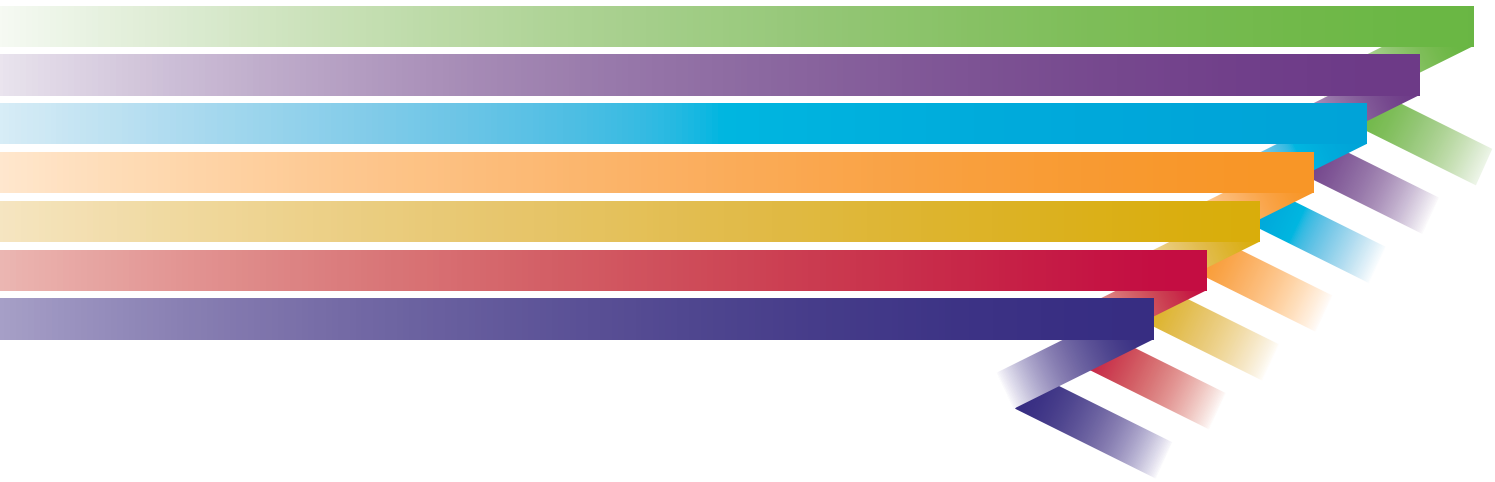

Provincial Evaluation of the Releasing Time to Care and Productive Operating Theatre Programs

British Columbia, 2012-2017

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

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WHO WE ARE

The BC Patient Safety & Quality Council (the Council) provides system-wide leadership to efforts designed to improve the quality of health care in British Columbia. Through collaborative partnerships with health authorities, patients, and those working within the health care system, we promote and inform a provincially coordinated, patient-centred approach to patient safety and quality.

We also provide advice and make recommendations to the Minister of Health.

In support of this mandate, we undertake activities that are determined through extensive consultation with our partners to define where we can best add value. Drawing on our resources, stakeholder relationships and the diverse expertise of our staff, we are at once a leader, an advisor, a partner, a facilitator, an educator, and a supporter.

We also provide a bridge to the best knowledge in health care quality available across Canada and beyond. We seek out national and international innovation of value to BC, adapt these new ideas to meet the needs of our health care system, and work with our partners to put them in place. Releasing Time to Care is one example of this work.

We would like to thank all participating Releasing Time to Care teams in BC for their openness in sharing their stories, data, challenges, and accomplishments.

This report, celebrating their impressive achievements, would not have been possible without their hard work and valuable contributions.

They inspire us every day!

EXECUTIVE SUMMARY

Originally developed in 2007 by the National Health Service (NHS) in England, The Productive Series encompasses module-based improvement programs in various areas, including Releasing Time to Care (RT2C) for acute, mental health, residential care, and community-based settings, and The Productive Operating Theatre (TPOT) for operating room teams.

Using a grassroots, self-directed approach, RT2C has yielded impressive results. The key to its success is that improvements are driven by multi-disciplinary teams working at the point of care. It empowers staff and physicians to ask difficult questions about practice and to re-design and streamline the way they work by focusing on four core areas: safety and reliability of care, value and efficiency, team performance and staff well-being, and patient experience and outcomes.

Prior to implementation in Canada, early observations of the Productive Series' impacts in England were promising for its application in international health care settings. It had been shown to improve teamwork, communication, and culture, leading to improved health outcomes for patients, lower costs for the organization, and lower staff absence and turnover rates as a result of more engaged and productive teams.[1] [2] Inspired by this success, the program first came to BC in 2012 and was implemented by four acute demonstration units in Vancouver Coastal Health. Once it became evident the program could succeed here, the Council began supporting the spread of RT2C throughout BC in 2014. There are now 53 teams actively implementing RT2C across 28 sites and 8 organizations throughout the province.

As with any improvement work, it is important to collect and review data to understand whether the program is achieving intended results. RT2C is now well established in BC, and it was time to undertake a province-wide evaluation to answer the following questions:

1. Is RT2C improving quality in BC's health care system?
2. What are the key factors for success with the program?
3. Does RT2C contribute to improving workplace culture for participating teams?
4. How effective is this program in supporting improvement in the four core areas of focus?
5. What impacts are we seeing on direct patient care as a result of the program?

The evaluation approach was co-created with input from the RT2C Provincial Leadership Committee, executive sponsors, point-of-care team members, and the provincial faculty network. In total, it included analysis of 229 unique quantitative datasets from 41 teams, interviews with 19 individuals from seven teams, a provincial online survey in September 2016 (response rate = 74/300, 25%), and a review of anecdotal qualitative feedback received directly from teams over the past five years. Data were shared voluntarily, as teams are not required to submit results to the Council on a regular basis. In turn, the evaluation is somewhat limited and does not provide a comprehensive summary of all of the RT2C-related work happening throughout the province. All data were mapped against the four core areas of program focus and seven dimensions of BC's Health Quality Matrix.[3]

Of the quantitative data received, 84 datasets (37%) met the criteria for improvement, 27 (12%) did not, and 118 (51%) did not include sufficient data to reach a conclusion one way or another. There may be a variety of reasons for which so many datasets were inconclusive, including: shifting priorities, changes in staffing or leadership, teams having begun tracking a measure quite recently, teams having discontinued measurement prematurely, teams being too young (those that began in 2016 or later may not yet have had enough time to achieve results; 23 active teams fall into this category), or other unknown variables. Of the teams submitting data, 27 of 41 (66%) have seen improvement on at least one measure, and 21 of those 27 teams (78%) shared data showing improvement on multiple measures. Seven teams (17%) did not submit any data showing improvement, while the remaining seven (17%) did not submit sufficient data to say one way or another.

Promisingly, the evaluation revealed improvements in all four areas of program focus (though it is important to note that progress is not consistent across all teams; some have excelled and accomplished a great deal, while others struggle to establish regular program practices or consistently collect and analyze data). The most commonly collected measures across teams were: patient experience and satisfaction, direct care time, Clostridium difficile incidence, staff satisfaction, Methicillin-resistant Staphylococcus aureus incidence, and falls. The range of success varied widely depending on the measure. For instance, 0% of teams collecting data on unplanned absence and overtime have sufficient data to confirm positive results, while 100% of teams collecting data on pneumonia, hand hygiene, unnecessary motion, and staff satisfaction have seen improvement. The qualitative portion of this evaluation revealed clear support for the program and a strong belief in its ability to improve staff well-being, in particular. Impacts in this area relate to staff engagement, empowerment, team culture, and professional development.

Qualitative feedback also validated previous findings on important factors for success with the program. These include: protected time for staff, a balanced and complementary team, project leader and facilitator support, constant communication, leadership visibility and support, patience and ongoing commitment, alignment with organizational strategic direction, and focus on a balanced set of measures. Teams are hindered by paying insufficient attention to these key areas, as well as by additional barriers, such as: resistance and change fatigue, turnover and unplanned absence, workload, and resource constraints.

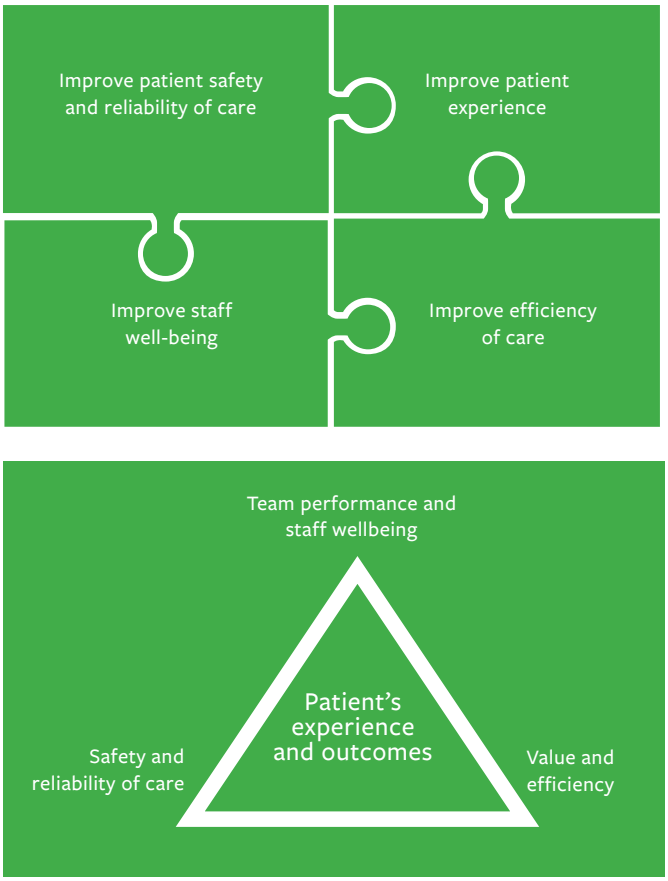
The evaluation identified four primary ways in which the Council will focus its efforts moving forward. These include: helping teams to increase attention on measurement (particularly direct care time), supporting greater access to standard collected measures, enhancing education and skills-development for teams, and developing relevant resources for the provincial network.

SECTION 1: PROGRAM OVERVIEW AND BACKGROUND

OVERVIEW

Originally developed in 2007 by the National Health Service in England, the Productive Series encompasses several module-based improvement programs designed for implementation across various care settings. Using a grassroots, self-directed approach, the programs within the Productive Series support multi-disciplinary teams to lead improvements at the point of care. They empower staff and physicians to ask difficult questions about practice, collect and analyze data to inform decision-making, and streamline the way they work.

Releasing Time to Care (RT2C) and The Productive Operating Theatre (TPOT) are two programs within the Productive Series. RT2C, originally developed for acute and mental health teams, has also been adapted in BC for residential care and community-based settings. TPOT is specific to the operating room. Although they are each unique, because both RT2C and TPOT fall under the Productive Series umbrella, their similarities outnumber their differences. For instance, both focus on the same four core areas of improvement: safety and reliability of care, patient experience and outcomes, value and efficiency, and team performance and staff well-being. In addition, they both begin with the same foundational modules, followed by process-related modules specific to the different care settings in which they are applied (see "Program Modules" for details).



Core areas of focus: RT2C (top) and TPOT (bottom).

For the purpose of this report, when we refer to "RT2C" or "the program" we mean both RT2C and TPOT as they are implemented across all care areas. When we refer to "patients" we mean patients in acute settings, mental health and community-based clients, as well as residents living in long-term care.

PROGRAM MODULES

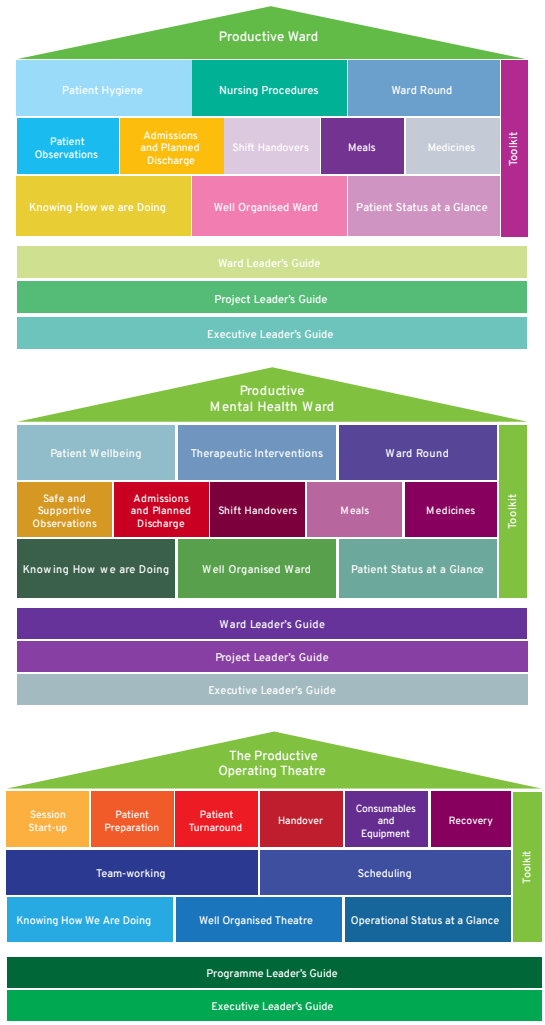
Both RT2C and TPOT begin with a focus on the following three foundational elements, followed by additional process-related modules that allow further customization for each care setting:

FOUNDATION 1: "Knowing How We're Doing" focuses on collecting and analyzing measures in real time to problem-solve as a team and make informed decisions about improvement.

FOUNDATION 2: "Well Organized Ward/Theatre" explores how to organize the physical environment to ensure maximum efficiency and safe provision of care.

FOUNDATION 3: "Patient/Operational Status at a Glance" concentrates on displaying key information in a central place to reduce interruptions and improve communication and flow.

Additional process-related modules allow further customization for each care setting (modules for each program are represented by the different boxes in the house models to the right).



Top to bottom: Productive Ward modules (RT2C in acute, residential care, and community settings), Productive Mental Health Ward modules (RT2C in mental health settings), and The Productive Operating Theatre modules (TPOT in operating room settings).

SUCCESSES IN ENGLAND

Prior to implementation in Canada, early observations of the Productive Series' impacts in England were promising for its application in international health care settings. It had been shown to improve teamwork, communication, and culture, leading to improved health outcomes for patients, lower costs for the organization, and lower staff absence and turnover rates as a result of more engaged and productive teams.[1] [2]

Some highlights of achievements in England include:

- 42% increase in direct care time (from 17.7% to 42.5%)
- 56% reduction in MRSA infections (from 16 to 7 over a 2-year period)
- 78% reduction in C. difficile infections (from 77 to 7 over a 3-year period)
- Reduced annual incidence of pressure ulcers (from 0.8 to 0.6 over a 4-year period)
- Increased patient care ratings of "very good" (from 71% to 84%)
- Reduced staff absence rates (from 5.2% to 4.0%)

BACKGROUND IN BRITISH COLUMBIA

Inspired by the program's success abroad, the Productive Series first came to BC in April 2012. Vancouver Coastal Health (VCH), with the support of the Council, implemented RT2C as a demonstration project across four acute units at Richmond and Squamish Hospitals. Once it became evident the program could succeed here, the Council began supporting the spread of RT2C throughout BC in spring 2014.

