrey and Fort St. John. A virtual event was held for Northern participants (see Appendix D).

The evaluation related to these kick off events had a 77% response rate (95 of 123 participants).

99% of participants learned new ideas or concepts at the sessions at the kick-off event.

96% of participants felt that the event enabled them to gain insight into overall aims, approaches and what is possible in Clear at the kick-off event.

Webinars and Coaching Calls

Semi-structured webinars were held every two-to-three weeks to weave together subject-specific expertise from faculty, quality improvement capacity-building from the Council and lateral learning through team-driven presentations about their improvement efforts and changes. The initiative curriculum was partially modeled on topics suggested by faculty and teams in Clear's previous waves and adapted for the evolving needs within the broader context of the provincial system. Group coaching calls were piloted, where teams could stay on the call after webinars to ask questions and collectively discuss challenges and strategies.

Six leadership webinars and 13 educational webinars for teams were hosted with topics such as antipsychotic medication use, physician engagement, quality improvement, measurement and culture (Appendix E). The webinars also provided an opportunity for care homes to share successes and challenges with one another.

Final Celebration Webinar

The final virtual celebration was held for all participating teams and faculty on May 16, 2019. In response to comments and questions raised by teams, a speaker specializing in cannabis, dementia and the elderly was invited to present. This celebration also introduced health authority leads, who were supporting the practice change informed by Clear and shared the preliminary data available from the self-reports provided by teams.

Several teams were showcased in short videos that demonstrated the impacts Clear had within their care homes. These videos provided an overview of some of the most salient changes the care homes had experienced, as well as an accessible legacy for the care homes to reflect on their success.

Following the final celebration, a recording of the webinar was posted to the website and the Council committed to host and update resources for one year following the initiative.

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 and feedback on their monthly reports. Specific improvement support included assisting teams with PDSA cycle planning, linking teams with each other to share ideas, connecting teams with faculty for clinical support, assisting with data collection and interpretation and helping teams identify aims and complete their charters.

Regional Workshops

Five regional workshops were hosted across the province, with a total of 104 team members. The events were held at:

- Vancouver Island: September 25, 2018
  - Nanaimo
- Fraser Valley and Lower Mainland: October 2, 2018
  - Langley and Vancouver
- Northern: November 2, 2018 (virtual and in-person)
  - Prince George, Fort St. Johns and Burns Lake

Participants noted they enjoyed networking with others, hearing from other care homes about their challenges and strategies to overcome them, learning about the non-pharmacological approaches used by other care homes, the overall interactive delivery and the enthusiastic atmosphere of the workshops.

Quotes from Regional Workshop Participants

"This workshop provided a comprehensive process to distill complex problems and identify the best way forward."

"Thank you for inviting me to today. You have gotten me thinking about many things that help me, help staff, help residents and families."

"The struggle is real, change is hard to do, but the outcome can be rewarding. Even though you see improvement one month, the next month you might feel you are starting at the beginning."

"Finding out about other groups progress and being able to share our story and success which helps us all succeed with our goals."

98% of participants learned new ideas or concepts at the sessions at the regional workshop.

94% of participants felt that they would be able to apply the knowledge gained at the regional workshop to their work.

Reporting

Teams provided monthly quantitative and qualitative reports to their Improvement Advisors, which were collated and used to identify key strengths and emerging challenges. These reports served multiple purposes:

- For teams:
    - They offered a consistent way to track their progress/areas for improvement, with the option of tracking multiple PDSA cycles within the same template.
    - They provided encouragement and understanding of how each team was doing, as well as highlighting outlier teams that could be engaged (and why) to offer support.
- For Improvement Advisors:
    - They offered a consistent way of understanding the emerging challenges and successes teams were experiencing across the initiative.
- For faculty, Partnership Alliance and leadership:
    - They provided a high-level understanding of the effects of the collaborative.

Reports were received by Improvement Advisors and collated into a master tracking sheet. Aggregated reports were provided to teams and external stakeholders at regular intervals. These reports were used by Improvement Advisors to guide 1:1 feedback to teams.

The reports also served to direct emerging webinar topics and education areas. For example, many teams indicated they struggled with the reporting process and as a result, one webinar featured a data analyst who provided additional support in completing the reports.

CHANGES IN WAVE 3

There were several differences in Wave 3 of Clear in comparison to the previous two waves.

Targeted Recruitment

Targeting recruitment to sites with higher rates of antipsychotic use may have impacted the level of engagement and overall rate of completion. Thirty-three care homes completed the collaborative and 21 care homes withdrew before the end of the collaborative (Appendix B).

Reasons cited for withdrawal included lack of capacity, shifting priorities, staffing transitions and lack of reporting support. For example, in several sites, changes in pharmacist capacity (maternity leave, staffing transitions) resulted in new reporting challenges that left sites feeling unable to participate. In other sites, staffing turnover was a source of stress for directors of care, posing significant barriers around readiness for change. In some instances, this created communication gaps and challenges around the ability to ascertain specific reasons for withdrawing from the collaborative.[1]

Of interest, in a breakdown of care homes by type and participation level (Table 2), 20 of the 21 care homes that withdrew were privately run.

[1] It should be noted that efforts were made to gain additional insight around why teams withdrew from the collaborative (phone calls conducted at two separate time intervals as well as two surveys), they were unsuccessful in capturing additional context.

Table 2: Care Homes by Type and Level of Participation

Wave 3	Health Authority	Private For-Profit	Private Non-Profit	Unspecified	Total
Active	13	12	7	1	33
Withdrew	1	12	8	0	21
Total	14	24	15	1	54

2019 data from the Office of the Seniors Advocate, suggests that the sites that withdrew may have lower direct care hours, which may have contributed to their overall readiness for change and the ability to take on a large initiative like Clear[2] [6].

One of the key tenets of success in a collaborative is engaging teams with the motivation and capacity to fully participate and drive peer to peer learning. In this model, targeting teams that were already struggling limited team's participation.

Complementary and Competing Initiatives

In Wave 3, care homes struggling with antipsychotic use among residents without a diagnosis of psychosis were targeted for recruitment. During this wave, the province had a number of similarly aligned initiatives (Appendix F) which may have positively impacted the results of Clear but may have also impacted care home capacity to fully participate.

Coaching Approach

During this initiative, staffing transitions impacted Improvement Advisor roles and meant that staff had to re-establish personal relationships with teams and clinical leads at various points throughout the collaborative. Coaching for teams evolved throughout Wave 3, from the traditional 1:1 model initially offered in Waves 1 and 2, to group coaching calls offered after webinars, establishing "Office Hours" for consultation, 1:1 follow-up phone calls (as needed), email feedback and surveys.

Reporting Frequency

Given the targeted recruitment of teams, several care homes struggled with reporting due to data accuracy concerns, outdated diagnoses, changes in staffing levels at the facility level and lack of an in-house pharmacist resources. Challenges in completing monthly reports made measurement difficult. In response, some care homes arranged to complete their reports bimonthly or quarterly to help alleviate the extra workload and measurement burden. These changes made it difficult to track team progress on a regular basis, limiting the ability of measurement to inform improvement.

Webinars

In November 2018 of Wave 3, there was a drop-in webinar attendance as result of declining interest. In response, it was decided to discontinue webinar offerings in the last three months of the collaborative. During this time, the collaborative continued to share resources electronically, provide coaching calls, support regular reporting and lead virtual feedback sessions to meet participant needs.

[2] For more information on publicly subsidized long-term care facilities, see the *British Columbia Long-Term Care Facilities Quick Facts Directory* at https://www.seniorsadvocatebc.ca/residential-care-quick-facts-directory/

Website and Milestone Development

In previous waves of Clear, four primary objectives were identified as "drivers" of change [7]:

1. Appropriate antipsychotic use in long-term care;
2. Best practice management for residents with BPSD;
3. Enhance teamwork workplace and workflow; and
4. Resident care planning for quality of life and safety.

In order to support Wave 3 change efforts, collaborative faculty adapted the driver diagram[3] from previous waves of Clear. During Wave 3, it was noted that many teams were struggling to connect to the driver diagram model. It was suggested by new clinical leads that this was partially due to change ideas already incorporated into best practice. In response, the need to adapt and modify the existing model because was identified.

This, combined with feedback from teams that they were struggling to find resources on the Clear website, presented an opportunity. In response, the Clear team developed a model that allowed teams to progress through a step-based "milestones" approach to implementing Clear (Fig. 3).

Fig. 3: Clear Milestones

To support this, the existing resources on the website were updated, expanded and reorganized. This new model and website design received positive feedback, resonated with teams and was adapted over the course of Wave 3 to address emerging needs.

[3] A driver diagram visually represents a shared theory of how things might be better, building upon knowledge gleaned from research, observation and experience.

ABOUT THE EVALUATION: METHODS & FINDINGS

Approach

This evaluation used information collected both during and following the collaborative. It was designed to learn about the effectiveness of Clear and was created with input from faculty, the Partnership Alliance and Council staff.

Methods included paper and electronic surveys, storyboard posters, notes from coaching calls and discussions with teams, self-reported data, website analytics and comparison of outcomes to information provided by the Canadian Institute of Health Information database. The following table details the timelines and methods used for each element of the evaluation.

Table 3: Methods Used to Evaluate Clear Wave 3

Element	Method	Timeline
Kick-off event	Paper surveys	January and February 2018
Regional workshops	Electronic surveys	September to November 2018
Storyboards	Electronic and hard copy storyboard posters	January to November 2018
Improvement Advisor notes	Notes from Improvement Advisor coaching calls and site visits	Duration of the initiative
Webinar surveys	Virtual follow-up surveys after webinars	Duration of the initiative
Regional workshop notes	Aggregate notes from discussions and brainstorms with teams	September to November 2018
Mid-initiative participant survey	Electronic survey sent out to all teams	December 2018 to January 2019
Team quality improvement reports	Teams self-reported qualitative QI data and tests of change	Duration of the initiative
Team self-reported QI data	Teams self-reported rates of AP use	Duration of the initiative
Online final survey of teams	Electronic survey to teams	April to May 2019
Phone survey of non-respondents	Phone call to non-respondent teams	April 2019
CIHI data	Summary of nationally available data	Duration of the initiative
Website analytics	Summary of website visits and searches	Duration of the initiative

Developmental Evaluation Approach

Where possible, results of each phase of the evaluation were incorporated into the design and structure for Clear. For example, notes from early Improvement Advisor site visits and coaching calls indicated that several teams were struggling to connect with family physicians and prescribers in order to complete the dose reductions and discontinuations. As a result, the clinical leads and faculty worked with the teams to design a generic template, which care homes could adapt and send to physicians to inform them about the initiative and highlight potential antipsychotic change opportunities.

Post-Event Evaluation Forms: Kick Off and Regional Workshops

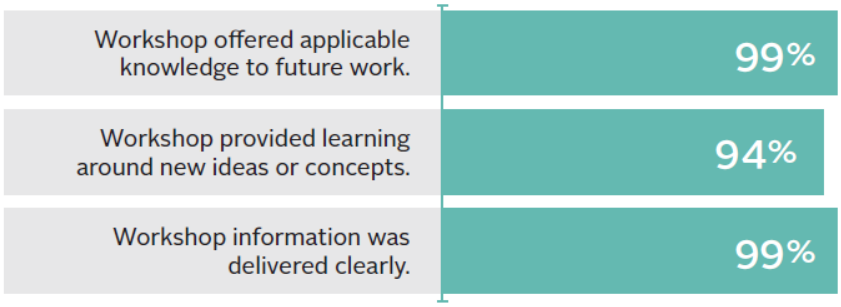
Following the kick-off workshop and regional events, evaluations were provided to participants to gauge their experience at the events. Table 4 below summarizes the results of these evaluations.

Table 4: Wave 3 Events and Response Rate

Event	Response Rate
Regional Kick-off events	95 feedback forms / 123 attendees (77%)

Evaluation forms from the Regional Kickoff Workshops indicated that:

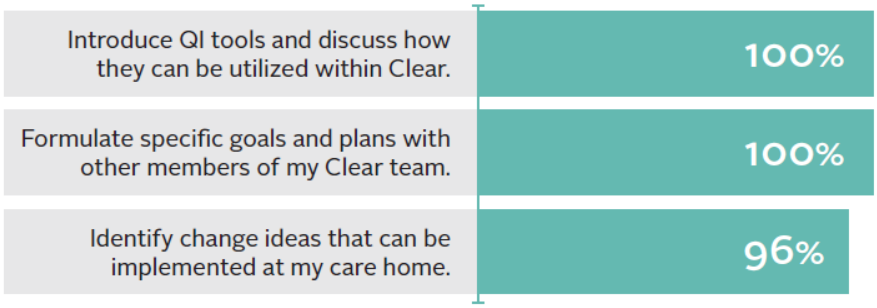
Kick Off Workshops: % of Respondents who Agreed / Strongly Agreed



Event	Response Rate
Regional Workshops	97 feedback forms / 114 attendees (85%)

Respondents indicated the learning objectives for the Regional Workshop sessions were achieved (gaining insight into overall aims, approaches and what's possible in Clear) as well as nearly 100% of respondents agreeing or strongly agreeing that they felt they could:

Regional Workshops: % of Respondents who Agreed / Strongly Agreed



When asked about their understanding of how Clear aligned with other initiatives throughout the province only 80% of responded said that it did, suggesting an opportunity to provide better linkages to other work.

Storyboard Presentations

At the time of the Regional Workshops, approximately 35 teams were still enrolled in the collaborative, with approximately 30 teams in the lower mainland and the island. During the two Regional Workshops in the lower mainland and Nanaimo, 16 teams presented storyboards based on their experiences (approximately 70% of attending teams), highlighting any challenges and key developments. Many focused on the value of central learning opportunities on increasing education around dementia care as well as teamwork and communication. Storyboards also demonstrated a shift in thinking towards the use of medication as a last option for managing behavioural difficulties.

Storyboards also noted the positive collaboration between clinicians, staff and families and how early successes often built trust and encouraged future improvements. Storyboards tended to showcase specific non-

pharmacological approaches, as well as baseline data about care homes and their teams. Successes centred around:

- The shift towards team-based care as core to person- and family-centred care planning;
- The importance of interdisciplinary team member participation in care conferences; and
- The importance of extensive and comprehensive communication.

Quote from Storyboard

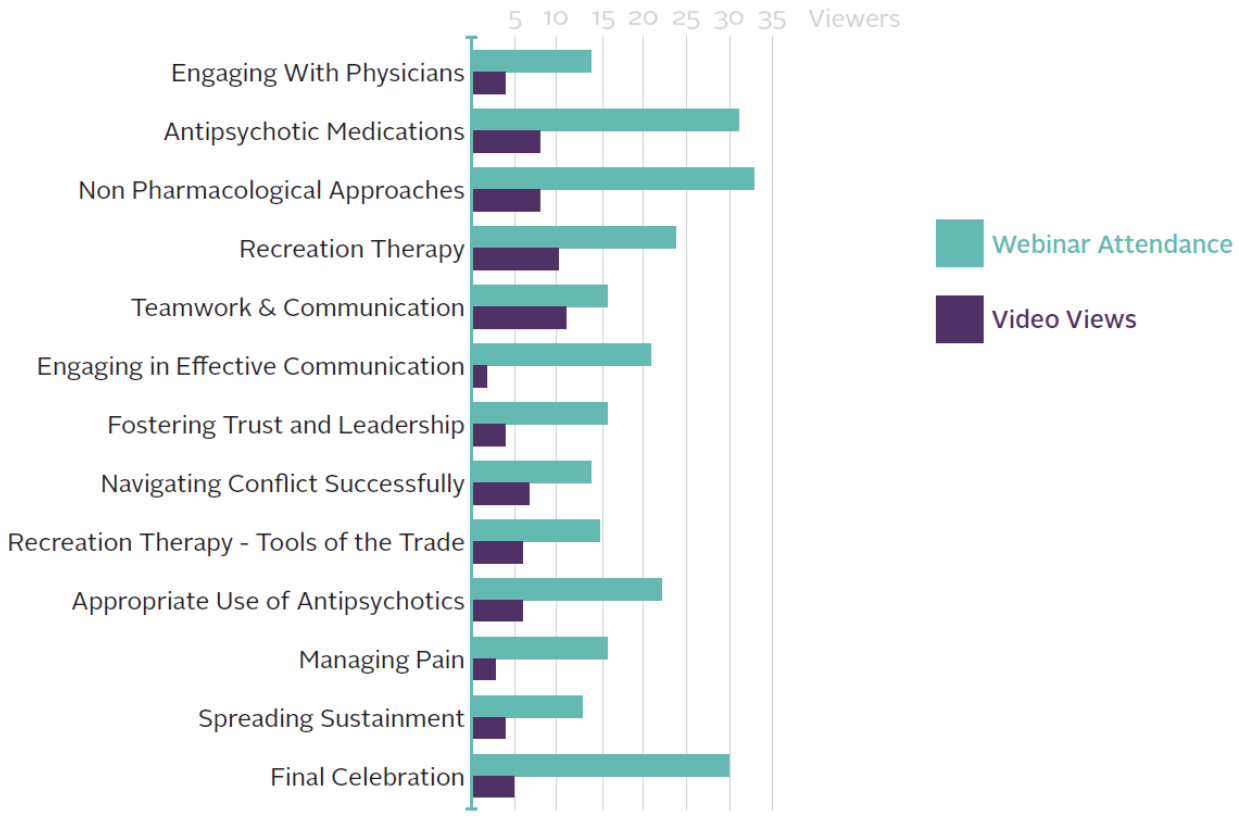
The important thing we have learned is to try everything else first – this is not easy to get across to staff and they will get orders without collaborating with us first. This is a slow process with long-term positive outcomes."

Although most sites were unable to show quantitative reductions at the time of the storyboard presentations, anecdotal stories on improvements in quality of life were noted, as well as increased staff satisfaction, improved work environment, enhanced staff communication and overall staff engagement at the site.

Webinar Evaluations and Attendance

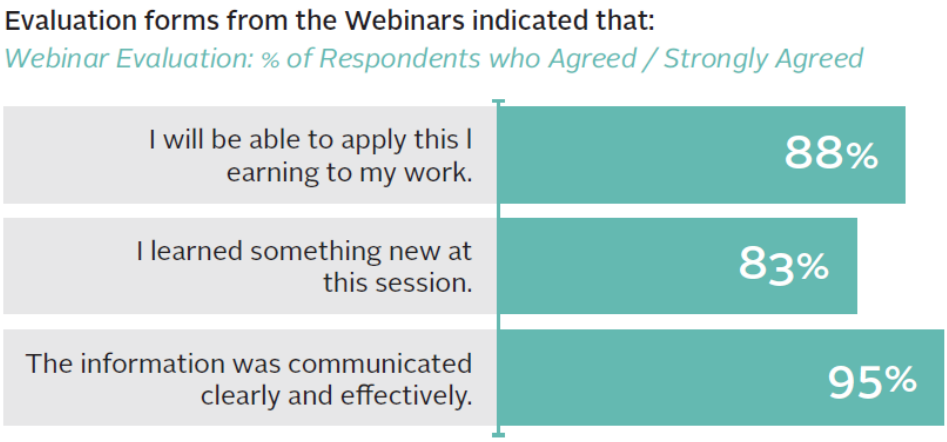
A total of 13 webinars were delivered for Wave 3, with five additional "Getting Started" leadership webinars for team leads. Attendance at the webinars is summarized below (Fig. 4). Unfortunately, it was not possible to track if multiple people were watching the webinar from the same computer/venue. As some care homes struggled with the timing of the webinars, they were recorded and posted online. The number of video views reflects the number of times a recording was watched.

Fig. 4: Clear Webinar Attendance and Views



After every webinar, participants were invited to complete a 5-6 question survey covering learning objectives, webinar format and space for open ended comments. There were slightly more than 200 connections to the live webinars and 78 post-surveys were completed (39% completion rate).

Table 5: Webinar Evaluations



Regional Workshop Focus Groups

The evaluation also included notes and observations solicited from the kick-off workshops and regional workshops regarding barriers and key elements of success. These ideas were generated through two activities at in-person events. In the first activity, participants were invited to choose an area of discussion that they felt particularly passionate about or one where they were struggling. In the second activity, groups of three to six participants rotated through various topics prepared by workshop facilitators.

> *"[The greatest benefit to participating in Clear was] being supported by a provincial body that has enabled us to be able to decrease the use of antipsychotics with our residents."*
>
> - Clear Team Member

A selection of barriers that teams were consistently struggling with were highlighted, as well as ideas on how to overcome them. These discussions supported strong communication, built trust between teams and they surfaced valuable insights around the initiative and implementation. The information from these sessions was transcribed, themed and integrated into the findings.

These exercises highlighted challenges related to:

- Data collection;
- Senior leadership and medical leadership support;
- Clinician and staff engagement; and
- Resistance to change.

Mid-Initiative Survey

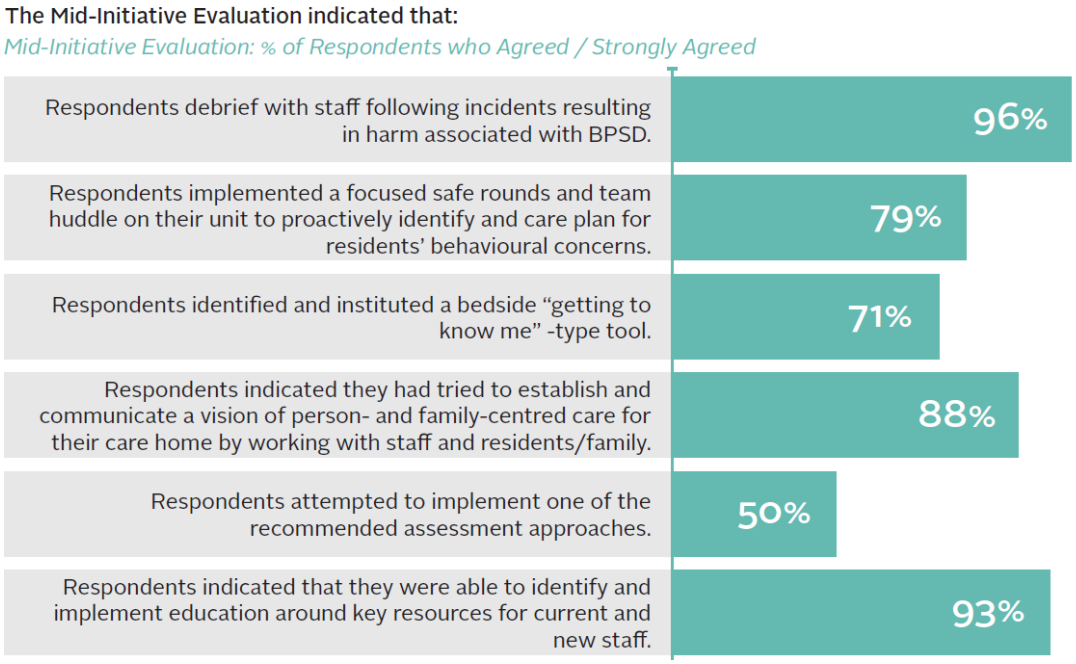
In order to understand initiative impact and how Clear operated at the care home level, a survey was distributed to all improvement team members who had been in contact with Improvement Advisors.

> *"There is genuine improvement in the quality of life and engagement of our seniors. It gives concrete evidence that antipsychotics should never be the first go to for challenging behaviours. If only I could get staff to 'buy in' on the thought process that medications are not the answer and to be curious and investigate the root causes of behaviours."*
>
> - Clear Interim Survey Respondent

The survey was available electronically (via email) as well as by phone and hard copy/fax (depending on individual preference) from November 26 to December 21, 2018. However, the survey response was low. To encourage participation, the Council extended the initial survey deadline to January 14, 2019 and provided incentives to respondents who completed the survey.[4] In the end, 48 team members representing clinical and administrative groups from 24 care homes responded.

Thirty-three respondents (68.7%) agreed or strongly agreed that they felt comfortable leading quality improvement work for Clear at their care home and 36 (75%) agreed or strongly agreed that the Council support for the Clear initiative met their needs. Respondents also shared insight on areas such as communication, staff "buy-in" and availability of resources where additional support would be valuable for future quality improvement initiatives. The table below highlights survey answers to key questions related to Clear best practices.

Table 6: Mid-Initiative Evaluation



Respondents identified additional tests of change that had been implemented such as:

- Establishing a train-the-trainer approach to Clear;
- Implementing behaviour tracking;
- Identifying, testing and implementing of non-pharmacological approaches tailored to individual resident's interests and abilities;
- Testing and implementing improved behaviour care planning;
- Including care aides and residents/families in behavioural care planning; and

[4] A consistent challenge with the Clear teams in Wave 3 was low response rates to emails and phone calls. Compared to Wave 2, the mid-initiative survey responses were significantly lower by the initial due date in December.