In total, 71 teams have now been trained across 35 sites and 10 organizations in BC (Appendix A), with further expansion at Fraser Health and Vancouver Coastal Health anticipated in 2017. Of these 71 teams, 53 are currently active. As is often the case with large, voluntary training opportunities, not every team that completed initial training has followed through with implementation. In BC, two trained teams never began and 16 others started but discontinued within a year or two (including all three TPOT teams). Others go through periods of high and low activity, but maintain active status with the program. The reasons for this vary by site and organization; anecdotal feedback suggests these may relate to leadership interest, staffing changes, workload, and other factors.

To our knowledge, the numbers to the right are up to date at time of publication in August 2017.

	TOTAL	ACTIVE	INACTIVE
# OF TEAMS	71	53	18
# OF SITES	35	28	7
# OF ORGANIZATIONS	10	8	2

	TOTAL	ACTIVE	INACTIVE
PRODUCTIVE WARD (ACUTE)	37	32	5
PRODUCTIVE WARD (COMMUNITY)	6	3	3
PRODUCTIVE WARD (RESIDENTIAL CARE)	8	7	1
PRODUCTIVE MENTAL HEALTH WARD (MENTAL HEALTH)	17	11	6
PRODUCTIVE OPERATING THEATRE (TPOT)	3	0	3

THIS EVALUATION

The Productive Series has now been underway in BC for five years. While constant examination of progress at the unit and site level continues (and is fundamental to the program's design) this report provides the first province-wide look at RT2C's collective achievements since implementation began in 2012.

The purpose of this evaluation is to showcase a wide range of accomplishments from BC teams, identify the areas in which teams are focusing, understand key enablers and barriers to success with the program, and explore challenges and opportunities for the future. While there are many achievements worth celebrating, there are also areas in which teams are not seeing improvement; we have summarized both in order to provide a balanced analysis of the program's impacts.

Furthermore, it is important to note that progress is not consistent across all teams and sites. Some teams have excelled and accomplished a great deal, while others struggle to establish regular program practices or consistently collect and analyze data. We are encouraged to see that 27 of the 41 teams submitting data for this evaluation (66%) have seen improvement on at least one measure, and 21 of those 27 teams (78%) have data showing improvement on multiple measures. Seven teams (17%) have not yet seen improvement, while the remaining seven (17%) do not yet have sufficient data to say. Of the 53 active teams, 23 were trained in 2016 or later and are considered "young" teams; most of these do not yet have sufficient data to contribute to this analysis.

ULTIMATELY, THIS EVALUATION SEEKS TO ANSWER THE FOLLOWING QUESTIONS:

1. Is RT2C improving quality in BC's health care system?
2. What are the key factors for success with the program?
3. Does RT2C contribute to improving workplace culture for participating teams?
4. How effective is this program in supporting improvement in the four core areas of focus?
5. What impacts are we seeing on direct patient care as a result of the program?

SECTION 2: METHODOLOGY AND DATA SOURCES

DATA COLLECTION AND SOURCES

All of the data included in this report were shared with the Council voluntarily. Teams are not required to submit data to the Council on a regular basis, and as such, this evaluation does not provide a comprehensive summary of all of the RT2C-related work happening throughout the province. Teams are also more likely to send us data showing improvement than data that do not show improvement. These are known limitations of this report.

Ongoing evaluation was not a condition of participation for teams trained between 2012 and 2015, and this has offered important learning around systematically embedding an evaluative perspective with teams moving forward. A customizable template to assist with measures tracking was introduced to all teams in August 2016 (Appendix B), and the Council has begun requesting regular progress updates from teams moving forward.

While this report is by no means exhaustive, we did receive a substantial amount of data from both active and inactive teams; 41 teams submitted at least one dataset related to their RT2C work, and 32 of these are considered active. From this sample, we have attempted to summarize the areas of greatest impact as well as the areas in which some teams are struggling. The data were collected using the provincial measurement template, additional team-specific tracking mechanisms, and through Council-led provincial feedback efforts (see below). Time periods ranged from just a few weeks or months to several years between 2010 and 2017.

All measures, both quantitative and qualitative, have been mapped against the program's four core areas of focus (page 1) and the seven dimensions of BC's Health Quality Matrix[3] (page 8). Quantitative findings are summarized in Section 3 of this report, while qualitative findings are discussed primarily under "Staff Well-being" in Section 3, as well as in Sections 4, 5, and 6.

THE BIG PICTURE

In total, we received 229 unique quantitative datasets from 41 different teams. Of this sample, 84 datasets met the criteria for improvement, 27 did not, and 118 did not include sufficient data to reach a conclusion one way or another. This may be due to a variety of reasons, including being a "young" team (those that began in 2016 or later), having recently started data collection on the measure submitted, having discontinued measurement prematurely, changes in staffing, leadership or priorities, or other unknown factors.

In addition to the quantitative data we received, we completed in-depth interviews with 19 individuals across seven RT2C teams, conducted a provincial online survey in September 2016, and analyzed anecdotal qualitative feedback received directly from teams over the past five years. Online survey results have been showcased together with data from specific sites throughout Sections 3, 4, and 5 of this report. This survey went to 300 individuals across all BC RT2C teams, and received a response rate of 25% (n=74).

QUANTITATIVE DATA SOURCES	QUALITATIVE DATA SOURCES
• Provincial measurement template • Team-tracked data in various other formats (including spreadsheets, safety crosses, audit reports, presentations, etc.) • Health authority reports • Email newsletters and weekly, monthly, and/or annual progress summaries	• Individual and group in-person interviews • Council-conducted provincial online survey • Other site-conducted surveys and qualitative feedback • Email newsletters and weekly, monthly, and/or annual progress summaries

It is clear from this analysis that some teams have achieved a great deal and have much to celebrate, while others are struggling to consistently collect enough data or see improvement over time. Additionally, because measures are not standardized across teams, the areas in which teams collect data vary quite widely. Selecting which data to track is a key engagement process within the program, and point-of-care staff are encouraged to consult and collaborate with one another to identify the areas of greatest importance to staff. This helps to build ownership over the data collection and analysis process, and fosters communication and problem-solving within the team.

Definitions for quantitative data analysis:

IMPROVEMENT: Met the criteria for a non-random signal of improvement, as outlined in The Health Care Data Guide[4] (Appendix C). Based on run chart rules, data in this category showed a shift, trend, and/or significant number of runs over time; improvement was identified if one of these criteria were met either before or after reaching 20 data points. Pre- and post-implementation data suggesting improvement have also been included in this category, though we acknowledge the limitations of this type of data to the right.

NO IMPROVEMENT: Did not meet the criteria for a non-random signal of improvement after reaching a minimum of 20 data points, ***or*** the dataset fell just short of 20 data points, but even with the addition of a few more data points the criteria would still not have been met.

INSUFFICIENT DATA: We did not receive enough data, or the dataset lacked sufficient detail, to determine whether or not improvement had been achieved. Generally speaking, the data in this category did not yet meet the criteria for a non-random signal of improvement and contained fewer than 20 data points. Some data were on course to improvement in the future, but not there quite yet.

Three important notes with regard to the data included in this report:

Measure definitions and methods of data collection differ across sites and organizations. Given the locally-driven nature of this program, it is not possible to establish consistent operational definitions or data collection methodologies across teams.

Several submissions for this evaluation included pre- and post-program implementation data. This type of data is limited for quality improvement purposes, as it does not show the pattern of change that took place between the periods measured.[5] The same pre- and post-data can mask entirely different stories; as such, run charts are the preferred way to display data over time. We have shared pre- and post-data in this evaluation because in some cases it was all that we received, however we acknowledge this data is not as rigorous as that plotted in a run chart and wherever possible we have shown run chart data instead.

Currently, all three TPOT teams are on hold with the program. The data collected during active phases of implementation are limited, and unfortunately mostly insufficient to demonstrate improvement as a result of the program. In turn, the data presented in this report predominantly summarize the work of RT2C teams, rather than RT2C and TPOT teams combined.

MOST COMMON MEASURES

The table that follows provides an overview of the most commonly collected measures submitted for this evaluation. Unfortunately, more than half of the data received lacked enough data points or detail to determine whether or not improvement is taking place. Percentages reflect the number of teams seeing improvement relative to the number who are not; datasets with insufficient data have been excluded. (For a complete list of all quantitative measures received as part of this sample, see Appendix D.)

MEASURE	NUMBER OF TEAMS SUBMITTING SUFFICIENT DATA	NUMBER AND % OF TEAMS SEEING IMPROVEMENT	NUMBER AND % OF TEAMS NOT SEEING IMPROVEMENT	NUMBER OF EXCLUDED DATASETS *(DUE TO INSUFFICIENT DATA)*
PATIENT EXPERIENCE/ SATISFACTION	10	9 (90%)	1 (10%)	10
C. DIFFICILE	10	6 (60%)	4 (40%)	4
STAFF SATISFACTION	8	8 (100%)	0 (0%)	5
MRSA	8	7 (87%)	1 (13%)	5
DIRECT CARE TIME	7	5 (71%)	2 (29%)	13
HAND HYGIENE	6	6 (100%)	0 (0%)	0
URINARY TRACT INFECTIONS (UTIs)	6	5 (83%)	1 (17%)	4
UNNECESSARY MOTION	5	5 (100%)	0 (0%)	0
PNEUMONIA	4	4 (100%)	0 (0%)	4
FALLS	4	3 (75%)	1 (25%)	9
SECLUSION	3	1 (33%)	2 (67%)	2
PRESSURE ULCERS	3	0 (0%)	3 (100%)	4
AGGRESSION	2	2 (100%)	0 (0%)	6

LINKING RT2C TO THE BC HEALTH QUALITY MATRIX: WATCH FOR THESE ICONS!

"The BC Health Quality Matrix assesses quality from individual patient/client, population and system-wide perspectives. [It] asserts that quality is comprised of multiple dimensions and recognizes that there may be greater emphasis on a particular dimension of quality at any given time for unique patient/client circumstances."[6] In many cases, the dimensions of quality are inextricably related and mutually supporting. While not all dimensions of quality apply to each area of work undertaken by RT2C teams, linkages have been highlighted where applicable. The dimensions most affected by this program are: acceptability, safety, and efficiency.

Throughout this report, the following icons will be used to highlight linkages to one or more of the seven dimensions of quality.

FIVE DIMENSIONS OF QUALITY ARE FOCUSED ON THE PATIENT/CLIENT EXPERIENCE FROM BOTH AN INDIVIDUAL AS WELL AS A POPULATION PERSPECTIVE:

ACCEPTABILITY
Care that is respectful to patient and family preferences, needs and values

APPROPRIATENESS
Care that is provided is evidence-based and specific to individual clinical needs

ACCESSIBILITY
Ease with which health services are reached

SAFETY
Avoiding harm resulting from care

EFFECTIVENESS
Care that is known to acieve intended outcomes

TWO DIMENSIONS OF QUALITY MEASURE THE PERFORMANCE OF THE SYSTEM IN WHICH HEALTH CARE SERVICES ARE DELIVERED:

EQUITY
Distribution of health care and its benefits fairly according to population need

EFFICIENCY
Optimal use of resources to yield maximum benefits and results

SECTION 3: SPOTLIGHT ON IMPACTS (2012-2017)

SAFETY AND RELIABILITY OF CARE

Improve patient safety and reliability of care

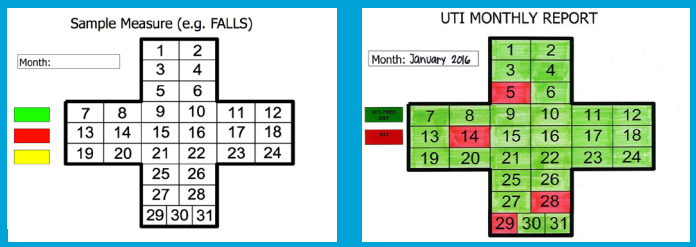
> ***"I know for years nurses have talked about solutions, but now we have the platform to actually do something to improve care."***

The safety and reliability of care focus area allows teams to identify and address issues relating to the safety, appropriateness, efficiency, and effectiveness dimensions of quality – in particular, to avoid harm resulting from care. Teams choose from a wide array of measures to track in this area, which may include: urinary tract infections (UTIs), pneumonia, falls, Methicillin-resistant Staphylococcus aureus (MRSA), Clostridium difficile (C. difficile), aggression, hand hygiene, pressure ulcers, medication errors, and/or self-harm, to name a few.

Among the data received for this report, the most commonly tracked measures in this category were: C. difficile, MRSA, falls, UTIs, pneumonia, and aggression. Improvement on these measures varied from 60% of teams improving C. difficile rates, for example, to 100% of teams improving on pneumonia and aggression. Some highlights of these accomplishments have been summarized in the pages that follow; teams collecting on these measures but who don't yet have sufficient data were excluded.

SAFETY CROSS

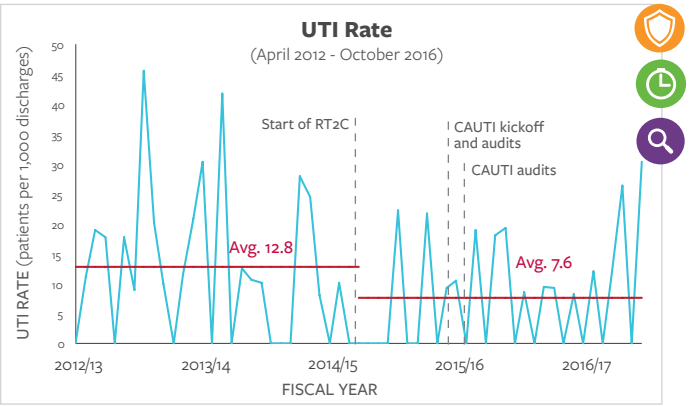
The "safety cross" is a commonly-used tool to track real-time data pertaining to safety and reliability of care. It promotes simple daily tracking of whether or not there was an incident (e.g. a new infection) on each day shift and night shift in a given month. Below is an example of a blank safety cross template (which can also be used to track near misses) and a completed safety cross from a RT2C team.



Blank safety cross template and a completed safety cross on UTIs.

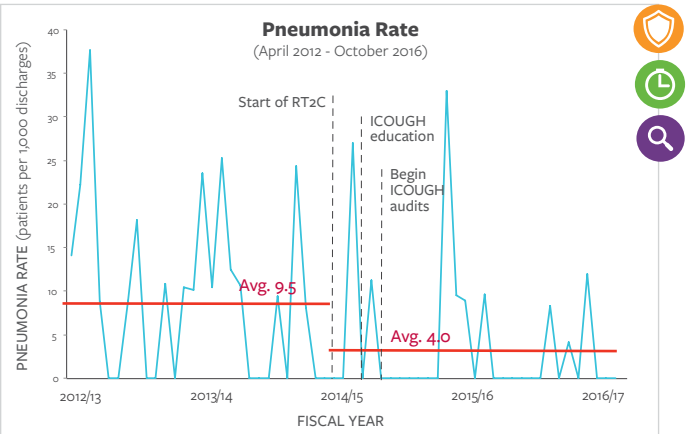
One organization has adapted the safety cross to collate data on multiple measures at once, quickly displaying whether or not there was an incident-free day using a smiley face sticker.

UTIs: Five of six teams (83%) submitting sufficient data on UTIs have seen improvement. The urology and gynecology unit at Vancouver General Hospital successfully reduced their UTI rate by 41% (from an average of 12.8 to 7.6 per 1,000 discharges) through a multimodal approach with Enhanced Recovery After Surgery (ERAS), education, huddles, audits, and RT2C.