- Enhancing antipsychotic medication review processes.

> *"A dance night filled with music the residents themselves have chosen along with balloons, streamers, homemade food that all residents could enjoy and a very energic staff to participate with them. They all had so much fun! We have also implemented three different afternoons with balloon tossing. The residents with behaviour issues absolutely loved this activity. It was so rewarding for us to see these folks laugh and have a wonderful time. Following the activities, most residents with behaviour issues were able to be redirected by talking about the previous activities they had participated in or to engage them in one at that time. A quick staff discussion about what to do, depending on the person would then be implemented. Thank you for this workshop it really has inspired me to look beyond the pharmaceutical approach!"*
>
> - Clear Team Member

The survey responses also highlighted successes related to these tests of change:

- Aligning team members to a common purpose that included new non-pharmacological ways of providing care that were fun and increased human connection between clinicians, staff and residents.
- The incorporation of a train-the-trainer approach allowed staff to challenge historic ways of providing care and move towards a more family and person- and family-centred approach. Some care homes increased care aide involvement in resident care planning meetings to encourage and support family- and person-centred care.
- The implementation of a behavioural response team to meet weekly to review all responsive behaviour incidents, update care plans and discuss outcomes with staff and family.
- The addition of interdisciplinary medical review processes that included the family for input in care planning.

What stood out amongst nearly all respondents was their holistic, person- and family-centred and empathetic approach to improving care and quality.

Quotes from Clear Team Members

> *"I am learning it is very important to involve families and care staff. I am spending more time in the cottages and observing how the residents are presenting, what has changed, and then deciding appropriate time to start with reduction of not just antipsychotics but also other medication."*
>
> *"1. It takes a team! One person can have an idea, but it takes a team to develop it and implement it. 2. Every person on the team has something that they can contribute. 3. To think outside of the box. For example, if there are no activities after 2 pm and you work evening... create your own. 4. Build relationships with residents to understand them more fully. 5. Encourage EVERYONE! Staff and residents and treat everyone with kindness and respect. 6. Keep learning yourself and listen carefully to others."*
>
> *"We implemented the following successful change ideas: Non pharmaceutical approach... 'Hugs not drugs' adjusting environment to be more 'home-like' and community-based with 'neighbourhoods' and more village-like. Good resident assessments to determine if e.g. more pain related to behaviours. Behaviour logs completed/accurate progress notes. Resident-centred care and following individualized care plan/Kardex. All staff aware of safety huddles and sharing information to prevent falls-hip protectors/grip socks/bed at lowest position/night lights etc. Enhanced recreation and good planning to alleviate and provide alternative therapeutic benefits for residents. 1:1 spiritual/alternative with empathetic caring listening, quiet and gentle care."*

Team Quality Improvement Reports

As part of their monthly reports, teams were invited to submit a quantitative data tracking tool and a qualitative summary of changes from the last month. These reports provided a standard way of gathering information about the teams and their progress, as well as guiding Improvement Advisors for their regular follow up with teams.

In total, 186 reports were submitted. These were aggregated and coded into the overall findings related to successes, challenges and learnings.

> *"I believe that the initiative is critical to support the reduction in antipsychotic use. It has highlighted the need for practice change and each facility has the flexibility to design their own improvements. The ability of each facility to engage the direct care workers is another matter. It appears that the facility Clear participants would benefit with more help on communicating this initiative to the workers, residents and families."*
>
> *"I have waited nearly 12 years at Island Health residential (long-term care) services to provide the clinical quality improvement support that has been absent from practice and conversations. I am delighted that Clear has started this very excellent work and I am hopeful that the support will continue for a much longer period."*
>
> \- Clear Team Member

Qualitative Team Improvement Data

Reports submitted by teams were not always complete, making interpretation of the results difficult. Of the 186 reports, 38 left the qualitative section blank and a further 29 submitted reports that were identical to the prior month's report, despite Improvement Advisors' follow-up to support team reporting. Although it is possible that issues remained consistent from one month to the next, these identical reports were removed from analysis.

Overall the reports indicated a shift in thinking around antipsychotic use, as the positive effects of their reductions were highlighted by staff and residents. Responses highlighted increased involvement of a variety of disciplines, such as physicians, recreation therapists and pharmacists, unique clinical approaches, a shift towards a philosophy of whole-resident care and hope.

The central challenge that emerged was staff engagement, with a particular focus on turnover, culture change, shifts in mental models, difficulty finding time for staff, documentation and data entry. In addition, respondents found physician engagement, situations where antipsychotic reductions failed and resident turnover challenging. Appendix G provides a complete list of team successes and challenges.

Team Self-Reported QI Data

As part of the monthly reports, teams were asked to collect data on their quality improvement work. This was their primary source of understanding to drive the reduction of antipsychotics for Clear. Additional data collected by care homes, the Residential Assessment Instrument (Inter-RAI 2.0), was also used in the evaluation of this Initiative.

Monthly Data Reports

Teams within each care 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 aggregate data collected from the care homes.

Online Final Survey

A brief online survey was designed and emailed out to teams to provide feedback on the final outcomes and lasting impacts of the initiative, as well as to reflect on any sustainability challenges.

In total, 13 responses were received from 13 different care homes; they represented a variety of professions and the most engaged teams in Clear. Given this response distribution, the findings are only discussed from a qualitative perspective.

The following themes emerged from the final survey:

- Teams actively worked to pilot anti-psychotic reductions;
- Enhanced teamwork with and between family and caregivers;
- Staffing transitions inhibited ability to pilot changes;
- Increased knowledge of non-pharmacological care approaches;
- Connections between Clear teams valuable;
- Staff time and capacity an ongoing challenge; and
- Sustaining improvement requires ongoing education and funding,

Changes implemented by care homes were equally split among the four drivers. Most care homes indicated they were actively piloting antipsychotic reductions and integrating these reductions into medication reviews. Most respondents also indicated that they incorporated behavioural observation and tracking tools as part of a reduction plan.

Care homes piloting reductions engaged families as well as pharmacy, geriatric psychiatry and nursing staff in care planning and dose reduction schedules. Teamwork was indicated as valuable for introducing those changes.

> *"With team support, extra education service and psychiatrist involvement, we definitely see big change and positive impact on our residents, families and as well to our team."*
>
> - Clear Team Member

Clear was aimed at increasing quality improvement capacity in addition to improving non-pharmacological care and understanding of BPSD with residents. As noted above, results have been provided from a qualitative perspective only. However, almost all survey respondents agreed or strongly agreed that they increased their quality improvement capability:

- I have built useful skills for improvement in long-term care.
- Clear provided me with tools and resources to help implement changes.
- I feel confident leading quality improvement work in my care home.

> *"I loved the education and the information we received. Like many things it looks better on paper and is harder to put into practice. I found we tried to move ahead too fast at our facility without having done the education and buy in of staff. We know now that we need to go slower and involve the front-line staff more in the direction we want to go."*
>
> - Clear Final Survey Respondent

Areas of potential growth included the long-term outcomes of Clear on residents, culture and care planning. This included the opportunity for patients and families to be more involved in resident care planning (30% indicated growth potential), although one survey noted that "families feel more included in the process and have better information to help them understand the dementia journey."

Thirty percent of survey results indicated that care plans could be used more frequently in daily work and there was a mixed perception around the impact of the initiative on the BPSD present in care homes, with only 62% of respondents indicating they had seen a decrease. Forty-six percent noted that there was less aggression/violence in the care homes. Eighty-five percent of respondents agreed or strongly agreed that there was an increase in person- and family-centred care in their care homes.

When care homes were asked about the most rewarding aspect of participating in Clear, improved quality of life and management of dementia were noted as the benefit of being able to connect with other teams for support. There were also several comments around the shifting communication within teams and with physicians.

Increased knowledge around antipsychotics and polypharmacy reduction was noted, as well as increased uptake of tools and approaches by staff to better serve residents with dementia.

Quotes from Final Survey Respondents

"Discussing with other teams about their successes and failures. I did not feel so alone."

"The shared experience of all working toward the same goal."

"[We have seen] Increased communication within the facility and collaboration with residents' primary physicians."

Nearly all respondents indicated the most challenging part of Clear was having time and support from staff. Some comments indicated that not all staff agreed with Clear and many focused on the time and resources needed to backfill and train staff, or to work through culture change. One respondent observed, "It is challenging to get staff to do the work in the beginning when it takes time to see the results and benefits down the road."

Several others noted the challenge of changing culture highlighted physician communication and client history/context. The main area of challenge identified with the quality improvement metrics included in Clear was the focus on antipsychotic diagnosis and consumption, rather than on lowest effective dose and dose reduction success. This sentiment echoed some comments and discussion from Improvement Advisors around the emerging need to potentially revisit the CIHI indicator [3] to expand or reassess its utility as a proxy for dignity and quality of life.

When asked to identify the key elements of success, most comments included management support and communication with staff. Several indicated the importance of focusing on the improved quality of life for residents and the promotion of specific tools for staff to use while implementing changes.

The most-cited barriers to participation were time (for engagement, education and training for staff), staffing transitions and scheduling for meetings and webinars. Approximately half of the respondents indicated that ongoing education would be key to sustaining Clear and the culture change it requires. Many noted additional funding at the facility level was necessary for implementing the non-drug methods of mitigating BPSD. Ongoing focus on teamwork and staff retention was also mentioned by approximately a third of respondents.

Telephone Non-respondent Interviews

The evaluation included telephone interviews targeted at care homes that did not appear to actively participate in Clear (based on lack of response to the two surveys conducted during the collaborative, submission of fewer than two reports and little or no engagement with the initiative activities). The purpose of the interviews was to learn about the challenges of participating in Clear and gain insight into the impact of the recruitment strategy on Wave 3 participation, as there was some concern from the Partnership Alliance and faculty that participation rates were lower compared to other initiatives.

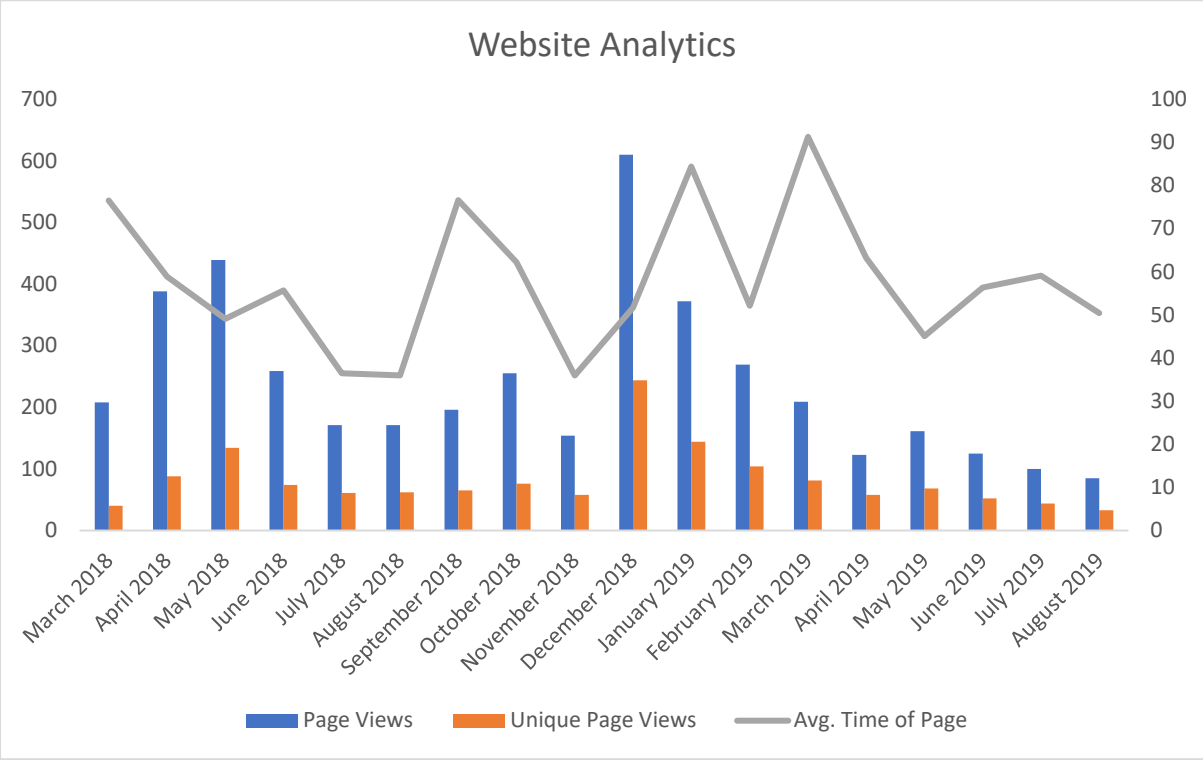
Leads from 12 previously registered teams were targeted and each person was phoned three times and emailed twice. Unfortunately, only one interview was completed as a result. In several instances the listed contact had transitioned roles and the interviewer was unsuccessful in connecting with an alternate contact. The results of this interview process are therefore not included in the final evaluation.

Website Analytics

A significant amount of time and effort was spent redesigning Clear's website and resources. As a result, this evaluation includes analytics on the use of these key resources. Fig. 5 below summarizes the number of times the site was viewed in a day (pageviews), the number of individual users per day (unique pageviews) and the average length of time spent on the website.

The spike in views in early fall is likely due to the timing of the Regional Workshops' registration and the increased use in December 2018 coincides with the launch of the redesigned website. Users continue to utilize the website information after the conclusion of the initiative, as evidenced in the continued views through to August 2019.

Fig. 5: Summary of Clear Website Usage



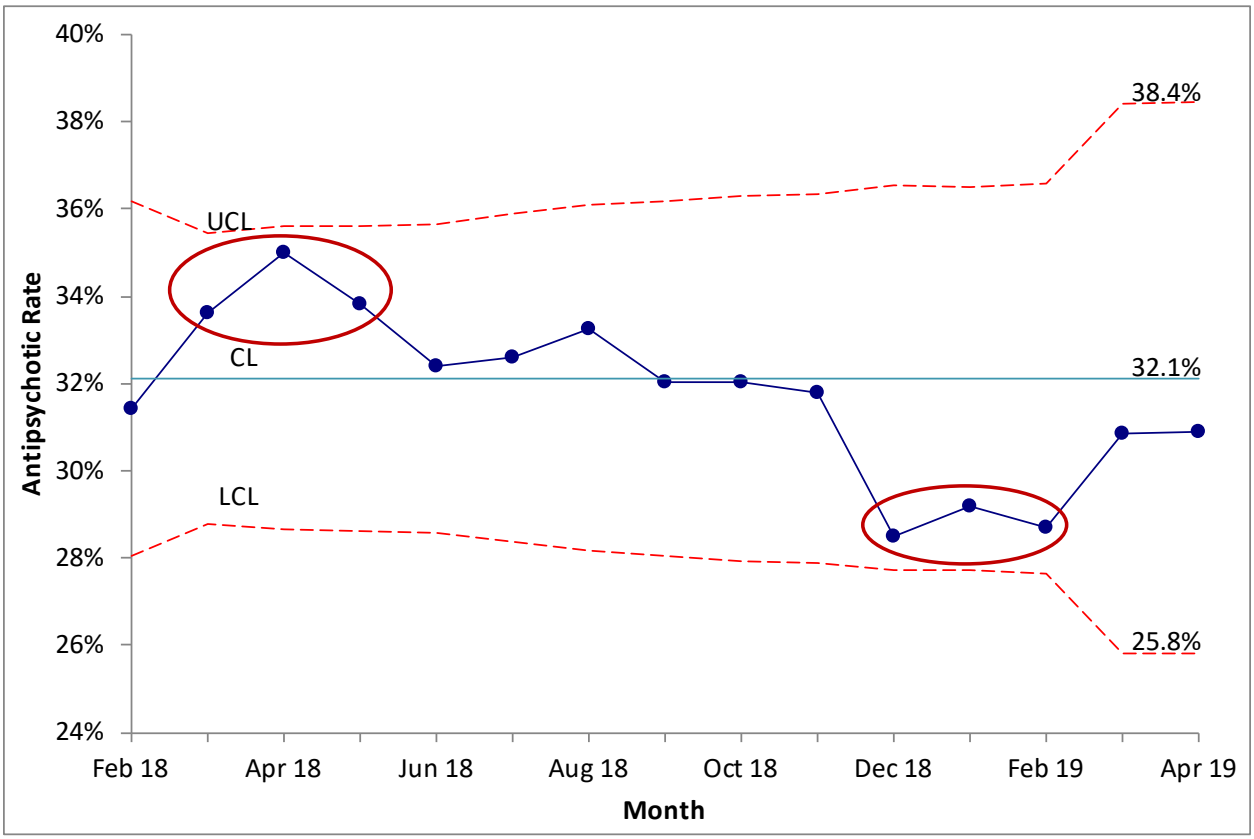
RESULTS

Team-Submitted Results (All Teams)

Based on the data submitted by teams participating in Wave 3, there was significant progress in reducing the use of antipsychotic medications in participating care homes.

- A total of 237 of the 1,834 residents (17.9%) who had a prescription for antipsychotics had their medications reduced or discontinued during the initiative.
- Monthly data tracked by teams showed a 15.7% reduction in potentially inappropriate antipsychotic medication use. Specifically, Clear care homes decreased the percentage of residents on antipsychotics without a diagnosis of psychosis from 34.1% to 28.8% (Fig. 6), which is still above the provincial (25.9%) and national (21.8%) averages.

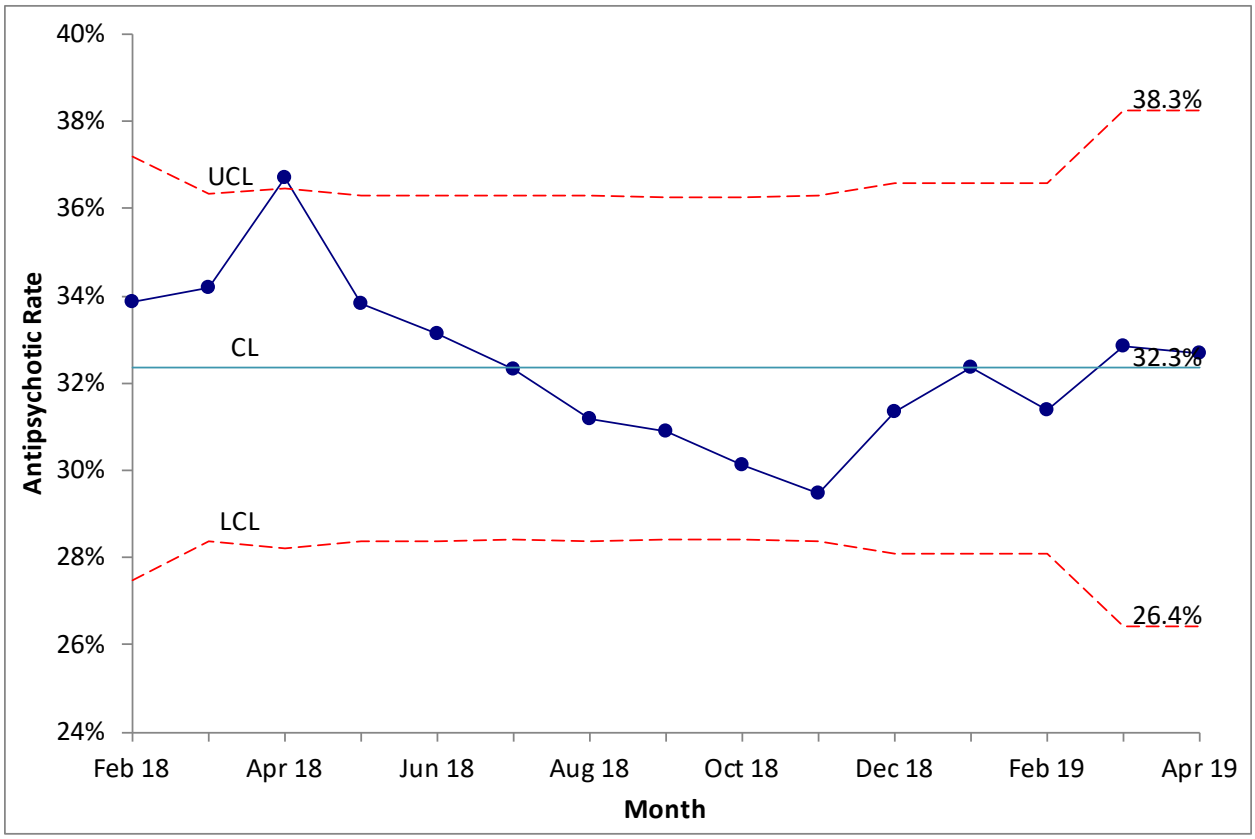
Fig. 6: Potentially Inappropriate Use - Residents on Antipsychotics Without a Diagnosis of Psychosis



Team-Submitted Results: Deep Dive

Seventeen out of the 33 Clear teams reported results consistently throughout the course of the initiative. Results from these teams were analyzed using control charts to observe change over time. There are four control charts (Fig. 7 – Fig.10) and in each of these scenarios there is evidence of improvement. The data exhibit special cause variation, which indicates the system is not stable. The observed variation in antipsychotic rates are non-random and influenced by specific circumstances and factors not always present (such as improvement work and changes in care processes).

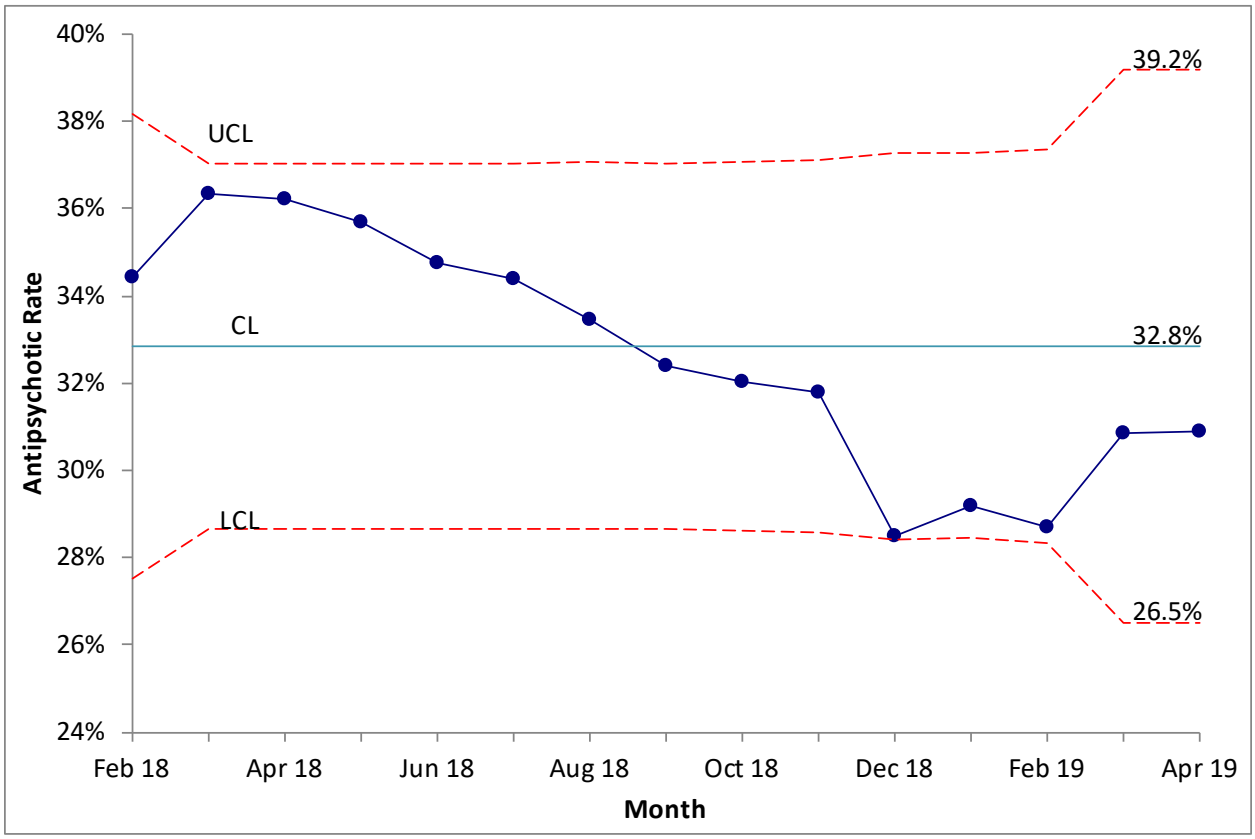
Fig. 7: Total Antipsychotic Use Decreased from 34.9% to 31.7% (9.2% reduction)



Notes on Special Cause Variation:

- April 2018: Single point outside control limits
- April 2018 to November 2018: Trend of six or more consecutive points continually decreasing

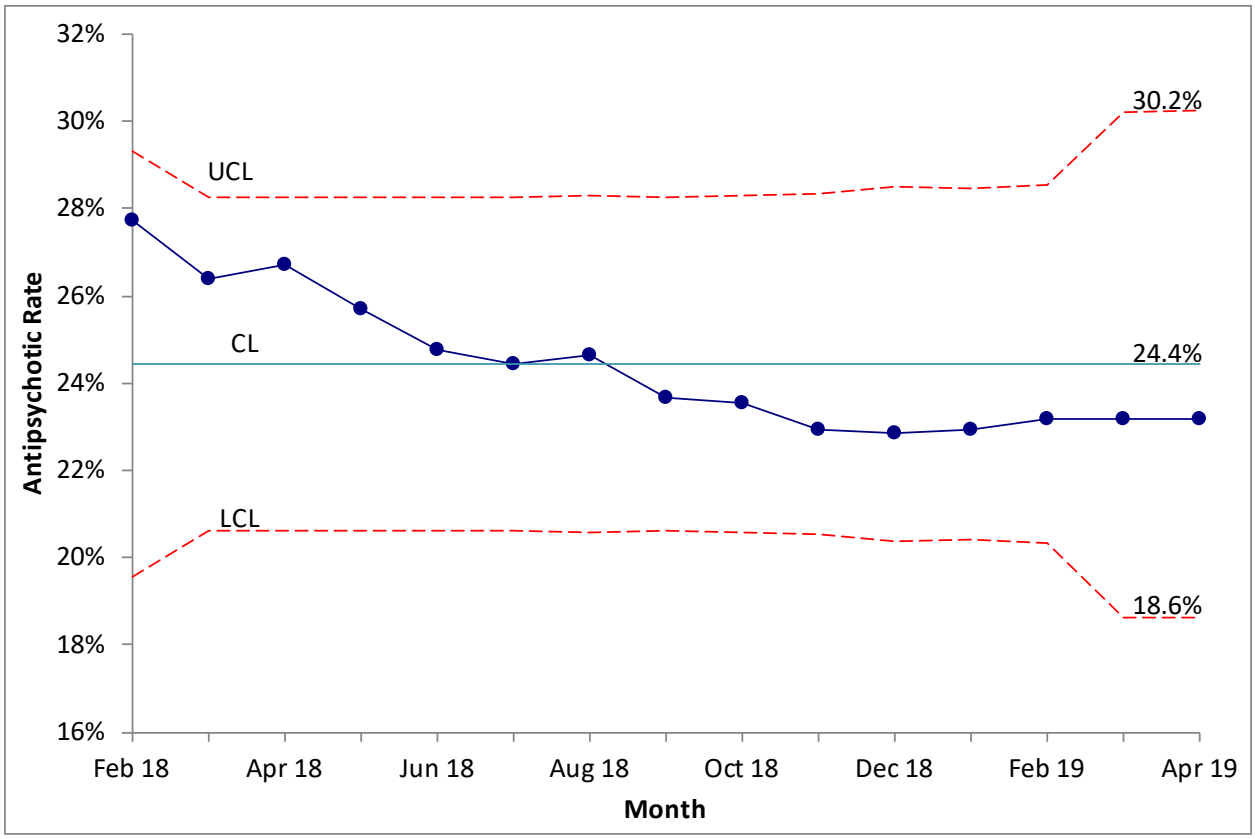
Fig. 8: Potentially Inappropriate Use (without diagnosis of psychosis): Any Antipsychotics Decreased from 36.1% to 28.8% (20.2% reduction)



Notes on Special Cause Variation:

- March 2018 to November 2018: Trend of six or more consecutive points continually decreasing
- September 2018 to April 2019: Shift of eight or more points in a row below the centreline

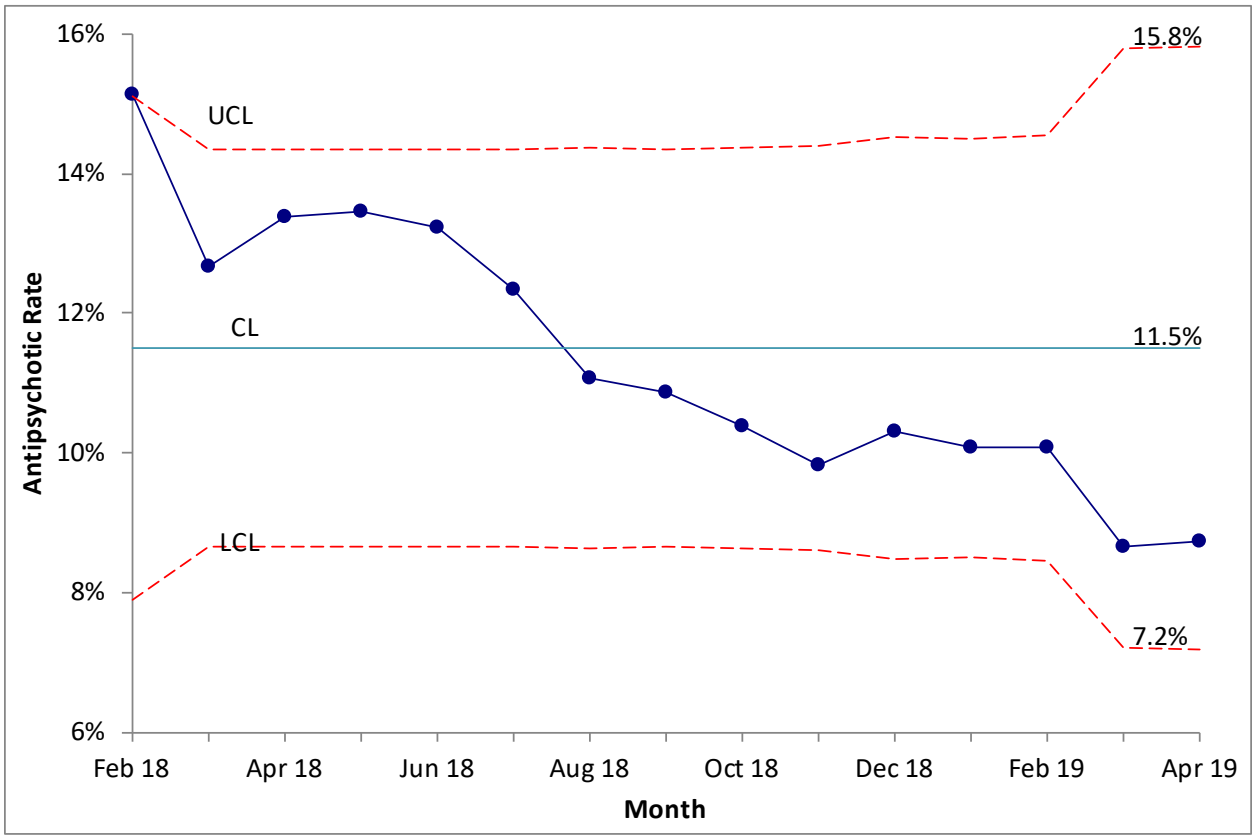
Fig. 9: Potentially Inappropriate Use (Without Diagnosis of Psychosis): Scheduled Antipsychotics Decreased from 26.3% to 23.0% (12.4% reduction)



Notes on Special Cause Variation:

- September 2018 to April 2019: Shift of eight or more points in a row below the centreline

Fig. 10: Potentially Inappropriate Use (Without Diagnosis of Psychosis): As Needed Antipsychotics Decreased from 13.2% to 10.2% (22.9% reduction)



Notes on Special Cause Variation:

- May 2018 to November 2018: Trend of six or more consecutive points continually decreasing
- August 2018 to April 2019: Shift of eight or more points in a row below the centreline

Residential Assessment Instrument (RAI-MDS 2.0)

The Residential Assessment Instrument (RAI 2.0) is a standardized assessment, which is completed on residents in long-term care. It includes a variety of quality indicators and outcome measures. The RAI dataset was used to further support the evaluation on Clear's impact on reducing the use of antipsychotics. This data is submitted as part of the Continuing Care Reporting System (CCRS) managed by the Canadian Institute of Health Information (CIHI).

RAI data collected and submitted by care homes in British Columbia were provided by CIHI for the time periods between 2014 Q4 to 2019 Q1 (18 fiscal quarters from January 2015 to June 2019 inclusive). The specific indicators used in this evaluation are in Table 5 below.

Table 7: Inter-RAI 2.0 Indicators

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
Other Clinical Characteristics and Resource Utilization	
Medication Use:	% on analgesics, antianxiety, antidepressants, hypnotics
Resource Utilization:	% of residents with at least one hospital stay % of residents with at least one emergency room visit

The evaluation team reviewed the CIHI data to understand whether changes in antipsychotic use as a result of Clear Wave 3 made a difference to select quality indicators (QI) (Appendix G). The analysis tested the following questions:

- Have care homes that participated in Clear Wave 3 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 3 seen a change in QI indicators over time/throughout the course of the Clear Wave 3 initiative?

Residential Assessment Instrument (Inter-RAI 2.0) Results

Care homes participating in Clear Wave 3 showed a statistically significant reduction in the percentage of residents on antipsychotics without a diagnosis of psychosis over time. Care homes that did not participate in the initiative did not reduce their antipsychotic use during this timeframe.

- According to the CIHI Inter-RAI data, Clear care homes decreased the percentage of residents on antipsychotics without a diagnosis of psychosis from 32.7% to 27.6%, while the rate among non-participating care homes remain unchanged at 22.6% from 2017 Q4 (December 2018) to 2019 Q1 (June 2019) [3].
- Fig. 11 and Fig. 12 show the antipsychotic rate of participating care homes decrease, getting closer to the provincial average.
- When examining the rates within the participating care homes over time, there is a statistically significant difference between the start (2017 Q4) and end of Clear Wave 3 (2019 Q1) ($p<0.05$).

Fig. 11: Potentially Inappropriate Use of Antipsychotics (Adjusted Rate), RAI-MDS 2.0

Note: the thicker line indicates the period Clear Wave 3 was occurring.