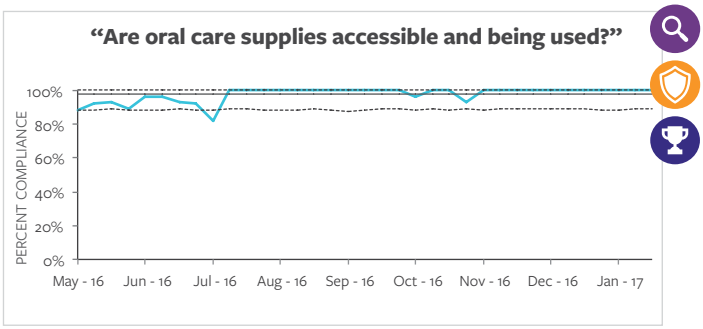
Urology & Gynecology Unit, Vancouver General Hospital, Vancouver Coastal Health

PNEUMONIA: All four teams (100%) submitting sufficient data on pneumonia have seen improvement through RT2C. The same urology and gynecology unit from Vancouver General Hospital also successfully reduced their pneumonia rate by 58% (from an average of 9.5 to 4.0 per 1,000 discharges) through the work of ERAS, introduction of ICOUGH education with patients, audits, and RT2C.

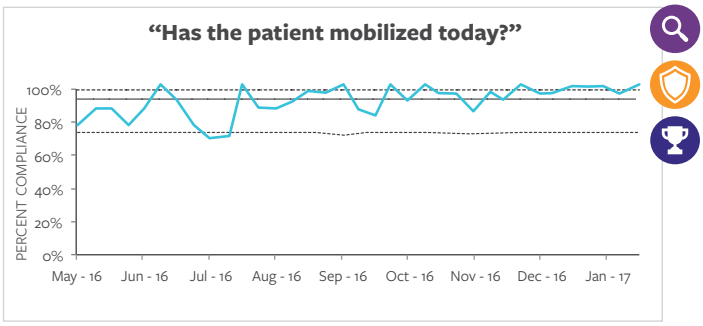


Urology & Gynecology Unit, Vancouver General Hospital, Vancouver Coastal Health

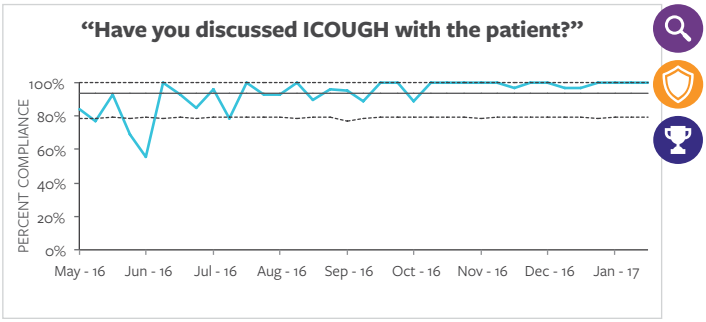
ICOUGH COMPLIANCE: The acronym "ICOUGH" refers to a pulmonary care program focused on reducing the likelihood of post-operative patients contracting pneumonia.[7] Some RT2C teams have worked to educate staff about the importance of ICOUGH, and have done informal audits to gauge staff understanding and self-reported implementation. The data below summarize staff's self-reported understanding and implementation of the "O" (oral care), "G" (get up and move), and "H" (have a conversation) components of ICOUGH on a surgical unit at Lions Gate Hospital.



Surgical Unit, Lions Gate Hospital, Vancouver Coastal Health

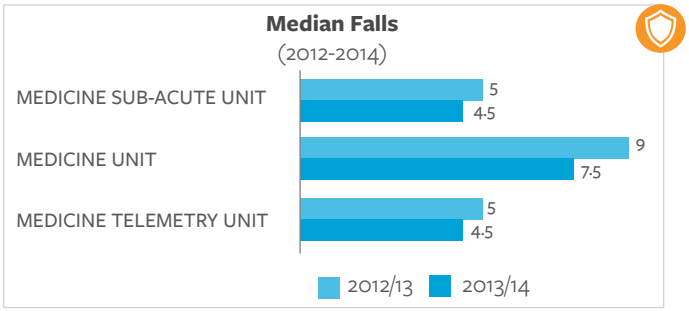


Surgical Unit, Lions Gate Hospital, Vancouver Coastal Health



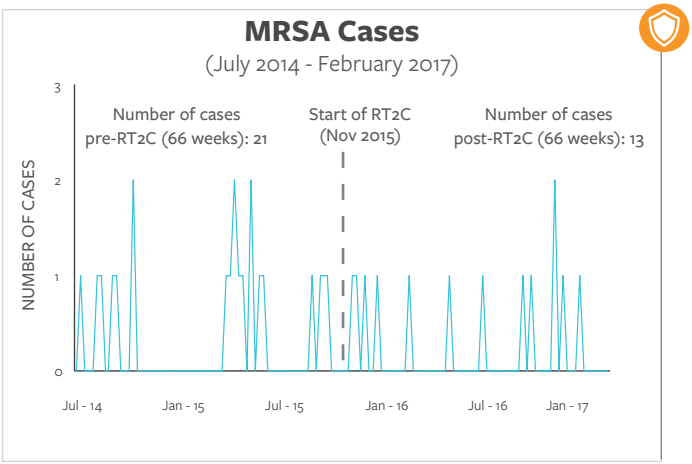
Surgical Unit, Lions Gate Hospital, Vancouver Coastal Health

FALLS: Three out of four teams (75%) submitting sufficient data on falls have seen improvement through RT2C. Though data were shared in pre-post format only (see limitations of this type of data outlined on page 6), the three demonstration teams from Richmond Hospital reduced their median falls by 10-17% early on in their RT2C implementation.

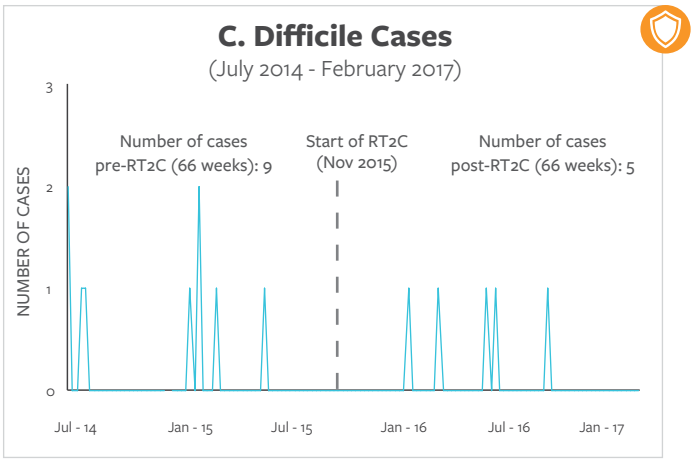


Medicine Units, Richmond Hospital, Vancouver Coastal Health

MRSA AND C. DIFFICILE: Seven of eight teams (87%) submitting sufficient data on MRSA and six of ten teams (60%) submitting sufficient data on C. difficile have seen improvement through RT2C. The acute care for the elderly (ACE) unit at Vancouver General Hospital reduced MRSA by 38% and C. difficile by 44%, comparing the number of cases in the 66 weeks before and after RT2C implementation.

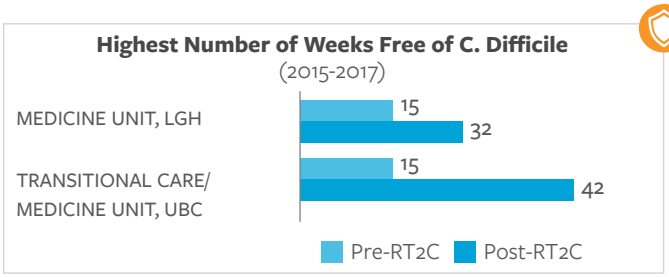


Acute Care for the Elderly Unit, Vancouver General Hospital, Vancouver Coastal Health

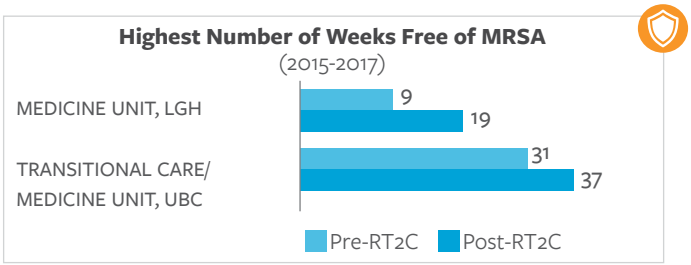


Acute Care for the Elderly Unit, Vancouver General Hospital, Vancouver Coastal Health

Two other acute units increased their highest number of infection-free weeks by between 16-64% following RT2C implementation.



Medicine Unit, Lions Gate Hospital and Transitional Care/Medicine Unit, University of British Columbia Health Sciences Centre, Vancouver Coastal Health

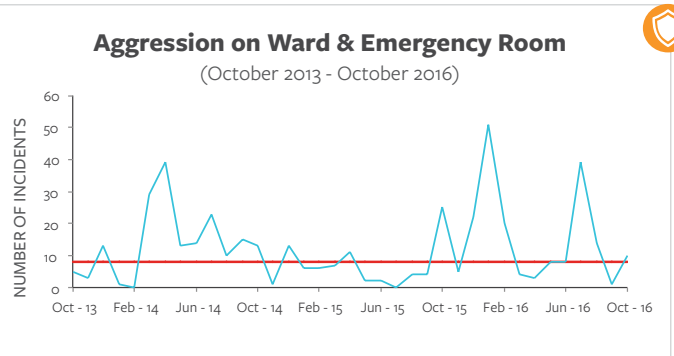


Medicine Unit, Lions Gate Hospital and Transitional Care/Medicine Unit, University of British Columbia Health Sciences Centre, Vancouver Coastal Health

AGGRESSION: Several mental health teams have tracked aggressive incidents either from one patient to another, or directed at staff members. Though most do not yet have enough data to speak to positive results, the two that submitted sufficient data on aggression (100%) have both seen improvement.

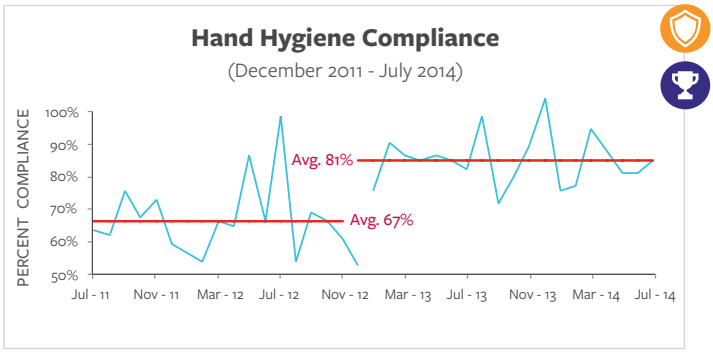
The psychiatric assessment unit at Vancouver General Hospital was able to reduce Patient Safety Learning System (PSLS) events related to aggression **from an average of 15-20 SLS/month to an average of 5-10 SLS/month** from 2015 to 2016.

The psychiatric unit at **Powell River General Hospital** successfully decreased violent and aggressive incidents among mental health clients both in the emergency room and on the ward at their hospital. Below, an early run above the median line in 2014 signifies the median was originally higher, and subsequently went down between October 2013 and October 2016 (see Appendix C for a summary of run chart rules).



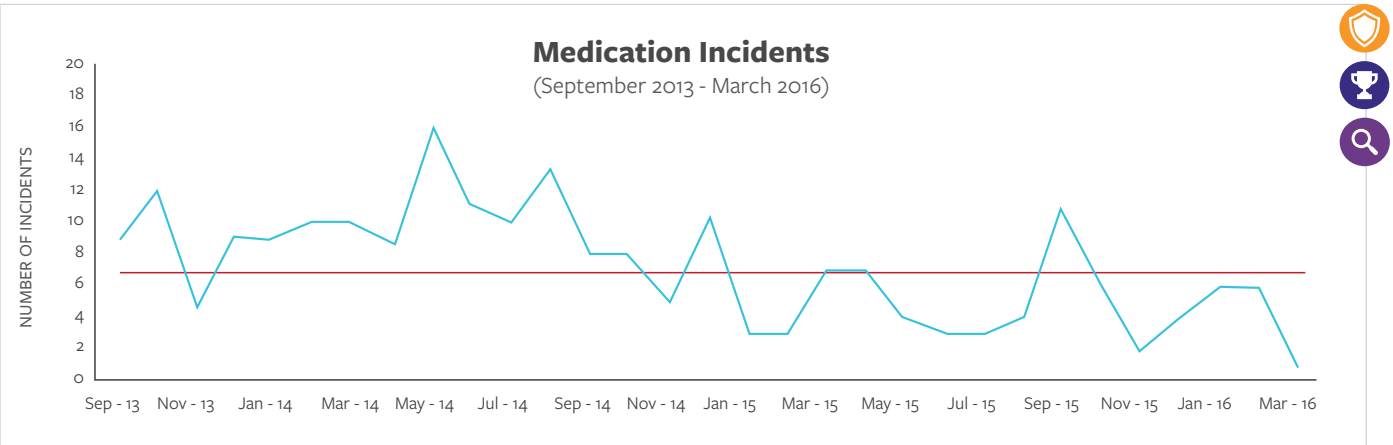
Psychiatric Unit, Powell River General Hospital, Vancouver Coastal Health

HAND HYGIENE: All six teams (100%) collecting data on hand hygiene through RT2C have seen improvement (no teams were excluded due to insufficient data). Interestingly, they were all located at Richmond Hospital – likely indicating a focused effort on improving this measure at that particular site. These six teams improved from between **58-72% compliance** with hand hygiene audits in 2011-2012 (prior to RT2C implementation) to between **68-82% compliance** (following RT2C implementation). Below is an example of one medicine unit's improvement from 67% to 81%.



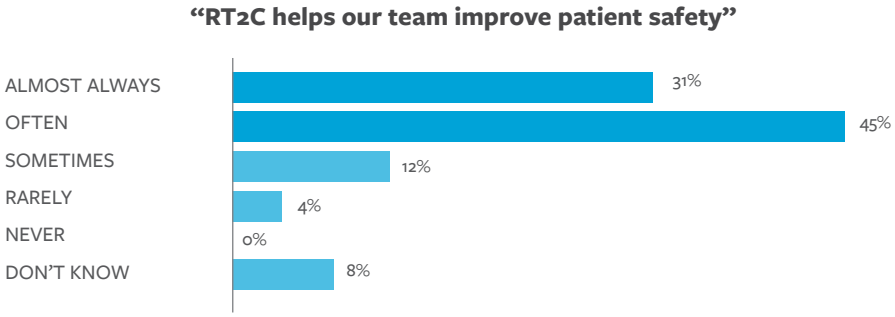
Medicine Unit, Richmond Hospital, Vancouver Coastal Health

MEDICATION INCIDENTS: Only one team submitted data on medication incidents (no teams were excluded due to insufficient data). The acute inpatient unit at Squamish General Hospital successfully reduced medication incidents over the course of a nearly three-year period between September 2013 and March 2016.



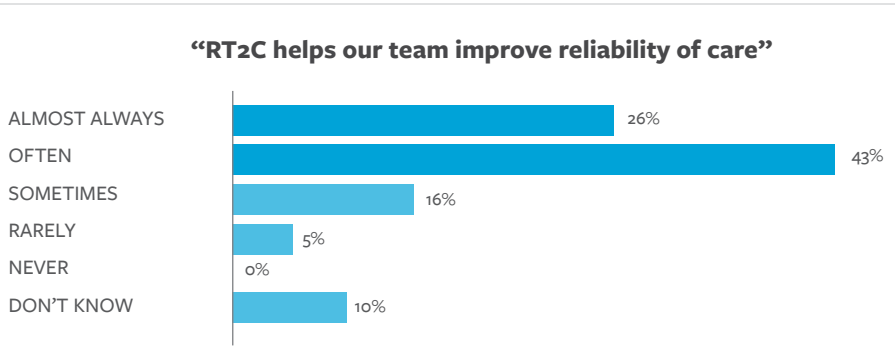
Acute Inpatient Unit, Squamish General Hospital, Vancouver Coastal Health

GROUP THERAPY SESSION ATTENDANCE: Though only one RT2C team has tracked the frequency of missed group therapy sessions, the HOpe Centre at Lions Gate Hospital successfully **decreased missed sessions by more than 50%**, improving quality of care through increased therapeutic interventions for mental health clients throughout the day from 2015 to 2016.



76% of provincial survey respondents feel RT2C often or almost always helps their team improve patient safety.

Council-conducted provincial online survey, September 2016. Response rate = 25% (74/300).



69% of provincial survey respondents feel RT2C often or almost always helps their team improve reliability of care.

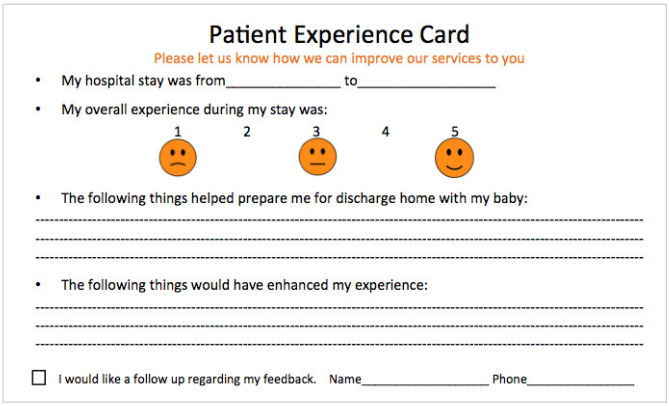
Council-conducted provincial online survey, September 2016. Response rate = 25% (74/300).

PATIENT AND FAMILY OR CARER EXPERIENCE

> ***"I like being with patients and helping them, and I like to see them benefit from all of this, too."***

The patient experience focus area is at the centre of all work underway with RT2C. All four quadrants of program focus impact patient experience, which also links to all seven dimensions of the BC Health Quality Matrix. Many teams have focused on improving patient experience by seeking patient and family or carer input through engagement and satisfaction surveys, brief questionnaires, and/or exit interviews. Some teams have taken this a step further by involving patients and family members or carers in huddles and other improvement-based conversations directly at the point of care.

Among the data received for this report, the most commonly tracked measures in this category were: patient experience/satisfaction, family and carer feedback, and seclusion. Mental health teams, in particular, have seen a lot of success in this area. Between 33-90% of teams sharing sufficient data on these measures have seen improvement, with most collecting data in pre- and post-RT2C implementation format. Some highlights of these accomplishments have been summarized in the pages that follow.



Patient Experience Card

Please let us know how we can improve our services to you

- My hospital stay was from_____ to_____
- My overall experience during my stay was:

1 2 3 4 5

- The following things helped prepare me for discharge home with my baby:

- The following things would have enhanced my experience:

☐ I would like a follow up regarding my feedback. Name_____ Phone_____

Sample patient experience card used upon discharge on the postpartum units at BC Women's Hospital & Health Centre.

PATIENT EXPERIENCE/SATISFACTION: Although patient experience and satisfaction was one of the most common measures submitted by teams as part of this evaluation, only ten datasets contained enough data to speak to whether or not teams are seeing improvement in this area. Of those ten teams, nine (90%) have seen improvement. As each site approaches this measure slightly differently, it is difficult to collate data across teams. The following are some examples of how sites are measuring improvement in this category.

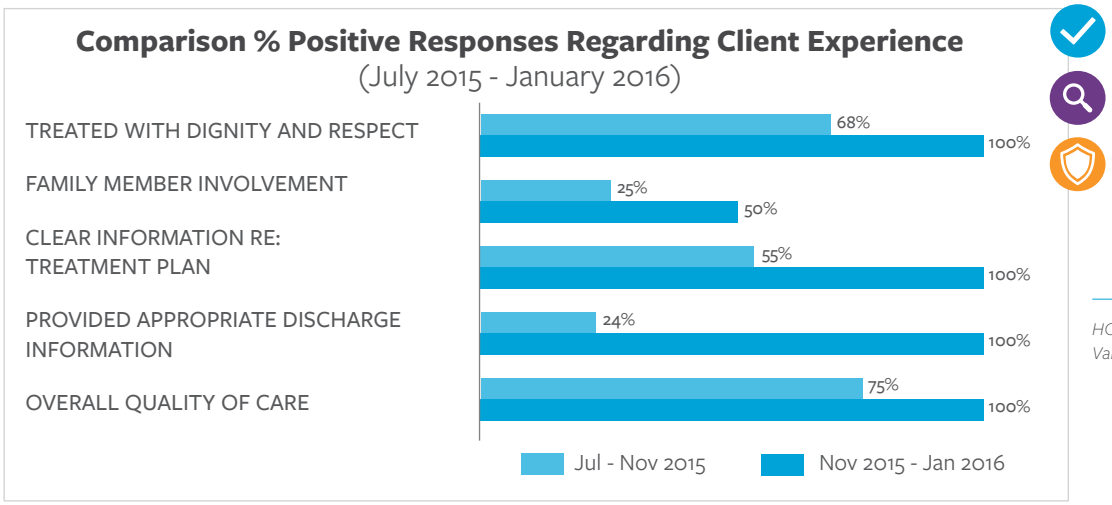
The acute inpatient unit at **Squamish General Hospital** was able to improve in the following patient experience categories between 2012 and 2014:

20% increase in the amount of patients who felt they were treated with dignity and respect

40% increase in the number of patients who felt able to actively participate in decisions around their own care

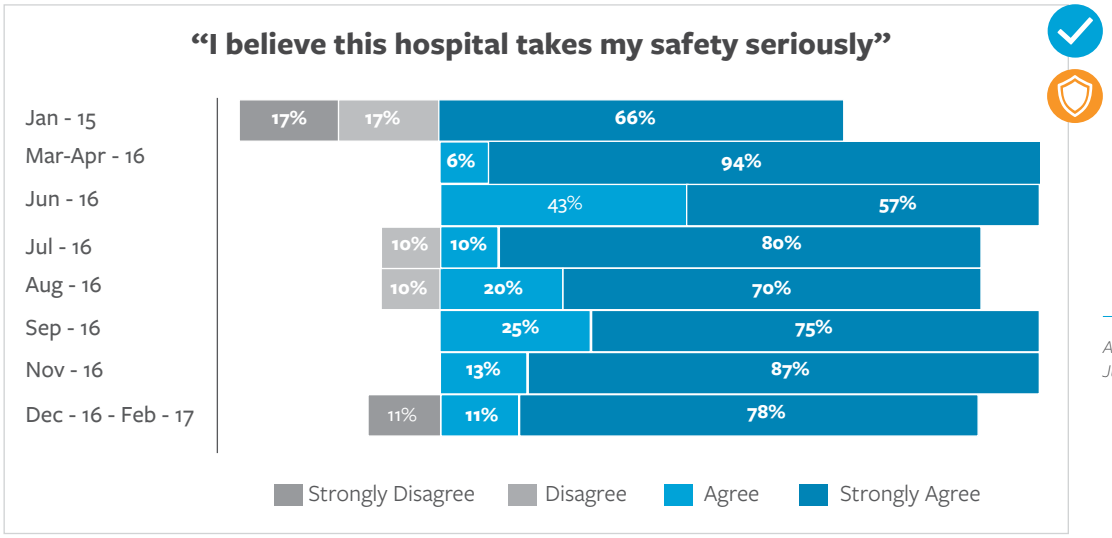
100% increase in patient satisfaction regarding meal options when new dietary choices were made available

The HOpe Centre at Lions Gate Hospital improved satisfaction among mental health clients with regard to being treated with dignity and respect, family member involvement, information regarding treatment plans and discharge, and overall quality of care between 2015 (pre-RT2C implementation) and 2016 (post-RT2C implementation).

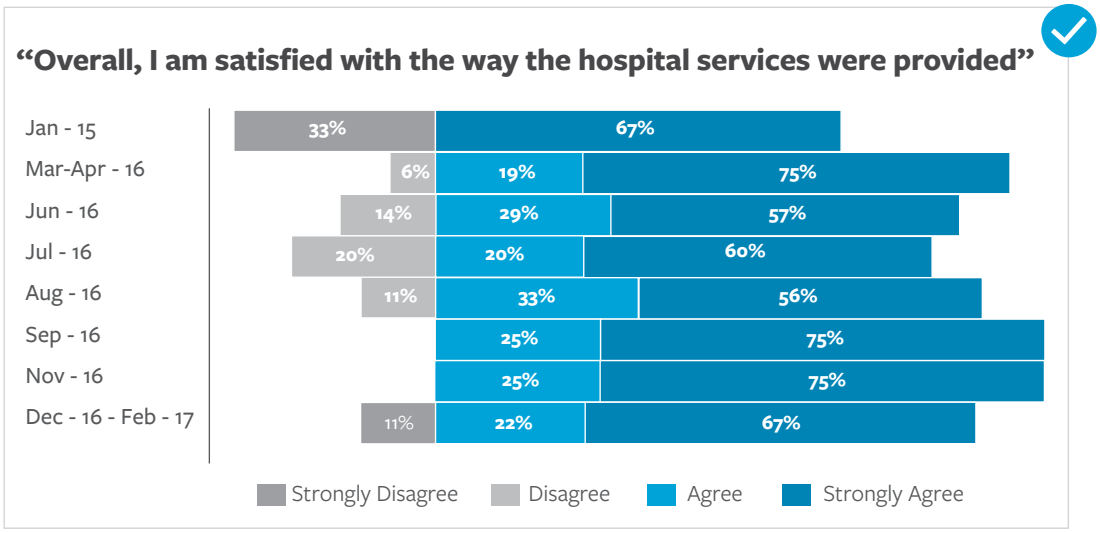


HOpe Centre, Lions Gate Hospital, Vancouver Coastal Health

One of the two active adult mental health units at **Royal Jubilee Hospital** has seen improvement relating to clients' sense of safety and overall satisfaction with services between 2015 and 2017.

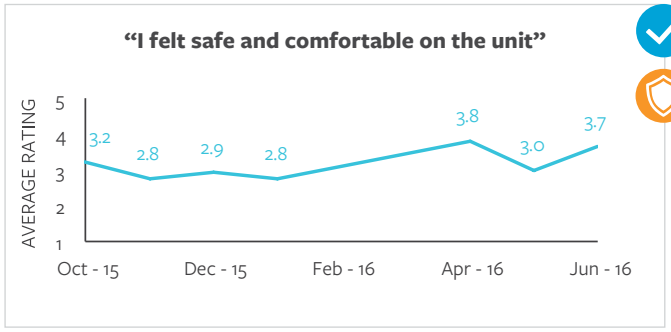


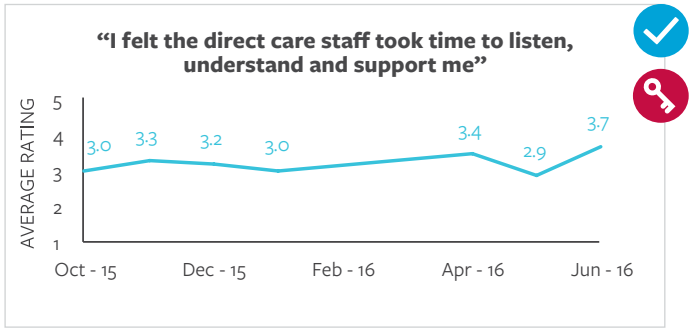
Adult Mental Health Unit, Royal Jubilee Hospital, Island Health

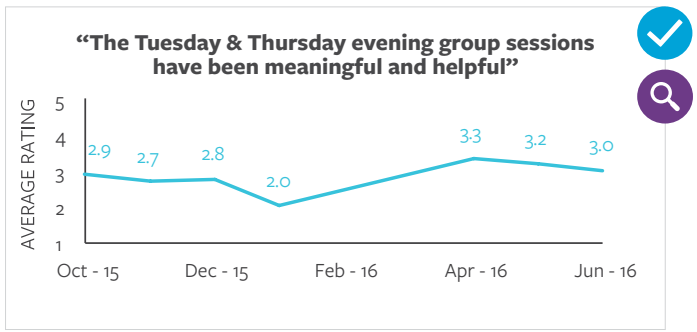


Adult Mental Health Unit, Royal Jubilee Hospital, Island Health

Ledger House, an acute inpatient site operated by Island Health, provides psychiatric services for children and youth. The RT2C team working on their youth unit saw improvements related to clients' sense of safety and comfort, support from staff, and helpfulness of group therapy sessions between 2015 and 2016.