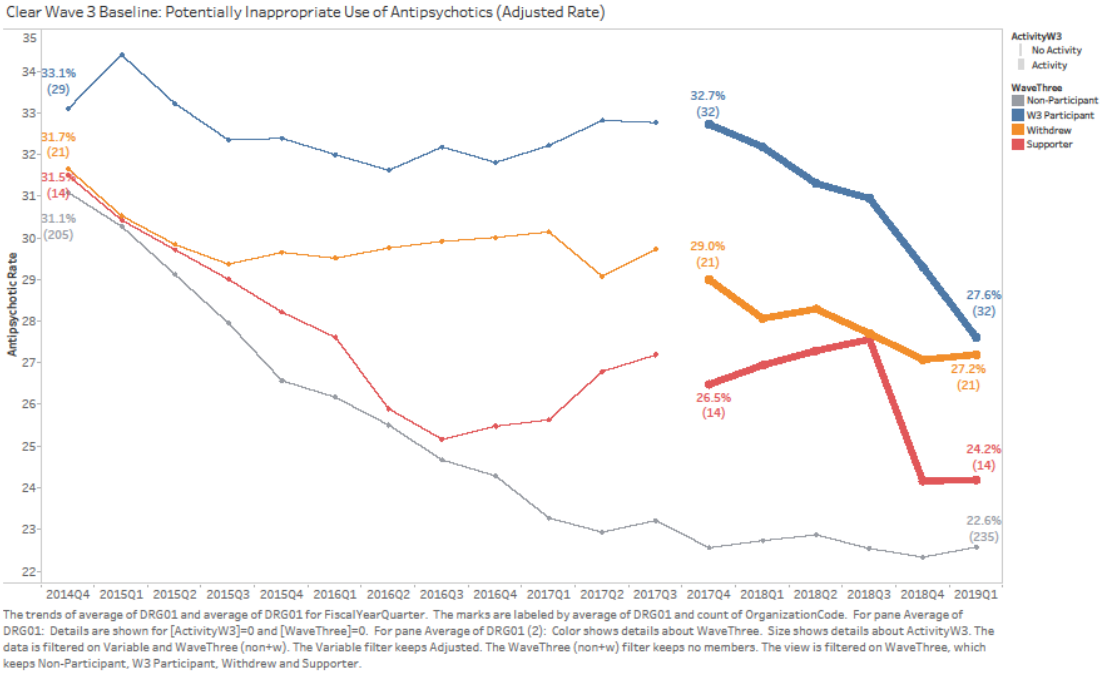
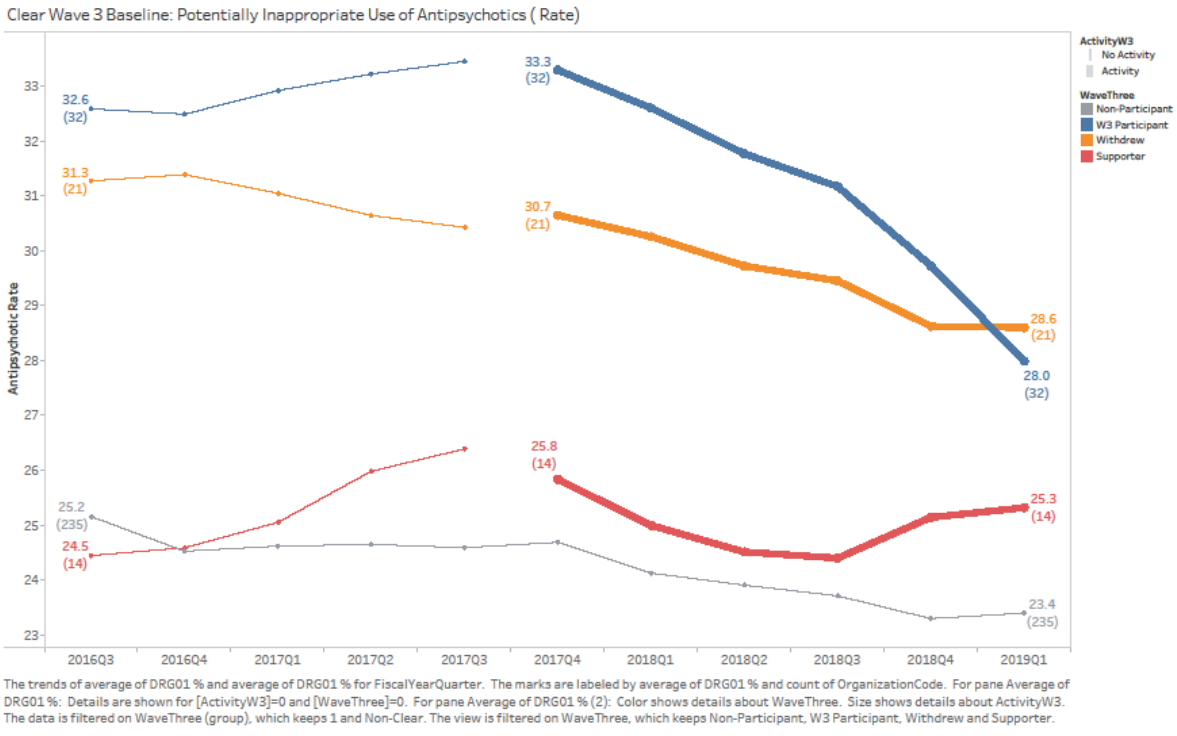


Fig. 12: Potentially Inappropriate Use of Antipsychotics (Unadjusted Rate), RAI-MDS 2.0

Note: the thicker line indicates the period Clear Wave 3 was occurring.



CONSTRAINTS, LIMITATIONS & ADMINISTRATIVE DATA

Monthly Data Reports

Data collected directly from care homes was generally well documented; however, there were opportunities for data inaccuracies, biases (in qualitative data) and incompleteness. This can be attributed to the variety/number of different people providing data and specific 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

The data requested through the Ministry of Health/CIHI database (Inter-RAI 2.0) were available only as aggregate data; in essence, the data presented information that represented the whole care home. Since some care homes only implemented Clear in certain parts of the home (e.g., in one unit), the data may therefore understate the initiative's impact.[5] In addition, because it can take months to fully discontinue a patient's antipsychotic medications, a time lag is expected for changes to be observed in the data.

Lack of Resident/Family Member Perspective

The initiative focused on improving care for residents with dementia in long-term care homes. In many cases, the patient 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 relied on the case studies, as well as staff reports and CIHI quality indicators to assess the impact on residents.

DISCUSSION & THEMES

Over the course of the collaborative, several themes emerged regarding learning for clinical and long-term care, learning related to collaboratives and quality improvement processes, success criteria and systematic barriers to implementation.

Appropriate Antipsychotic Use in Long-Term Care

A consistent theme that emerged broadly across all data sources was the increase in medical knowledge regarding appropriate antipsychotic use, including a better understanding about the health impacts of antipsychotics and the current practices for prescribing and culture of use. Several teams reported the positive impact of setting aside time to explain impacts to staff and clinicians and how this influenced them to evolve their behaviours and attitudes towards antipsychotics.

In certain cases, this helped with family members' attitudes towards antipsychotics. Some family members were previously unaware of the risks involved with the use of specific medications. It was noted that a new understanding of how pain manifests in people with dementia leads to potentially more effective ways of managing that pain – resulting in fewer challenging behaviours.

Culture of Medication Use

In addition to a deeper understanding of the health effects of antipsychotic medications, many clinicians reported a change in the overall culture of medication use and dementia care in their care homes. For example, several

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

sites reported an increase in 1:1 time with residents that led to a decrease in challenging behaviours and symptoms.

Another care home indicated a positive shift to individual care goals rather than tasks. One site piloted an increase in 1:1 time with residents through volunteer visiting and offering care staff additional "coffee break" time if they chose to spend that time visiting with a resident. However, some clinicians, including care aides, indicated they struggled to find enough time to spend with residents and there were a few comments related to the challenge of providing 1:1 support without compromising other schedules. Strong leadership support was key in ensuring staff felt empowered with the flexibility in their schedule to spend this additional time with people.

Interdisciplinary Team Collaboration

This shift towards person- and family-centred care meant engaging an interdisciplinary team in care planning with the person and family. This was highlighted within the medication reviews and care conferences that incorporated physicians and pharmacists, as well as other clinicians who were interested in pursuing non-pharmacological approaches to improve care. Some care homes reported they were able to adapt and apply the physician template letters and medication change request forms that were provided through Clear. Feedback from these care homes reflected their physician community was supportive of the straightforward summary of the care plan and goals, as well as a concise overview of the Clear approach and program. One clinician explained that physicians were more comfortable with change when they were aware the change in medication was being complemented by a reflection in the care plan to support potential behaviour changes.

> **Quote from Storyboard**
>
> *"We had all these residents on antipsychotics and because they did not have behaviours [issues] they did not come into our radar to have that reassessed in a focused way."*

One overarching element that appears to have made a difference in many care homes is the adoption of a person- and family-centred care approach.

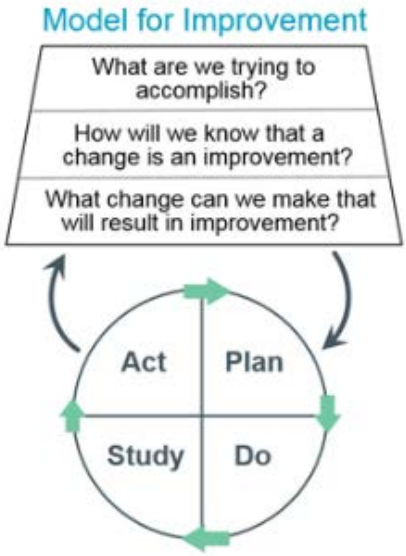
Site reports, conversations with Improvement Advisors and presentations offered during the regional workshops noted care homes often started with as needed antipsychotics. This is partially reflected in the data clean up many care homes undertook at the start of the initiative.

One Director of Care reported that having the opportunity to review each resident and question why they were on an antipsychotic or as needed antipsychotic was particularly helpful. For example, it was noted that people can be reactive or transitional when they first arrive and they may have antipsychotics prescribed to ease that transition. Many found there were times the antipsychotics were never used and/or never removed from the individual's chart and were still showing up in the data. Clear provided motivation for a comprehensive review and reframing of why these medications were prescribed and for staff to reflect if antipsychotics on the chart were current or needed.

Quality Improvement and Standardized Tools

Clear teams were supported to use the Model for Improvement [1] to accelerate change in their care homes (Fig. 13). As some teams became more advanced, they were supported in building their knowledge sequentially (sometimes even getting them to 'go slow, to go fast') and/or suggesting different conditions under which to test their change. For instance, one of the Clear leads focused on getting P.I.E.C.E.S. training/changing team culture before trying any other changes. This team was coached to identify where reducing/eliminating antipsychotics would occur in the P.I.E.C.E.S. training and was encouraged to try this change with one patient, on one unit with one physician (a physician they already knew who had supported other similar changes).

Fig. 13 Model for Improvement



Many Clear teams indicated when they started participating in the initiative, staff had fears about safety (e.g., residents becoming more aggressive). Teams were coached to focus on completing PDSA cycles and to include any predictions from staff regarding potential for behaviour concerns. As part of this process, it was important to have tools and systems in place to track and measure behaviours and/or identify patterns in behaviour change throughout the day or during specific activities (e.g., the behaviour change always occurred at lunch time or the resident would become aggressive when someone moved their leg – indicating they had pain). The standardized tools presented during the Clear webinars and available on the website were helpful for teams and made data collection less of a burden. They provided consistency over the course of a day or week and a forum to involve the entire team in monitoring the care and behaviour of an individual.

Teams also expressed the importance of starting small and leveraging their gains over time. Some teams noted that they experienced setbacks after their initial attempts to reduce antipsychotics were unsuccessful. Similarly, teams noted how effective it was to build on the successes of those who had medications effectively reduced or discontinued.

> *"Antipsychotic medication reductions have not worked for everyone; however, they have worked well for residents we never thought possible."*
>
> - Clear Survey Respondent

Care homes also built on each others' successes. One Director of Care reported that one of their most resistant clinicians was transformed after attending a Regional Workshop. The clinician felt inspired by the stories of success and issues other care homes had experienced and shared. The person valued the opportunity to meet others dealing with similar issues/barriers and learning how they had overcome them to be successful. The individual noted how easy it is to feel discouraged and isolated and having

the chance to discuss with others how they overcame these obstacles in a face-to-face setting was impactful. The clinician returned to the community and became a Clear champion and one of the most active proponents of the program.

Throughout the surveys, in-person workshops, 1:1 coaching calls and webinars, all teams highlighted the value of individual tools and resources that were shared broadly between teams and included on the website. This is reflected in the consistent website traffic (despite the winding down of the collaborative), as well as in all the unique tools mentioned by participants as valuable. The tools highlighted by the surveys were included in the resources section of the website.

Teamwork and Communication in the Workplace

In previous waves, several participating care homes immediately enrolled in the Teamwork and Communication Action Series after Clear had concluded. As part of Wave 3, the content from the Teamwork and Communication Action Series was embedded as a component of the webinar series with modifications that eliminated the usual team homework and coaching sessions.

Attendance at these webinars was lower than others, which may have been as a result of many care homes being previously exposed to the content, lack of understanding of the connection between teamwork and communication to the overarching Clear objectives, staffing transitions within the Council as well as reduced capacity of teams during the summer months.

Despite lower attendance, Clear teams reported a positive shift towards increased teamwork and communication during the initiative. This included greater diversity of disciplines in care conferences, care planning and delivery and an increased understanding of care goals (by all levels of staff and leadership). Teams also reported an increased capacity for quality improvement activities and increased team member satisfaction through a perceived improvement to dignity and quality of life for those living with dementia.

Outside of the formal training in teamwork and communication, many participants believe the in-person workshops, dedicated time to come together around a common goal, standardized behaviour tracking and increased understanding of how to create comprehensive, interdisciplinary care also contributed to the shift of how individuals with BPSD were treated in the system.

Resourcing

Clear aligns with other initiatives in the province, including DementiAbility (Northern Health) and P.I.E.C.E.S. (Vancouver Coastal Health). This complement is reflected in the downward trend in provincial antipsychotic use, but also may have impacted reporting rates for Clear. Some teams reported struggling to differentiate between initiatives or articulating the Clear-specific activities occurring at their sites, given the amount of other activities also underway. It is possible that these other initiatives may have diluted the reporting frequency for some teams. However, leveraging the synergy created across initiatives was reported to have helped improve some of the relationships with physicians and to have generally improved medication reviews.

There were numerous comments regarding the need for extra capacity for staff and ongoing investment in resources and training. One interim survey respondent noted the following requirement to ensure sustainment.