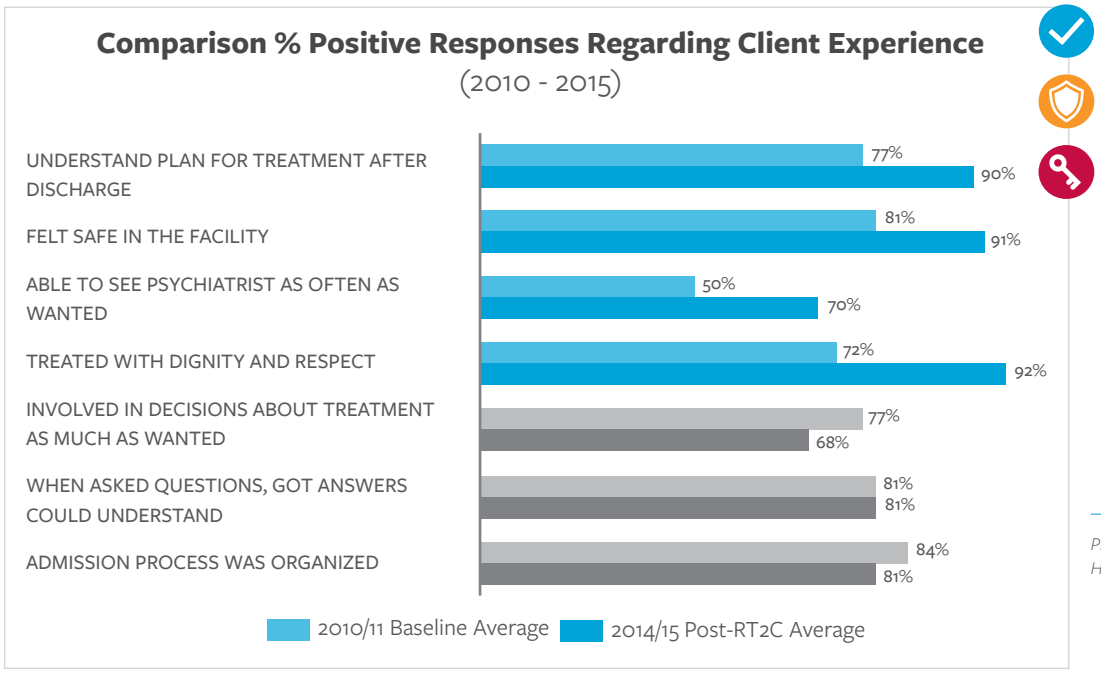






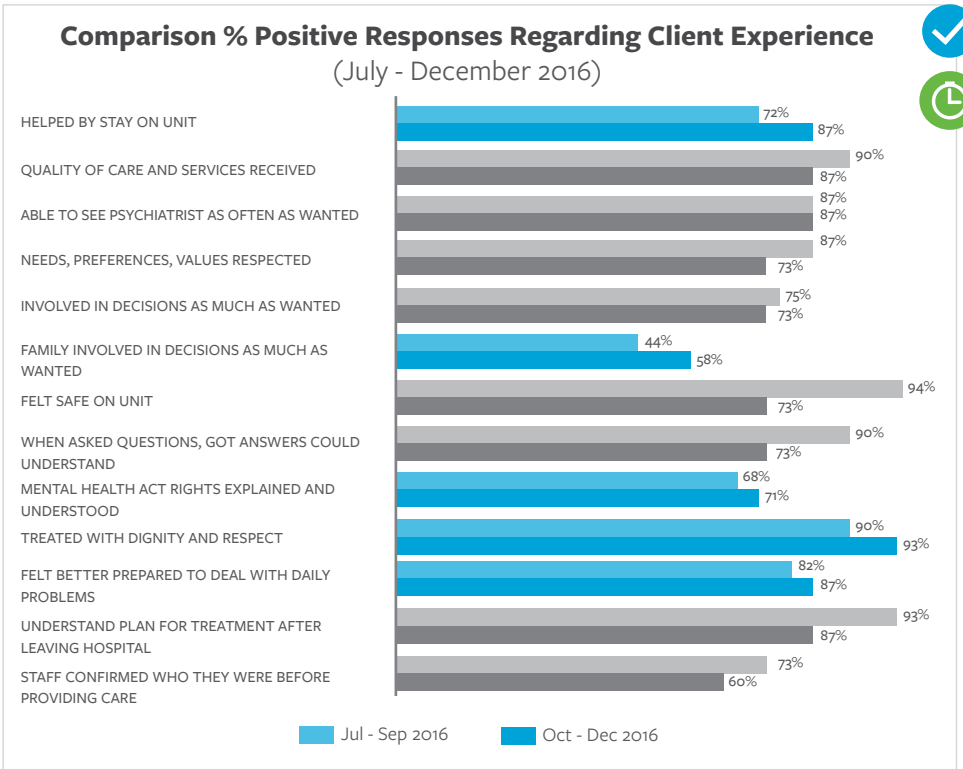
Youth Unit, Ledger House, Island Health

The psychiatric unit at **Powell River General Hospital** improved client experience following RT2C implementation in 2014, with the strongest gains related to physician access and being treated with dignity and respect.



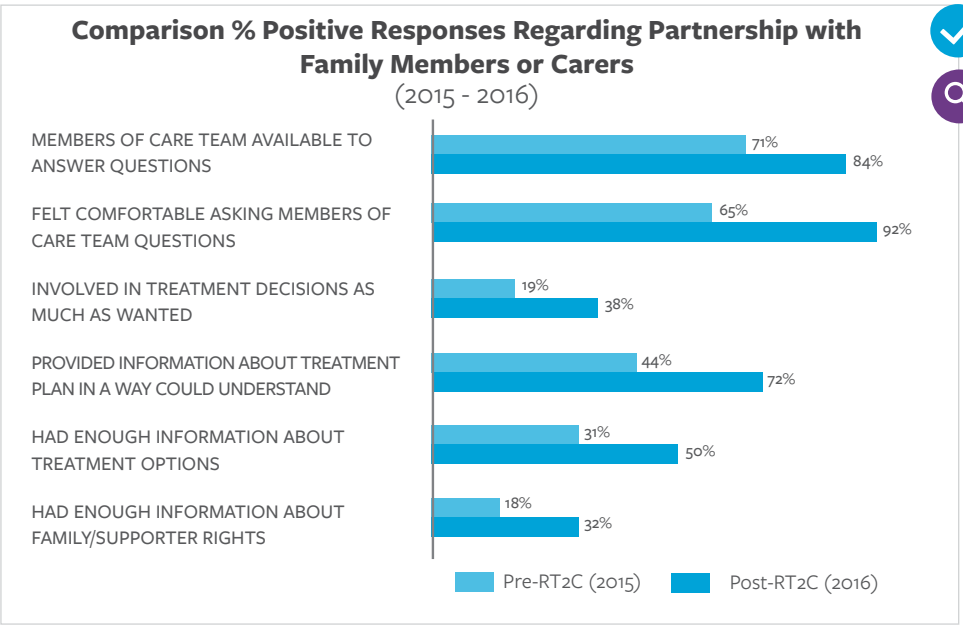
Psychiatric Unit, Powell River General Hospital, Vancouver Coastal Health

Over the course of 6 months in 2016, the psychiatric assessment unit at **Vancouver General Hospital** improved experience for mental health clients with regard to being helped by their stay on the unit, involving family members, understanding rights under the Mental Health Act, being treated with dignity and respect, and feeling prepared to deal with daily problems.



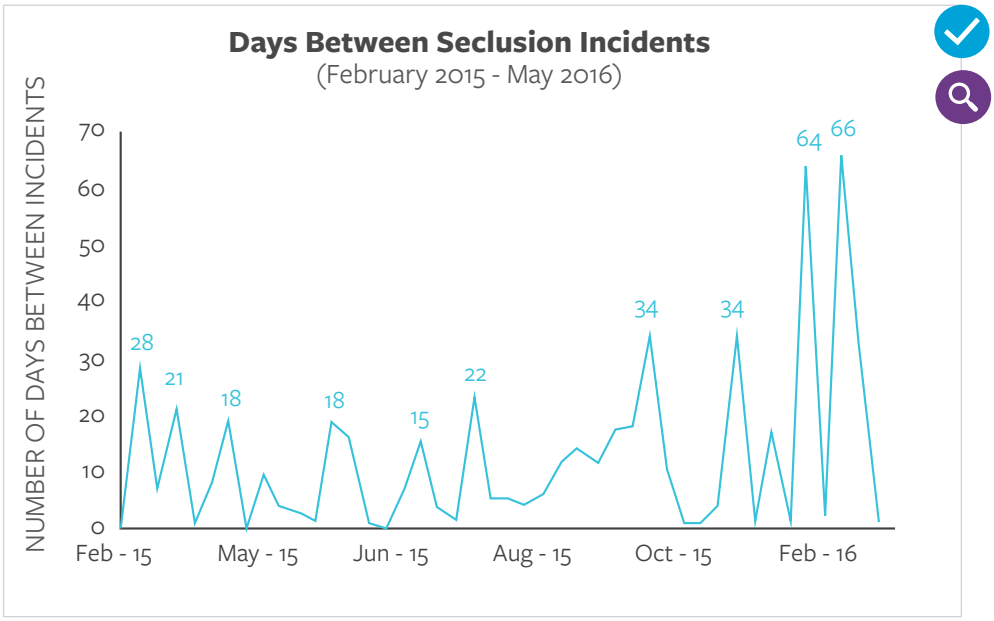
Psychiatric Assessment Unit, Vancouver General Hospital, Vancouver Coastal Health

FAMILY MEMBER OR CARER FEEDBACK: One team submitted sufficient data on family member or carer feedback and has seen improvement. The RT2C team from the psychiatric assessment unit at Vancouver General Hospital improved communication and partnership with family members and carers in several areas between 2015 and 2016.



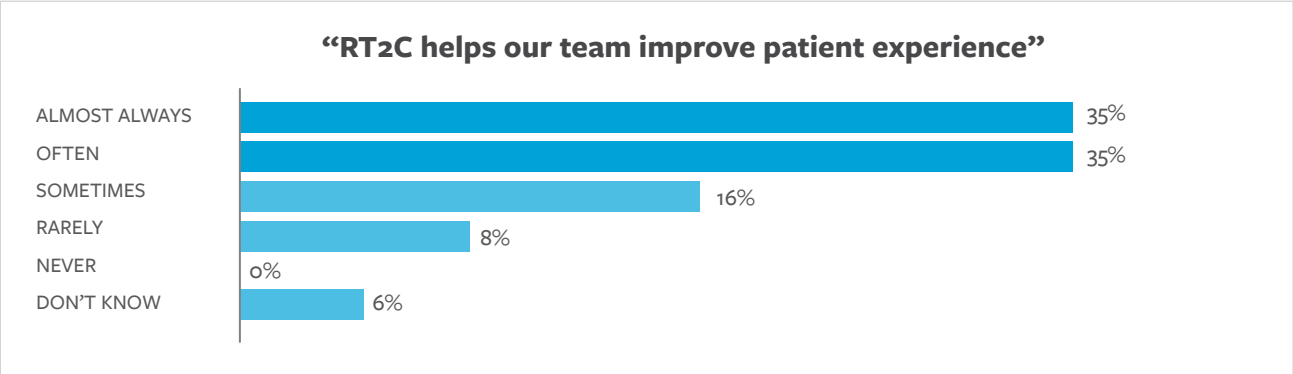
Psychiatric Assessment Unit, Vancouver General Hospital, Vancouver Coastal Health

SECLUSION: One of three teams (33%) submitting sufficient data on seclusion incidents for mental health clients has seen improvement. The RT2C team on the adult mental health unit at Royal Jubilee Hospital has worked to reduce seclusion, and increased the number of days between incidents. **They reached a high of 66 days without an incident in April 2016**.



Adult Mental Health Unit, Royal Jubilee Hospital, Island Health

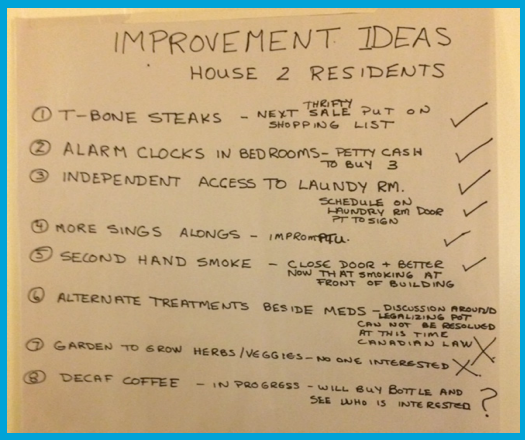
70% of provincial survey respondents feel RT2C often or almost always helps their team improve patient experience.



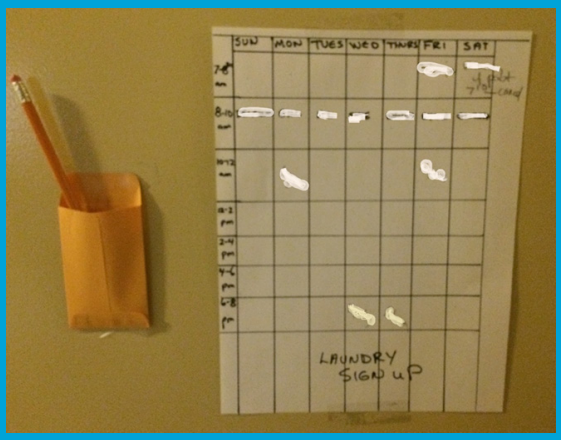
Council-conducted provincial online survey, September 2016. Response rate = 25% (74/300).

IMPACT EXAMPLE: MENTAL HEALTH CLIENT PARTICIPATION IN RT2C HUDDLES

At Seven Oaks, a tertiary mental health site within Island Health, clients are invited to participate in RT2C huddles. This gives them an opportunity to provide input into what would improve their experience as long-term residents at the facility. Staff are then able to explore opportunities for client-identified improvements, and follow through on feasible ideas. Their ongoing feedback is helping the RT2C team to move forward on its primary objective, which is to improve consistency in client-centred care planning by directly involving clients in the process.



Client-centred improvement ideas identified in RT2C huddles.



A laundry schedule improves satisfaction for long-term mental health clients so they can plan their days better.

EFFICIENCY OF CARE

> ***"We never have vacant lines. People want to come in here and work. We have very little turnover... I think it is a result of RT2C."***

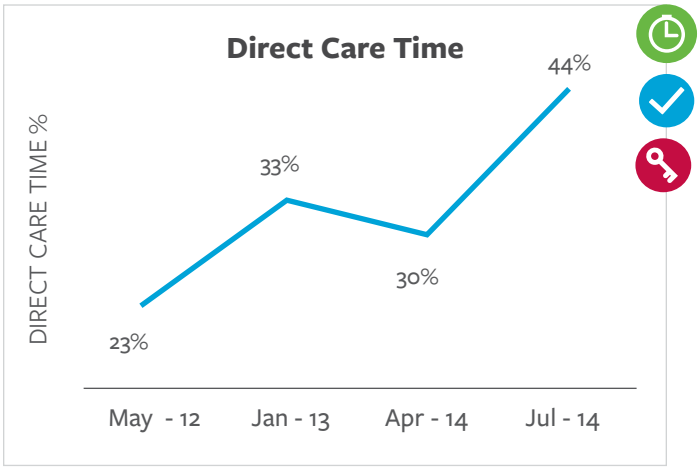
The efficiency of care focus area is perhaps the most commonly cited quadrant in terms of teams' improvement efforts and accomplishments. Teams' work in this area relates to the acceptability, appropriateness, safety, effectiveness, and (especially) efficiency dimensions of the BC Health Quality Matrix.

In their efforts to improve efficiency teams have worked on communication to reduce interruptions, streamlined documentation, standardized practice and processes, improved unit layout, and removed unnecessary waste (such as motion to obtain or return commonly used supplies and equipment). Improvement in the efficiency of care quadrant has positive impacts on staff well-being and safety and reliability of care, but in particular patient experience – when staff are able to free up more direct care time to spend with patients and families.

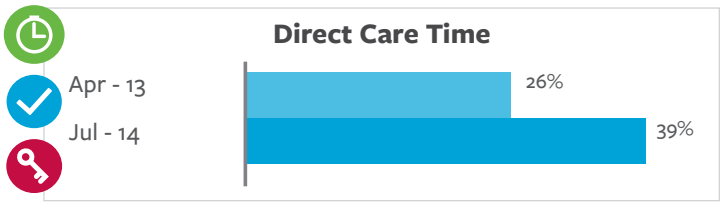
Among the data received for this report the most commonly tracked measures in this category were: direct care time, unnecessary motion, unplanned absences and overtime. The range of success on these measures varied widely: none of the teams (0%) collecting data on unplanned absence and overtime had sufficient data to confirm positive results, while all five teams (100%) collecting data on unnecessary motion have improved. Some highlights of these accomplishments have been summarized in the pages that follow.

DIRECT CARE TIME: This measure is central to the RT2C program and highly important for teams to be measuring and monitoring. Unfortunately, not all teams have completed activity follows (the tool used to measure direct care time) and therefore many of them are unable to speak to whether or not they are seeing improvement in this area. This evaluation has highlighted this gap and the Council will be working more closely with teams in the future to support them with data collection on this important measure.

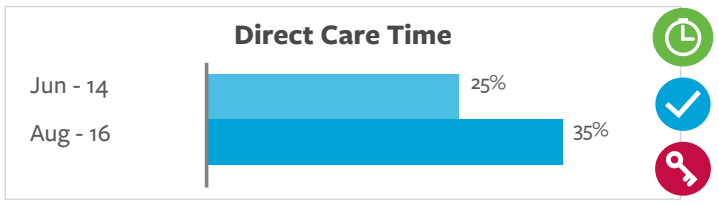
Among the teams that did submit data on direct care time (20), only seven had data from at least two time periods and could be included in this analysis. Of those seven teams, five (71% – four from acute settings and one from mental health) have seen improvement from baseline assessments.



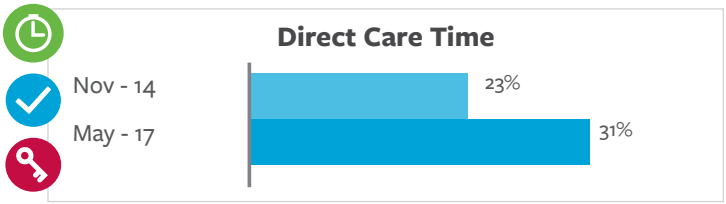
Medicine Unit, Richmond Hospital, Vancouver Coastal Health



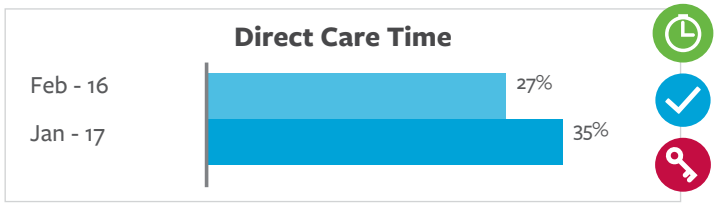
Acute Inpatient Unit, Squamish General Hospital, Vancouver Coastal Health



Urology & Gynecology Unit, Vancouver General Hospital, Vancouver Coastal Health

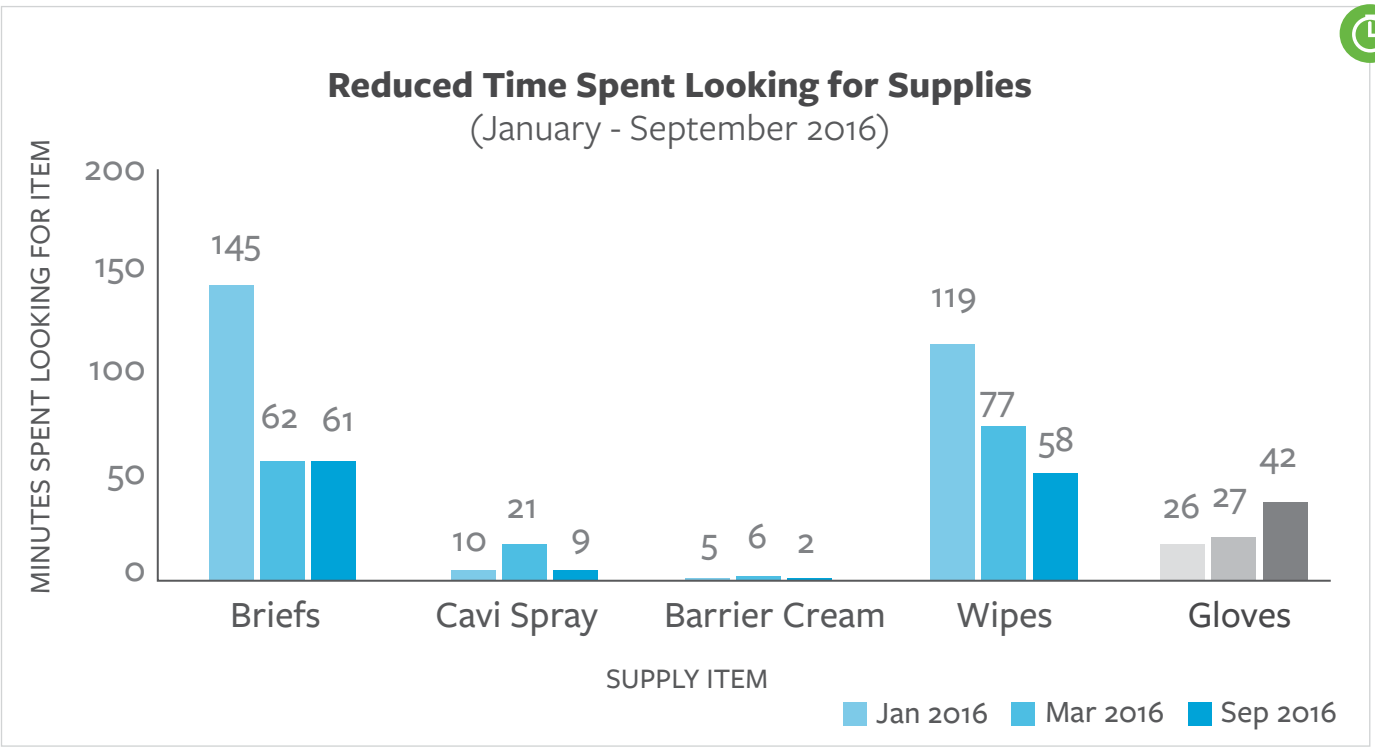


Adult Mental Health Unit, Royal Jubilee Hospital, Island Health



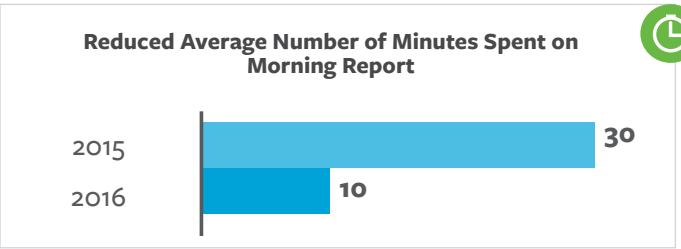
Acute Care for the Elderly Unit, Vancouver General Hospital, Vancouver Coastal Health

UNNECESSARY MOTION: A mix of acute, community, and residential care teams have tracked unnecessary motion, and all five submitting data on this measure (100%) have improved. One residential care team from Royal City Manor in New Wesminister was able to reduce time spent looking for briefs, CaviCide spray, barrier cream, and wipes as a result of their RT2C work in 2016.

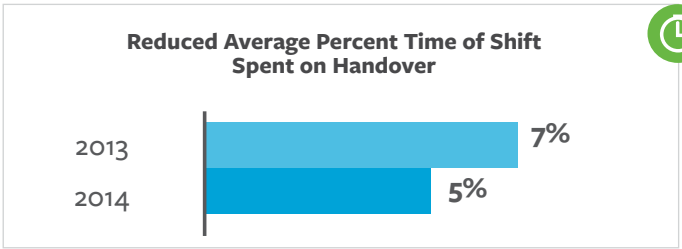


Residential Care Units, Royal City Manor, Revera

HANDOVER TIME: All four teams (100%) collecting data on handover time through RT2C have seen improvement (no teams were excluded due to insufficient data). One acute team successfully reduced morning report from an average of 30 minutes to 10 minutes using a new shift report sheet (2015-2016), while another reduced time spent on handover from 7% of shift time to 5% (2012-2014).



Transitional Care/Medicine Unit, University of British Columbia Health Sciences Centre, Vancouver Coastal Health



Acute Inpatient Unit, Squamish General Hospital, Vancouver Coastal Health

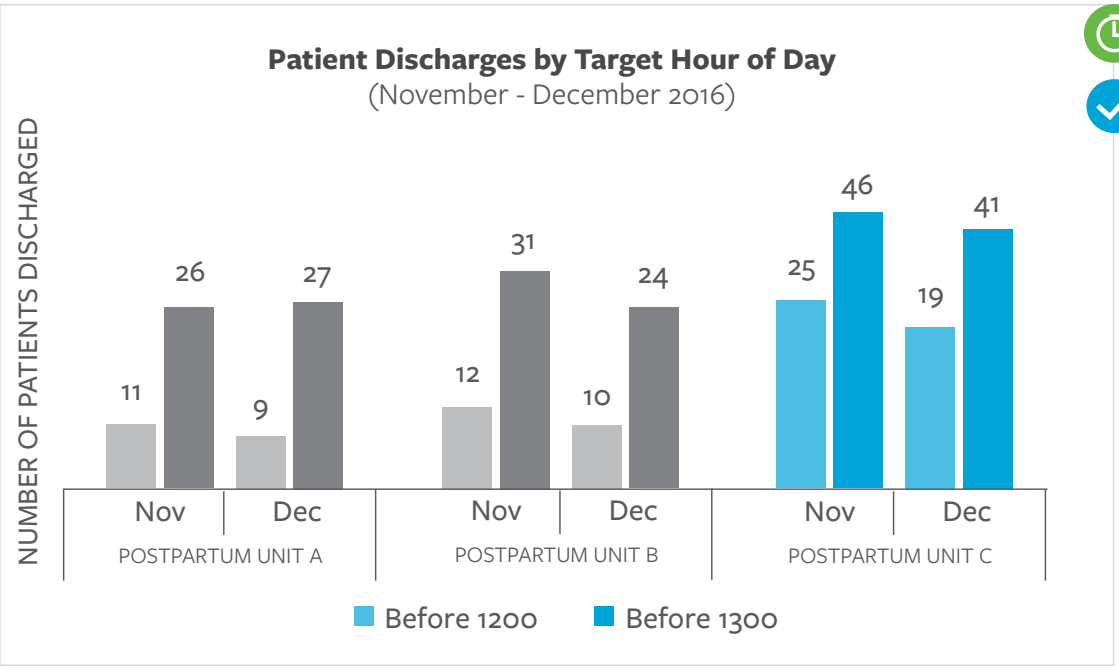
ADDITIONAL UNIQUE MEASURES: Teams have also found other interesting ways of measuring and improving efficiency, some of which are summarized below. These teams were the only ones to share data on the following measures:

- **Reduced nursing interruptions** from 110 to 72 on a typical day from 2013 to 2014. (*Acute Inpatient Unit, Squamish General Hospital, Vancouver Coastal Health*)
- **Decreased time spent sorting kardexes** (patient information system) from an average of 9.3 minutes to 3 seconds in 2015. (*Surgical and Medicine Units, Richmond Hospital, Vancouver Coastal Health*)
- **Reduced the average time spent preparing physician order forms** in the community from 7-15 minutes to 3.5 minutes through the creation of nine standardized order form templates over the course of May 2016 to January 2017. (*South Community Health Centre, Vancouver Coastal Health*)
- **Reduced the number of missed therapy appointments** by 13% through changing appointment scheduling, improving communication around therapist availability, and standardizing patient morning routines such as breakfast trays arriving on time in 2015. (*GF Strong Rehabilitation Centre Spinal Cord Injury Program, Vancouver Coastal Health*)
- **Increased the number of mental health clients admitted from the Emergency Department** within time targets by nearly 30% in 2015. (*Psychiatric Assessment Unit, Vancouver General Hospital, Vancouver Coastal Health*)
- RT2C helped build capacity to accomodate an **increase in the percentage of ambulatory visits** among home care clients in the community from May 2016 to January 2017.

SITE	BASELINE % OF AMBULATORY VISITS	POST-IMPLEMENTATION % OF AMBULATORY VISITS
Robert & Lily Lee Family Community Health Centre	32%	52%
South Community Health Centre	24%	36%

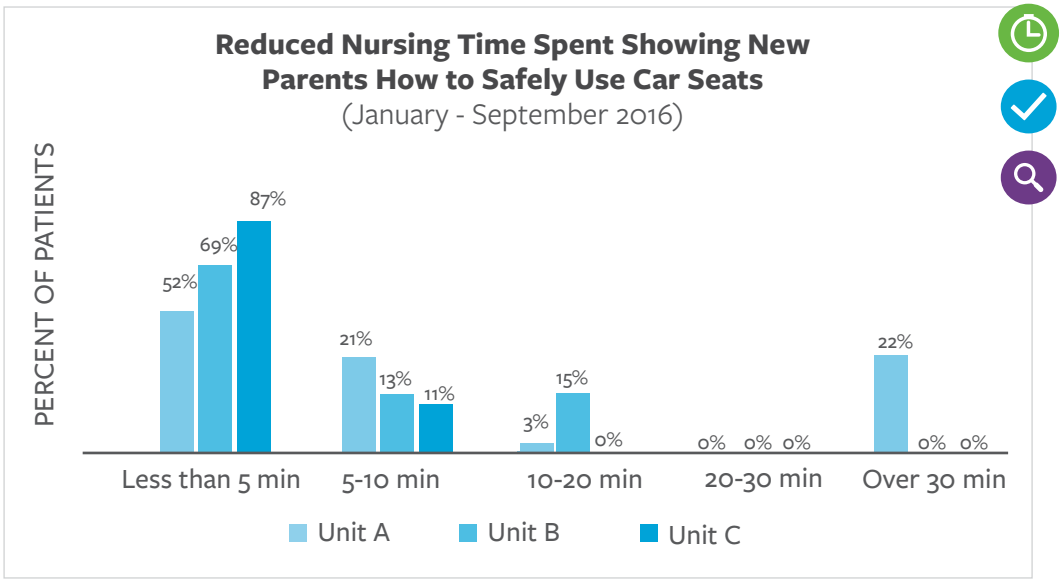
Two Community Sites, Vancouver Coastal Health

BC Women's Hospital and Health Centre's three RT2C teams worked to increase the number of patient discharges by target time of day and ran a trial on one of their postpartum units. Data show a higher number of discharges by target hour of day for this unit relative to the two comparison units during the trial period (November-December 2016).



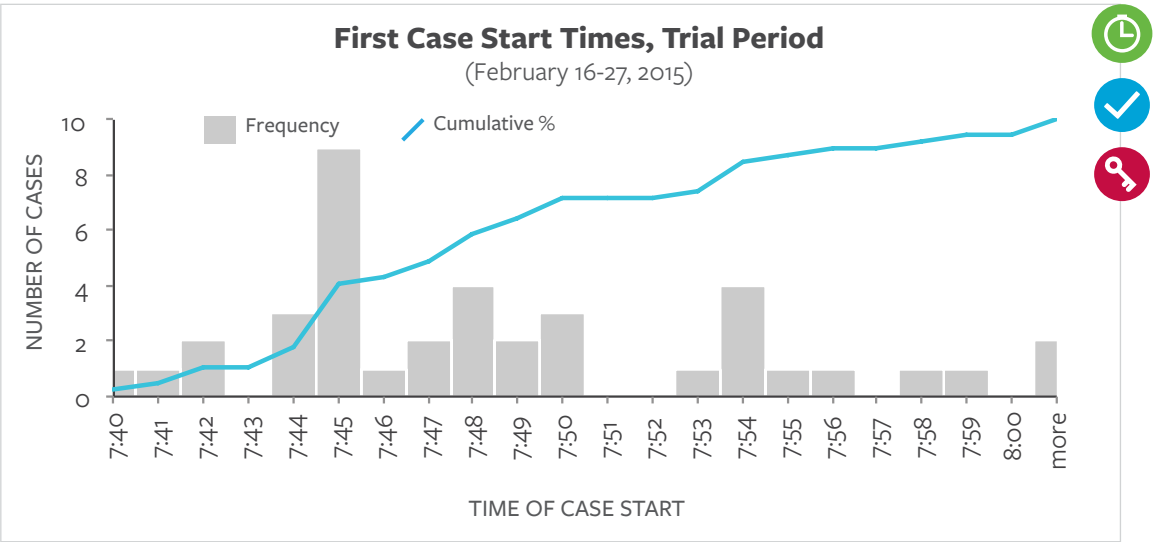
Three Postpartum Units, BC Women's Hospital & Health Centre, Provincial Health Services Authority

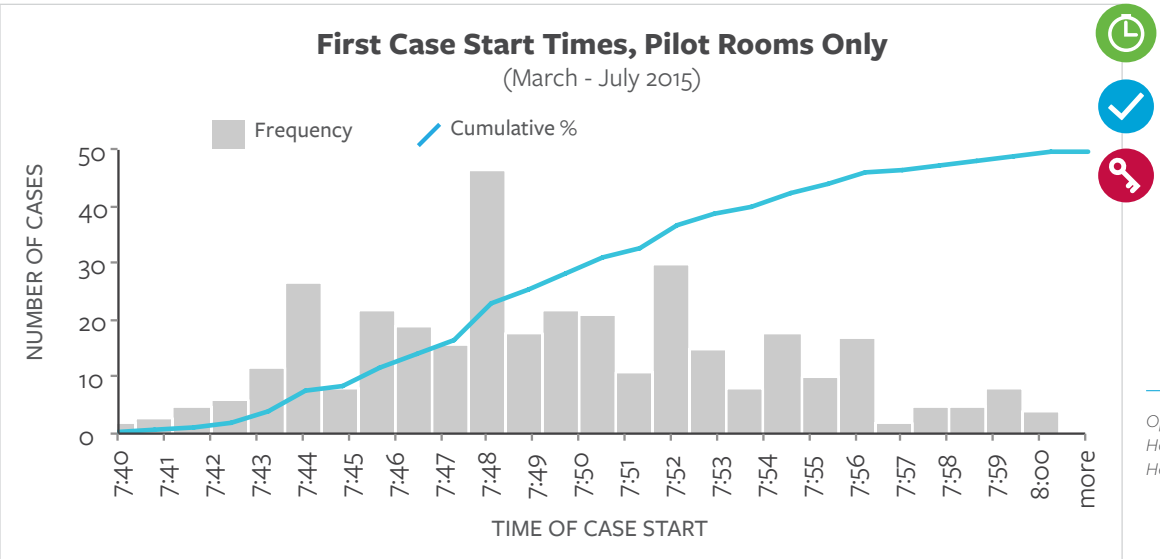
These same three units also worked to reduce nursing time spent showing new parents how to safely use car seats by developing a car seat checklist and testing it in June and July of 2016. Although no baseline data are available, nurses reported spending an average of approximately 20 minutes per patient prior to implementation of the car seat checklist. Following implementation of the checklist, 87% of patients took 10 minutes or less across 3 units.