> *"More staff! Facility investment to continue with project and enhancing team approach to inform all staff of goals and successes in program and how this improves residents' quality of life."*
>
> - Clear Survey Respondent

Exploring organizational energy was an important lens to apply throughout Clear as relationships were built and team coaching continued. Recognizing that organizational energy within the care homes was impacting the Clear leads and teams in different ways allowed a better understanding of underlying issues related to lack of reporting. Events that impacted some sites included an outbreak on a unit, accreditation underway or project staff turnover. Coaching was tailored to the energy levels of teams, such as supporting them to put together a storyboard they would present or adjusting deadlines to accommodate site-level needs. Efforts also focused on collaboration with leads to identify where Clear could complement other initiatives, such as those listed previously.

Individual relationships were fostered with leads from each of the health authorities to plan for sustaining changes implemented during Clear. These relationships grew from all waves of Clear, particularly those where Improvement Advisors were included in the membership of specific health authority working groups. Including health authority leads in coaching calls elevated participating care homes' access to health authority-specific resources and training over and above offerings available through the Clear initiative. It also facilitated a better understanding for care homes around the complementary work underway in local Divisions of Family Practice.

Towards the end of the initiative, attempts were made to develop a network for the leads to connect to continue to share experiences and support each other. The idea was to create an avenue through which people working in long-term care who are actively participating in practice change in dementia care for residents could discuss and plan for addressing systemic barriers.

The initiative leads were brought together twice and attempts were made for a third meeting; however, several factors seemed to prevent a more formalized, sustainable network from forming. Attendance continued to be an issue, despite efforts to book times well in advance. The leads were faced with many competing priorities and may not have felt this was the highest priority at the time. In addition, trust and relationship-building takes time. Geography was likely a factor in slowing this down, as meetings were most often over the phone or WebEx and could not be accommodated in person. In addition, during Wave 3, there was turnover in the Improvement Advisor roles, which then required forming and fostering new relationships with participants and health authority leads.

Of the two "network" meetings that were held, significant progress was made utilizing videoconference as a preferred mode over teleconference and the meetings were structured to use humour and personal appeal to build relationships and shared goals. A good portion of the second meeting was spent discussing the topic for the final webinar (cannabis in dementia patients), which was a unique, relevant and engaging common topic.

It is recommended for the future this type of connection and support for health authorities be fostered early, regularly and in-person (if possible) in order to help ensure longevity of the project and to leverage policy recommendations and local approaches around shared systemic barriers.

Measurement

Progress reporting was particularly challenging in Wave 3. Many teams indicated a lack of capacity for the work required to provide monthly reports and data submissions, particularly as it related to pharmacy resources. Transitions of new residents from acute care may have had an immediate impact on reported rate of antipsychotic use at the care home. As teams were working to reduce antipsychotic use with existing residents, new arrivals would cause the percentage of antipsychotic use to increase again.

Coaching provided during the Improvement Advisor sessions helped participants to interpret the data from different cohorts of residents and, although this did not solve the systemic barrier of upstream antipsychotic usage during transition to long-term care, this analysis better indicated their efforts at the care home.

In Wave 3, teams measured not only discontinuations but also reductions in antipsychotic use. Teams were excited to see progress in both these areas and to showcase the impressive changes some residents had moving

to lower dosages even if antipsychotics were not completely discontinued. Given teams' feedback regarding their capacity for reporting, adjustments were made to allow reporting every other month. This still enabled teams to experience, celebrate and track their progress, without feeling overburdened or disengaged by it. Support was provided as much as possible to help teams with data reporting (particularly when pharmacy support was limited). For example, one team lost their pharmacist partway through the initiative and reporting was then taken over by another team member who required extra support to learn the tools. The key component in measurement here was to meet teams where they were at and support them to report as often and as accurately as they could.

Several teams still struggled to see the significance of their data and actions in Wave 3. Some attempts were made to collect all the data that teams were using (e.g., behaviour tracking, activity cart use) however, it was not possible to aggregate this data in a meaningful way due to its granularity. This meant the incentive for teams to continue tracking these metrics was low, given they did not immediately see the significance of their efforts or improvement changes in the data reporting.

Although the measurement tool had been adapted to track PDSA cycles as well as reductions, there was a gap with the knowledge translation of the significance and total utility of the tool. Some teams experienced barriers using Excel and suggested using an automated tool in the future, with consideration of embedding the tool into a web-based application. Teams also noted feeling like they were being judged through the data collection process– having something developed that was more approachable, celebratory or integrated into care may also help to mitigate those sentiments.

1:1 Improvement Advisor Support and Face-to-Face Workshops

Human factors are important to consider when evaluating the time Clear teams were able to dedicate to Council emails, phone calls, webinars and regional gatherings as well as the amount of time they had to process information. Since Clear Action and Improvement team leads often did not have dedicated time set aside to work specifically on Clear, it could be difficult to make connections. One of the 'forced functions' that was attempted in this wave was to always include links to the resources webpage in any emails or follow up communication from Improvement Advisors to teams. This conditioned teams to know where to go for information even if they could not locate an original message. It also illustrated the importance of starting early and reinforcing often to support teams with multiple modes of sharing information.

Teams reported feeling energized and connected after the face-to-face workshops:

"Face-to-face meeting was fantastic makes me more likely to reach out and connect to the Clear Team."

"We aren't alone in our struggles and difficulties."

Having teams participate across the province was challenging but worthwhile. Offering regional workshops rather than one single provincial workshop enabled teams who may have otherwise been unable to travel to a central location to attend and connect with other care homes in their region who likely had similar cultural and local challenges. However, not being able to connect more broadly across the system meant that other relationships did not form – e.g., between rural sites in different health authorities. The pilot of the decentralized, semi-virtual workshop in northern BC was a success, providing face-to-face interactions with teams and Improvement Advisors, while still fostering some provincial connections.

It was repeatedly noted by teams that having access to protected time for improvement efforts was a struggle and having a day together to work on Clear was a big asset. Teams also noted the value in having a 'faces to names' connection with Improvement Advisors and the Council team. However, it was also noted that this was challenging at times due to changes in leads and staffing at the Council. There was positive feedback from teams regarding the opportunity to work directly with faculty and clinical leads, as there is richness in being able to have access to expertise from people who have been through Clear and can provide insight to challenges and barriers that current teams were facing. This was especially true of several Wave 2 care homes who were able to attend and share stories of success at the regional workshops, which Wave 3 care homes found inspiring and engaging.

Value of Celebrating Positive Deviance

Although there were clearly some common systemic barriers facing these teams, about one-third of the teams had great success with report submissions and showing progress on the number of residents either on reduced or discontinued antipsychotics. They also showed progress on team culture and their team care plans for residents that included non-pharmacological approaches. Exploring positive deviance enabled Clear leads to identify unique solutions from these teams and to celebrate their successes.

The teams were approached to present at regional workshops on the specific changes they had made within similar resource constraints as the other teams involved in Wave 3. Positive deviants were celebrated across the broader collaborative through interactive sessions where teams were asked to detail the barriers they had identified and describe how they had come up with successful solutions. Since the workshops were regionally based, this helped the teams tap into a new community of existing resources within Clear.

KEY LEARNINGS

Unlike previous waves of Clear, Clear Wave 3 was unique in that it specifically targeted 123 care homes that were overprescribing antipsychotics on residents without diagnoses of psychosis. There is evidence around the key components of effective collaboratives based on the Breakthrough Series model; however, these learnings assume that high performing, early adopters and motivated teams constitute most of the membership of the collaborative. As such, the following are consolidated learnings of special consideration when running a collaborative based on the Clear Wave 3 recruitment model as reflected in the evaluation:

1. Be clear on the time commitment required. Ensure teams enrolled in the collaborative have a clear understanding of the time commitments required to be successfully participate. This was proven especially true of those 'voluntold' sites in which leadership may have been eager to commit without giving adequate thought to the resources and capacity required to support teams to be successful. Incorporating a readiness assessment would explore the overall potential and capacity for change at sites.
2. Plan for lower levels of engagement. The collaborative approach is specifically designed and targeted at high performing teams that have the capacity, interest and engagement to create change and take on quality improvement work. Careful consideration should be given prior to applying the collaborative model to enforce or incentivize low performing or struggling sites. Without a high level of engagement and interest, the collaborative will not meet the threshold of momentum required for action.
3. Understand where you are starting so you know where to go. Conduct a broad-based survey of team attitudes and knowledge toward the initiative topic as a baseline for measuring impact at the conclusion of the collaborative. Improvement in team morale, engagement and job satisfaction were reflected in teams participating in the collaborative. In sites that may be struggling, involvement in a collaborative may provide additional positive outcomes around team and individual performance. A baseline survey or assessment of these components may help track some of these additional benefits of team participation.

4. Consider complimentary initiatives and their impact on participation. During Wave 3 of Clear, there were a number of similar initiatives happening in the province. While these may have positively impacted the results of Clear, they may have also impacted the capacity of care homes to fully participate in the collaborative. Prior to embarking on improvement work with lower-capacity teams, it may be helpful to conduct an environmental scan of complementary initiatives and consider their potential impact on participation.
5. Make participation easy. Staff turnover and time to plan and execute tests of change were consistently cited as barriers for Wave 3 teams. Help remove barriers to participation by enabling step-by-step milestones to guide improvement. Provide resources and tools to facilitate engagement and participation for teams that may have additional barriers to success.
6. Keep measurement simple and accessible. Data collection was frequently noted as a major burden for participating teams. Integrating a low barrier progress survey, as well as identifying progress touch points and more universal process measures for teams may help teams gain traction in early stages of the collaborative. These low barrier measures will help teams build energy for change. This increased sensitivity and responsiveness in measures may help increase engagement.
7. Build relationships and be prepared for turnover. Lower performing teams also seemed to experience a high degree of turnover. Teams experiencing high turnover can struggle with gaining momentum for change. Plan for turnover and help mitigate its impact by maintaining relationships with all participants, creating contact database, ensuring shared leadership, developing transition tools and documentation and ensuring effective communication at all levels. Carefully track involvement throughout the initiative to ensure communication with the appropriate people, especially as teams' transition or experience turn-over.
8. Ensure support from leadership. Leadership support helps to remove barriers to participation and enable team members to have protected time to participate by collecting data, reporting on progress and attending initiative events. Establish a formalized letter of commitment from leadership at the launch of the collaborative, as well as a clear reporting process to help maintain engagement. Build progress reporting into leadership meetings at the local and regional levels and set out clear expectations for participation at the onset of the collaborative. Establish a formal process for reviewing and addressing systemic barriers that may surface during the collaborative. Offer a certificate, ceremony, or accreditation to help incentivize team progress and participation.

Notable progress was made towards the goals and objectives of this collaborative. Ultimately, long-term care homes participating in Clear Wave 3 showed a statistically significant reduction in the percentage of residents on antipsychotics without a diagnosis of psychosis over time. The average rates of antipsychotics being used at participating care homes was closer to the provincial average at the end of the initiative compared to the beginning.

The recommendations of this evaluation and discussion in this report can be used to further other initiatives that aim to improve quality of care for older adults as well as to inform future collaboratives, especially those aimed at engaging sites that are underperforming, or where the site traditional collaborative model and modes of engagement are less effective.

CONCLUSION

Clear Wave 3 demonstrated that interdisciplinary teams can effectively work together and implement diverse strategies to improve the quality of patient care in long-term care homes. Through various methods including

regional workshops, webinars, coaching and reporting, Improvement & Action teams at long-term care homes were able to decrease the percentage of residents being prescribed antipsychotics. In doing so, there was a shift towards person- and family-centred care practices and increased dignity for older adults.

Notable progress was made towards the goals and objectives of this collaborative. Ultimately, long-term care homes participating in Clear Wave 3 showed a statistically significant reduction in the percentage of residents on antipsychotics without a diagnosis of psychosis over time. The average rates of antipsychotics being used at participating care homes was closer to the provincial average at the end of the initiative compared to the beginning.

The evaluation and discussion in this report can be used to further other initiatives that aim to improve quality of care for older adults, as well as to inform and strengthen future collaboratives to optimize chances of success.

APPENDIX A: GLOSSARY

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.

BPSD: Behavioural and psychological symptoms of dementia.

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- and family-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).

Process Measures: Activities or results that are measured throughout initiative to ensure progress is on track.

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 [8]: effectiveness, appropriateness, accessibility, acceptability, safety, equity, efficiency.

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.

Special Cause Variation: Outcomes that are outside of the expected variation in a system and are used to indicate changing circumstances.