Three Postpartum Units, BC Women's Hospital & Health Centre, Provincial Health Services Authority

TPOT: As all three TPOT teams are currently inactive, we received very little data from these teams. Most of what we received did not show improvement or lacked sufficient data to say one way or another. One TPOT team achieved improvement related to an increase in on-time surgery starts over a 5-month period in 2015 (scheduled start time was 7:45 am). They were able to increase on-time starts in the operating room by 73% over an initial two-week period, and sustained that improvement at 27% above baseline for the following 5 months (February-July 2015).





Operating Room, Richmond Hospital, Vancouver Coastal Health

72% of provincial survey respondents feel RT2C often or almost always helps their team improve efficiency of care.

Council-conducted provincial online survey, September 2016. Response rate = 25% (74/300).

IMPACT EXAMPLE: MOBILE WOUND DRESSING CART

The GF Strong Rehabilitation Centre RT2C team has created a mobile wound dressing cart to transport supplies to each patient's room. The creation of this cart has successfully reduced the amount of walking time required to obtain dressing supplies from two minutes (for seven patients) to 30 seconds. This saves nurses 10.5 minutes over the course of a full day, and adds up to 64 nursing hours saved in a year. This improvement has also eliminated the need to store supplies in patients' rooms, which reduces the amount of supplies discarded when a patient is discharged.

STAFF WELL-BEING

Improve staff well-being

"I feel like our morale's really starting to come up."

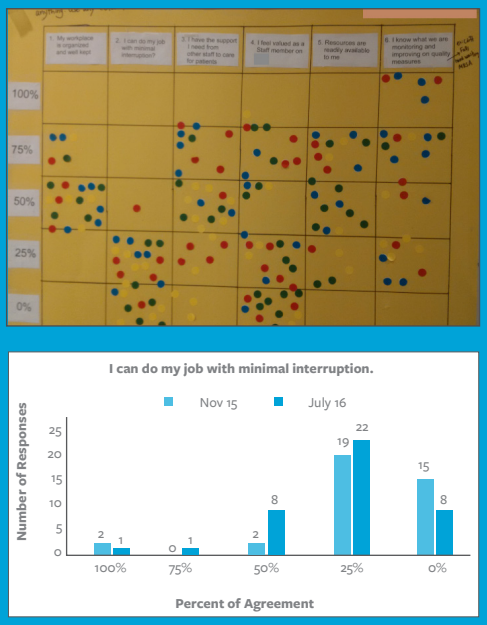
Staff well-being is in many ways a by-product of targeted improvement efforts in the other three quadrants. While some teams work directly on changing things that frustrate staff, many focus their efforts on improving efficiency, teamwork, and communication – all of which influence the well-being of staff. Daily huddles are a foundational aspect of the program and one way in which RT2C supports staff to create a venue for voicing ideas and concerns, and learning to problem-solve as a team.

Staff well-being links to the acceptability, safety, effectiveness, and efficiency dimensions of quality. Research has shown that effective teamwork and communication among staff can directly impact patient outcomes, including the prevention of adverse events.[8] Staff perception of teamwork has been associated with important outcomes related to well-being, such as emotional exhaustion, burnout, job satisfaction, and organizational commitment. Burnout symptoms, such as fatigue and the inability to concentrate, can critically affect health care providers' ability to ensure patient safety.

RT2C's impacts on staff well-being emerged more strongly from the qualitative data (e.g. in-person interviews and the Council-conducted provincial online survey) than from quantitative sources (e.g. measurement templates). Many teams use staff satisfaction surveys as a gauge of success in this area, though they are not the only, nor a complete, reflection of overall well-being. Furthermore, much of the quantitative data relating to staff satisfaction involves pre- and post-implementation assessments. Nonetheless, it is promising that all eight teams (100%) submitting sufficient data on staff satisfaction have seen improvement. The ways in which they assess this vary quite widely, some of which have been highlighted in the pages that follow.

DOT VOTING

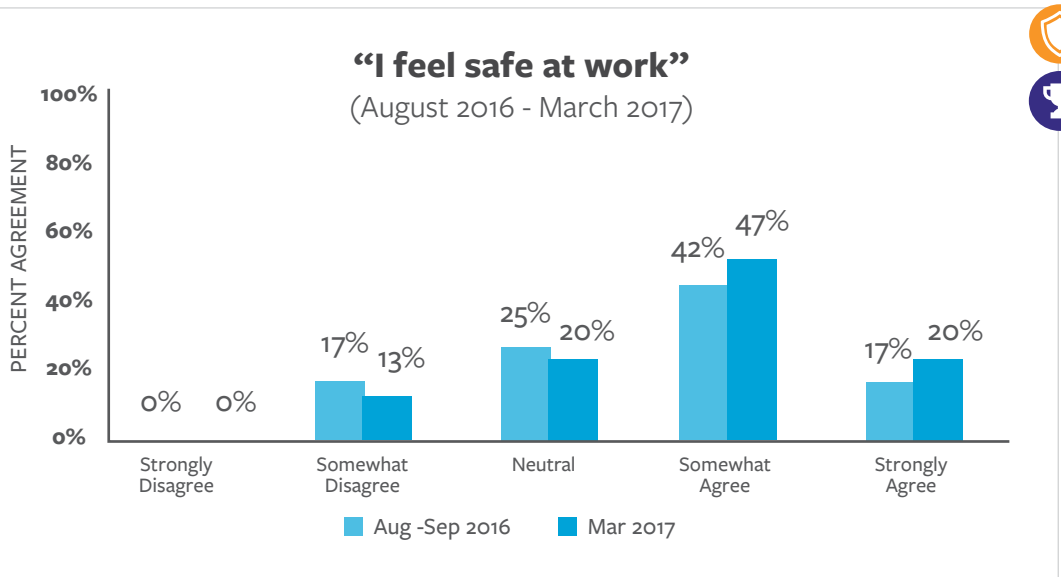
"Dot voting" is a simple tool teams can use to quickly and easily gauge how staff are feeling. Each individual responds to a series of statements by placing a dot sticker next to how often they agree with each statement. For example: "I can do my job with minimal interruption" 25% of the time, 50% of the time, etc. This data can then be plotted and compared over time, and – more importantly – used to start important conversations about addressing areas of frustration for staff.



Sample dot vote on staff satisfaction (top), with data from dot votes at two different time periods plotted in a bar chart (bottom).

SENSE OF SAFETY: In their efforts to understand staff well-being many teams ask questions about physical and/or psychological safety at work. Two of the three teams (67%) that submitted sufficient data related to staff safety have seen improvement in this area – both from Island Health.

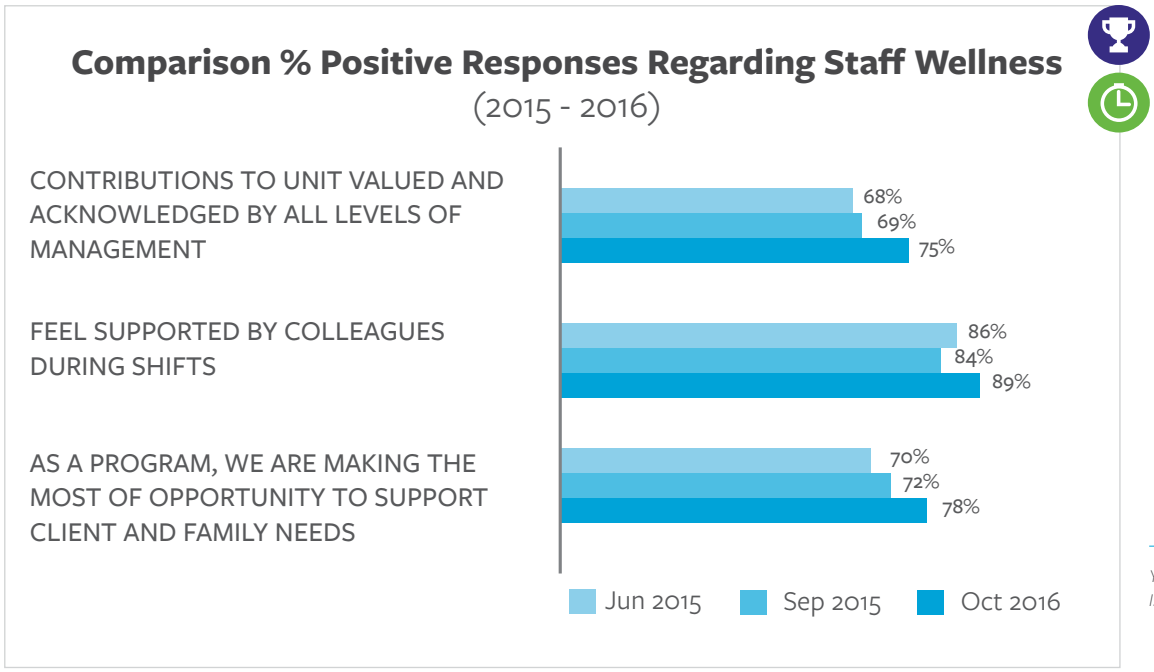
Seven Oaks Tertiary Mental Health, Island Health



Medical Detox & Stabilization Unit, Royal Jubilee Hospital, Island Health

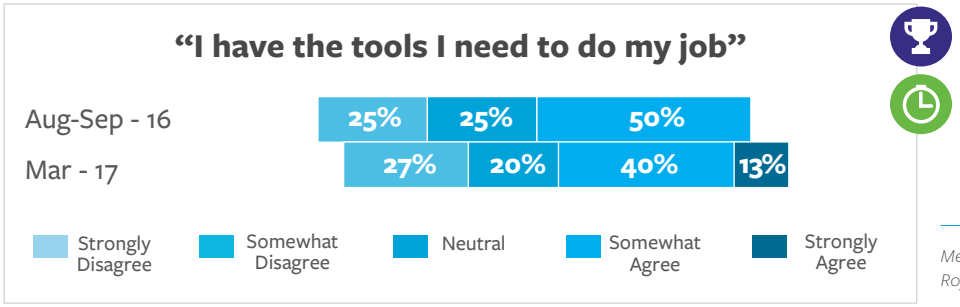
ADDITIONAL STAFF WELL-BEING INDICATORS: Teams have many other ways of assessing staff well-being, making it difficult to compare and collate information across sites. Of the sites seeing improvement related to staff satisfaction, the below data summarize a sampling of the results.

The youth unit at **Ledger House** has seen improvements related to staff feeling their contributions are valued, feeling supported by colleagues, and meeting mental health client needs.



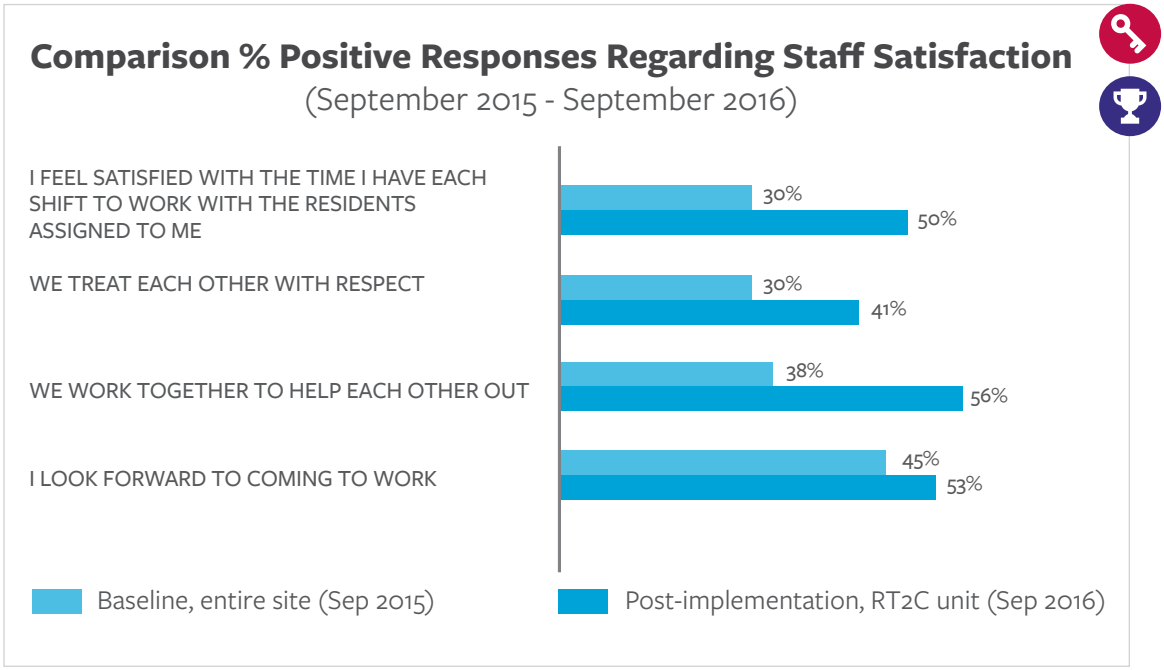
Youth Unit, Ledger House, Island Health

The medical detox & stabilization unit team at **Royal Jubilee Hospital** have influenced satisfaction with regard to staff feeling as though they have the tools needed to do their job.