APPENDIX B: LONG-TERM CARE HOMES COMMITTED TO MAKING IMPROVEMENTS IN CLEAR WAVE 3

Wave 3 Action & Improvement Teams

1. Aberdeen Hospital
2. Augustine House/Haven House
3. Beacon Hill Villa
4. Bevan Lodge Residential
5. Cumberland Lodge
6. Czorny Alzheimer Centre
7. Dufferin Care Centre
8. Elim Village, The Harrison/Harrison West
9. Glacier View Lodge
10. Good Samaritan Wexford Creek
11. Gorge Road Hospital
12. Jackman Manor
13. Kiwanis Village Lodge
14. Nanaimo Seniors Village
15. Nanaimo Traveller's Lodge (Eden Gardens)
16. Peace Villa
17. Powell River General Hospital - Evergreen ECU
18. Qualicum Manor
19. Renfrew Care Centre
20. Richmond Lions Manor Bridgeport
21. Rotary Manor
22. Selkirk Place (Selkirk Seniors Village)
23. Shorncliffe
24. Simon Fraser Lodge
25. Sunridge Place - The Arbours
26. The Pines
27. The Residence at Morgan Heights
28. The Residence in Mission
29. Valhaven Rest Home
30. Valleyhaven
31. Willingdon Creek Village
32. Woodgrove Manor
33. Yucalta Lodge

Wave 3 Teams Withdrawn to Supporters

1. Acropolis Manor
2. Adanac Park Lodge
3. Comox Valley Seniors Village
4. Finnish Home
5. Fleetwood Place
6. Guildford Seniors
7. Heritage Square
8. Joseph Creek Village
9. Kamloops Seniors Village
10. Kinsmen Lodge
11. Langley Lodge
12. Maple Ridge Seniors Village
13. New Vista Care Home
14. Pine Acres Home
15. Rosemary Heights Seniors Village
16. Rosewood Manor
17. St. Judes Anglican Home
18. Stanford Place
19. Summerland Seniors Village
20. Waverly-Grosvenor House Ventures
21. White Rock Seniors Village

APPENDIX C: FACULTY MEMBERSHIP IN CLEAR WAVE 3

Faculty

- Anita Wahl, Clinical Nurse Specialist, Fraser Health
- Ann Marie Leijen, Consultant, Rebalance Rehab
- Ashok Krishnamoorthy, Geriatric Psychiatrist, Vancouver Coastal Health
- Carol Ward, Geriatric Psychiatrist, Interior Health
- Dacia Reid, Manager Program Practice and Education, Island Health
- Jasjit Gill, P.I.E.C.E.S. Representative and Educator, Vancouver Coastal Health
- Johanna Trimble, Patient Partner, Patient Voices Network
- Judy Macdonald, Clinical Pharmacist
- Katharine McKeen, Family Physician (Victoria)
- Marcia Bertschi, Quality Advisor, Northern Health
- Zainab Diesta, Director of Care, George Derby Centre

Partnership Alliance

- Alzheimer's Society of BC
- BC Care Providers Association
- BC College of Family Physicians
- BC Psychogeriatric Association
- College of Pharmacists of BC
- Denominational Health Association
- Division of Geriatric Psychiatry at UBC
- Ministry of Health
- Office of the Seniors Advocate
- Public Guardians and Trustee of BC
- SafeCare BC
- Worksafe BC

APPENDIX D: LIST OF REGIONAL EVENTS HOSTED IN CLEAR WAVE 3

Session	Date	Region	Location
1	January 26, 2018	Island	Nanaimo
2	January 30, 2018	Lower Mainland	Vancouver
3	February 8, 2018	Fraser	Surrey
4	February 14, 2018	Northern	Virtual
5	March 15, 2018	Northern	Fort St. John

APPENDIX E: LIST OF WEBINARS HOSTED IN CLEAR WAVE 3

Session	Date	Topic	Type	Attendance	Surveys Completed
1	December 4, 2017	Getting Started with Clear	Leadership		
2	December 14, 2017	Leadership and Coaching	Leadership		
3	January 11, 2018	Model for Improvement	Lead,ership		
4	January 16, 2018	Improving Patient Outcomes by Strengthening Teamwork and Communication	Leadership		
5	January 23, 2018	The Value of Measurement in Improvement Work	Leadership		
6	March 21, 2018	Engaging with Physicians	General	14	4
7	April 18, 2018	Antipsychotic Medications	General	31	8
8	May 9, 2018	Non-Pharmacological Approaches	General	33	8
9	May 24, 2018	Recreation Therapy	General	24	10
10	June 14, 2018	Exploring Foundations of Strong Teamwork and Communication	General	16	11
11	June 21, 2018	Leadership Check-in	Leadership		
12	June 28, 2018	Engaging in Effective Communication	General	21	2
13	July 12, 2018	Fostering Trust and Leadership	General	16	4
14	August 2, 2018	Navigating Conflict Successfully	General	14	7
15	September 13, 2018	Recreation Therapy - Tools of the Trade	General	15	6
16	October 11, 2018	Appropriate Use of Antipsychotics	General	22	6
17	November 22, 2018	Managing Pain	General	16	3
18	December 13, 2018	Spreading Sustainment	General	13	4
19	May 16, 2019	Final Celebration	General	30	5

*265 webinars attended in total

**78 surveys completed at the end of the webinars in total

APPENDIX F: 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 seniors through de-prescribing unnecessary medications and preventing adverse drug reactions.

Medication Reconciliation in Long-Term Care – an initiative by the Institute for Safe Medication Practices Canada (ISMP Canada). Reconciliation of seniors' medications on admission, discharge, and transfer of care is known to improve seniors' wellness. Health care providers need 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 six care areas in the first 48 hours of an acute hospital stay. The six care areas are: functional mobility; cognitive function; bladder and bowel management; nutrition and hydration management; pain management; and medication management.

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 person- and family-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 G: SUCCESSES & CHALLENGES HIGHLIGHTED BY TEAMS

Successes Noted in Qualitative Team Improvement Data

Successes		
• Need for increased staff engagement (13) • Maintain steady gains slowly (12) • Importance of teamwork (12) • Staff is engaged (10) • Finding antipsychotic reductions work (9) • Positive effects of antipsychotic reduction (9) • Data helping initiative (9) • Need more staff meetings/ time (8)	• Physicians are supportive (7) • Recreation therapy (7) • Clean data (6) • Pharmacy engagement (5) • Whole resident care (5) Learn data entry (5) • Need for increased physician engagement (4) • Behaviour tracking (4) • QI skills (3) • Learn from failures (3) • Hope (3) • Resident turnover (2)	• Medication changes not just antipsychotic (1) • Antipsychotic education (1) • Too much to process (1) • Staff turnover (1) • Medication changes not just antipsychotic (1) • Celebrate successes (1) • Targeted approach (1) • Alternative approaches to dealing with violence (1) • Need for increased AP education (1) • Target regular antipsychotics vs. As Needed (1) • Medication review process (1) • Sundowning (1) • 1:1 time (1) • Family engagement (1) • Other supporting initiatives (1) • Need resources (1)

Challenges Notes in Qualitative Team Improvement Data

Challenges		
• Staff (culture/time/FTE/ Resilience/education) (46) • Time (17) • Data entry (13) • No time for adequate documentation (12) • Time for education (11) • Staff turnover (11) • Physician relationship / engagement (11)	• 1:1 care (8) • Resident turnover (7) • Failed reductions (7) • Time for data entry (6) Update time and processes (6) • Families (5) • Resources for recreation therapy (5) • Lacking tools (4) • Accreditation (4)	• Communication (3) • IA connections (2) • Staff for recreation therapy (1) • Building renovations (1) Plateau (1) • APs started (1) • Medication reviews (1)

APPENDIX H: CIHI DATA ANALYSIS OF CLEAR WAVE 3

About the Dataset

Data was extracted from the Canadian Institute for Health Information's (CIHI) Continuing Care Reporting System (CCRS) using a self-serve report portal. 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 approximately 300 care homes in British Columbia for 18 quarters from 2014 Q4 to 2019 Q1 (Jan 2015 to Jun 2019 inclusive). Clear Wave 3 fell within quarters 2017 Q4 to 2019 Q1 (Jan 2018 to Apr 2019) and data were available for 31 of 33 participating care homes.

The QI indicators are 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 [3]. There were several limitations associated with this data set (as discussed in the Constraints and Limitations section on page 32).

Results

The six tables below report the hypothesis, statistical tests and results for five questions.

Among participating care homes, was there:

1. A decrease in falls? (Table A)
2. Fewer hospitalizations and/or ER (emergency room) visits? (Table B)
3. A decrease in the percentage of residents on antipsychotics without a diagnosis of psychosis? (Table C)
4. An increase in the percentage of residents with improved ADLs (Activities of Daily Living), cognitive function, behavioural symptoms and communications abilities? (Table D)
5. A change in antipsychotics correlated with an increase in other medications (e.g., analgesics, antianxiety, antidepressants and hypnotics)? (Table E)

The tables below outline the statistical tests that were run on the RAI dataset's quality indicators. They show statistically significant decreases over time for one indicator: the percentage of residents on antipsychotics without a diagnosis of psychosis.

The rate of decrease for this indicator was statistically significant. Participating care homes started with a much higher rate of antipsychotic use (32.7%) compared to non-Clear care homes (22.6%) in Jan 2018. By the end of the initiative, the participating care homes managed to reduce this gap by bringing their rates down to 28.5%, which is a 4.2% percentage point decrease.

Table A: Decrease of falls in participating care homes?

Indicator: Percent of residents who fell in the last 30 days (FAL02) Context: Falls may indicate presence of adverse drug events or other medications.		
Hypothesis	Statistical Test	Significance
Fall rates for Clear and non-Clear care homes are different.	Independent samples t-test	Not significant
Fall rates are different before and after Clear.	Paired t-tests comparing 2017 Q4 to 2019 Q1	Not significant
Results: - There is no statistically significant difference between the falls rate of Clear and non-Clear care homes over the course of the initiative.		

Table B: 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 2017 Q4 to 2019 Q1	Significant result comparing 2017 Q4 to 2019 Q1: Hospital Stays for Clear care homes is 9.8% compared to 7.5% (p=0.021, std. error=1.715)
Results: - 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. - There is statistical significance within the Clear group when looking at the change in % of residents with at least one hospital stay. Clear care homes reduced this rate from 9.8% to 7.5%.		

Table C: A 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 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	Significant results for all quarters between 2017 Q4 and 2019 Q1. Clear and non-Clear homes were significantly different to begin with.
Antipsychotic rates are different before and after Clear (for Clear and non-Clear)	Paired t-tests comparing 2017 Q4 to 2019 Q1	Significant result comparing 2017 Q4 to 2019 Q1: DRG01 for Clear care homes is 32.7% compared to 28.5% (p=0.003, std. error=1.303) for adjusted rate and 33.3% compared to 28.9% (p=0.004, std. error=1.403) for unadjusted rate. Not significant for non-Clear care homes.
Results: - Clear care homes have a statistically significant decrease in antipsychotic rates over time. Participating care homes made progress in reducing antipsychotic rates. Clear care homes decreased the rate by 4.2% (32.7% to 28.5%). - Non-Clear care homes did not make statistically significant reductions in antipsychotic rates. Over the same time frame, the rates increased slightly from 22.5% to 22.6% for non-Clear care homes.		

Table D: An 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 quality indicators to determine how Clear impacted residents on a broader level.		
Hypothesis	Statistical Test	Significance
QIs for Clear and non-Clear care homes are different	Independent samples t-test	Not significant
QIs are different before and after Clear (for Clear and non-Clear)	Paired t-tests comparing 2017 Q4 to 2019 Q1	Not significant result for Clear care homes. Significant result comparing 2017 Q4 to 2019 Q1: ADL05, ADL1A, BEHI4, COG1A, COM1A, MOB1A for non-Clear homes.
Results: - There were no statistically significant differences between the two groups within Clear Wave 3's timeframe. - Non-Clear care homes saw statistically significant differences in many QIs.		

Table E: Is there a change in antipsychotics correlated with an increase in other medications (e.g. analgesics, antianxiety, antidepressants and hypnotics)?

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)	Not significant for Clear care homes. For the non-Clear care homes:

		- A moderate positive linear correlation between antipsychotics and antianxiety (r=0.513) in 2019 Q1. - A high positive linear correlation between antipsychotics and antidepressants (r=0.820) in 2019 Q1. - A high positive linear correlation between antipsychotics and analgesics (r=0.815) in 2019 Q1.
Results: - Among non-Clear care homes (average care home), antipsychotic use is highly correlated with antidepressants and analgesics. Antipsychotics is moderately correlated with anti-anxiety.		

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