Medical Detox & Stabilization Unit, Royal Jubilee Hospital, Island Health

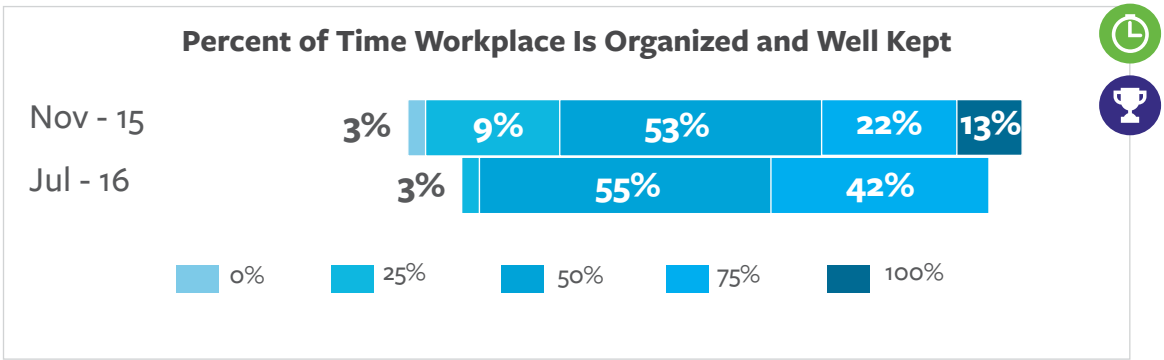
The **Seven Oaks Tertiary Mental Health** RT2C team has seen additional improvements in satisfaction relative to baseline data from the entire site.



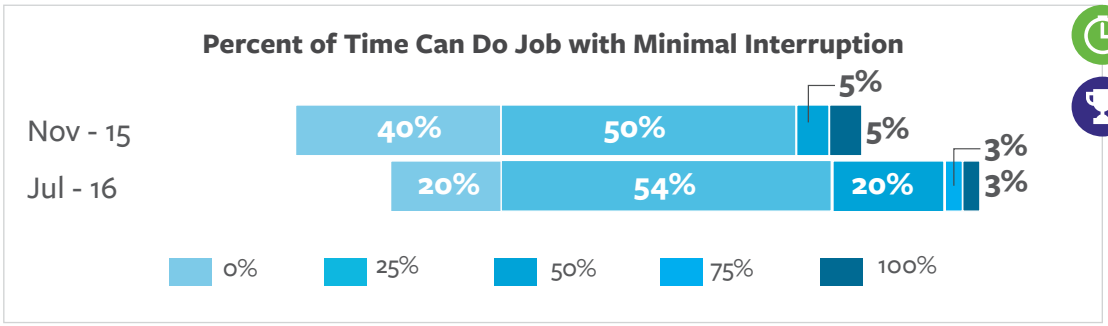
Seven Oaks Tertiary Mental Health, Island Health

In addition, follow up surveys in the house actively working on RT2C from September 2016 to May 2017 showed a **58% increase** in agreement with the statements "I have an opportunity to provide input into decisions" and "the input I provide is valued." The team also achieved a **40% increase** in agreement with the statement "our long-term visions and goals are being addressed."

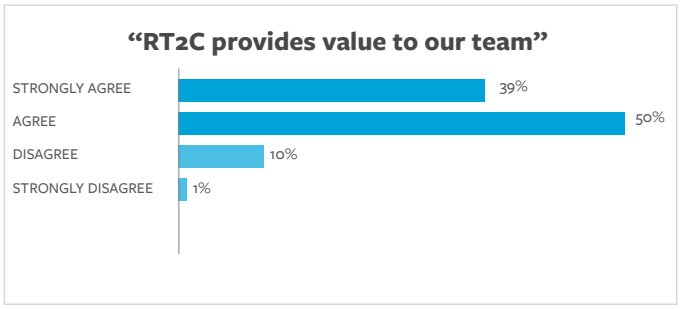
The acute care for the elderly unit at **Vancouver General Hospital** has seen improvement related to workplace organization and number of interruptions.



Acute Care for the Elderly Unit, Vancouver General

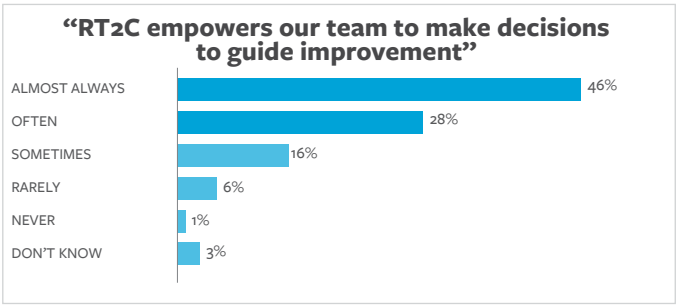


Acute Care for the Elderly Unit, Vancouver General Hospital, Vancouver Coastal Health



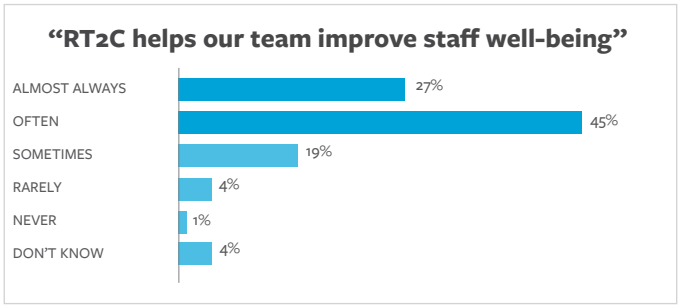
89% of provincial survey respondents feel RT2C provides value to their team.

Council-conducted provincial online survey, September 2016. Response rate = 25% (74/300).



74% of provincial survey respondents feel RT2C often or almost always empowers their team to make decisions to guide improvement.

Council-conducted provincial online survey, September 2016. Response rate = 25% (74/300).



72% of provincial survey respondents feel RT2C often or almost always helps their team improve staff well-being.

Council-conducted provincial online survey, September 2016. Response rate = 25% (74/300).

Although quantitative data submissions related to staff well-being are not easily compared or collated across sites, qualitative feedback from teams provided additional insights into the ways in which RT2C appears to be impacting staff well-being. The following themes emerged from interviews with 19 individuals from seven unique RT2C sites (a mix of acute, mental health, residential care, and community teams) and 74 responses to the Council-conducted provincial online survey. Both took place from August to September 2016.

STAFF ENGAGEMENT

> ***"We would not have had the voice, the backing, or the engagement without the program."***

A fundamental feature of RT2C is to leverage the expertise of point-of-care staff, supporting them to work together to identify issues and problem-solve as a team. Of the seven sites interviewed as part of this evaluation, at least one member from each team mentioned increased staff engagement as a positive impact – though a corresponding challenge is engaging widely and reaching everyone. Inevitably, there will always be some individuals who choose not to become actively involved. However, on high-functioning teams all staff have the opportunity to contribute, and many do. Because of RT2C, improvement is seen as part of their collective responsibility.

The most commonly-mentioned areas of impact relating to staff engagement were:

- Staff have the opportunity to provide input (e.g. through voting, surveys, huddles)
- Engagement increases morale (e.g. staff are happier at work and feel they "have a voice")
- Staff are more engaged because they own the work
- Ongoing communication is essential for keeping engagement high

STAFF EMPOWERMENT

> ***"I wish every health care worker/ provider could experience the empowerment RT2C provides."***

Related to engagement, empowerment is about the "social, cultural, psychological or political process through which individuals and social groups are able to express their needs, present their concerns, devise strategies for involvement in decision-making, and achieve... action to meet those needs." [9]

In order for the grassroots approach of the program to work, leaders need to simultaneously relinquish control and trust point-of-care staff to lead, while remaining visible, responsive, and supportive throughout the process. Here the focus shifts from managing people and daily tasks to empowering staff to act on their own ideas for improvement. Seventy-five percent of survey respondents felt RT2C often or almost always empowers their team to make decisions to guide improvement.

TEAM CULTURE

> ***"Releasing Time to Care changes the unit's culture for better patient care and teamwork."***

Culture is something that both influences and is an outcome of the program. It is also one of the hardest areas in which to track improvement. When we examine the qualitative data to better understand RT2C's impact on culture, we see the program seems to have had a positive influence in nearly all cases, though in different ways across sites and areas of care. See Sections 4 and 5 for further discussion of success factors and barriers related to culture.

The most commonly-mentioned areas of impact relating to team culture were:

- Staff feel more supported by each other and united by common goals
- Teams are building new norms and expectations relating to interprofessional collaboration
- Staff feel a sense of ownership and pride relating to improvement work
- The program creates safe channels for open discussion regarding ideas and concerns
- Staff are becoming more comfortable with change
- Four teams reported apathy and disengagement prior to RT2C, but are beginning to see a gradual shift in staff attitudes

PROFESSIONAL DEVELOPMENT

> ***"I hope to take what we have learned from RT2C and continue making improvements for years to come."***

RT2C represents a professional development opportunity that many staff may not have otherwise had, and also opens the door for other learning and professional growth pursuits. This was identified as having a positive influence on staff well-being. Some Ward Leaders reported feeling more self-reflective, professional, and aware of quality improvement as a result of participation in the program; others mentioned RT2C has given staff without traditional leadership roles (e.g. care aides and Licensed Practical Nurses) the chance to become leaders of improvement work.

One Project Leader commented: "There's no official mechanism for [LPNs] to take [a] leadership role within the acute care setting. So this gave some of them, who had lots of aptitude and no opportunities, an opportunity to take a leadership role on the unit. Some of our longest-lasting Ward Leads have been the LPNs."

IMPACT EXAMPLE: IMPROVING TEAMWORK

"[RT2C] gives the nurse a venue to be able to make the changes they need to make to do their job every day. I've seen the difference overall in how when I first started here, teamwork was a struggle sometimes because of [the] culture. It was very "clique-y" and very definite which groups helped which groups. That is just not the same anymore. Now... the culture is 'it's *our* floor, we're *all* working today.' I watched a team the other day – somebody got slammed with an admission at 20 to 7:00 and every single team, each side, one of their nurses came and did a part of that admission. That wouldn't have happened three years ago."

– RT2C Ward Leader

SECTION 4: KEYS TO SUCCESS

Over the course of supporting implementation of RT2C during the last five years BC has learned a great deal about what is required to be successful. Participating organizations have an enormous amount of knowledge regarding what has worked for them on their journeys, and have graciously shared some of this learning.

The following factors for success have been identified through countless conversations with RT2C team members including point-of-care staff and facilitators, up to senior executive leaders. As well, focused feedback was collected through the provincial online survey and in-person interviews, both completed from August to September 2016. It is important to note that teams without the elements that follow in place tend to struggle with both implementation and sustainment, while those that consider and embed all of the following factors into their practice are much more likely to succeed with the program.

PROTECTED TIME FOR STAFF

All teams have at some point underscored the importance of dedicated time to work on the program, separate from their regular clinical duties. The equivalent of approximately one nursing shift per week (backfilled) is recommended, particularly in the early stages of program implementation. Though schedules and meeting frequency may vary, teams are encouraged to meet at least bi-weekly. This is in keeping with the principles of continuous improvement and frequent Plan-Do-Study-Act cycles.

A BALANCED AND COMPLEMENTARY TEAM

It is important to give thought to who completes the training and forms the core RT2C team (namely the Ward Leaders, Project Leaders, and facilitators). Several teams have observed that passionate and resilient individuals who are well-respected by their peers have been most effective at engaging other staff and moving the program forward. In addition, including diverse perspectives and building a team with complementary skillsets (leadership, technical, quality improvement, clinical) is helpful.

While predominantly led by nursing staff, teams are encouraged to reach out to a wide variety of disciplines that may be affected by changes tied to implementing the program. These may include allied health, care aides, unit clerks and other support staff, pharmacists, physicians, housekeeping, and facility maintenance staff. It was suggested that having more than one Ward Leader at a time, or rotating this responsibility among numerous staff members, is also helpful in keeping workload manageable, building morale, and encouraging the long-term sustainability of the program.

The RT2C team at Seven Oaks Tertiary Mental Health in Victoria having some fun on team photo day.

PROJECT LEADER AND FACILITATOR SUPPORT

While the program is designed to be led and driven by point-of-care staff, it also requires skill and expertise from a Project Leader and/or facilitator to guide the work from an improvement perspective and help maintain momentum over the course of implementation. Ward Leaders are typically point-of-care staff who have

an excellent understanding of norms and processes in their care areas, but who may not have experience with program implementation, data tracking and analysis, and/or leading others. Project Leaders and facilitators can help to keep the team on track, stay true to the framework of the program, and provide critical mentorship around quality improvement, lean tools, and more. One caution, however, is to avoid over-reliance on the Project Leader or facilitator; they are there to support and build capacity, not to do the work of the team.

CONSTANT COMMUNICATION

Central to all improvement work is clear and ongoing communication. RT2C is no exception; communication is an essential element of the program at all stages of implementation and cannot be overlooked as integral to its success. Staff must be deliberate in making time for two-way conversations, asking and answering questions, and receiving feedback. The program framework itself offers some mechanisms for this (including huddles, whiteboards, and dot voting) and teams are generally encouraged to adopt the mantra "we cannot over-communicate."

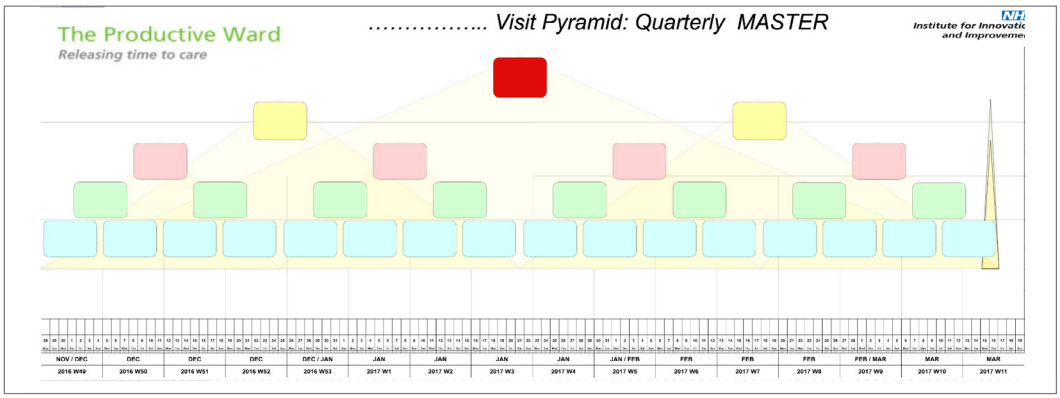
Teams identified some helpful strategies for keeping communication effective and fresh:

- Begin communication at the outset; don't wait for the program to be underway
- Use a variety of engagement methods (multimedia, bulletins, personal communication, etc.)
- Connect with other teams and share learning
- Use the program tools (e.g. huddles, dot voting) to elicit feedback and build consensus
- Mitigate negativity through personal conversations that encourage an open mind

Ward Leaders from Ledger House getting creative with how they communicate the launch of a new module – using a video skit! Watch the video here: https://youtu.be/uxGgWYInDeg

LEADERSHIP VISIBILITY AND SUPPORT

Staff also benefit from regular visits to the unit from leadership at all levels of the organization. Support from leaders in the form of providing protected time, ensuring a facilitator is in place, and removing barriers to progress in a timely fashion emerged as leading factors for success. One of the goals of the program is to build relationships "from ward to Board, and Board to ward" – a key element of this is leadership visibility on the units to show an interest in the work and ask questions about how teams can be supported in their efforts. Managers, Directors, and Senior Executive Team members are all encouraged to visit RT2C teams regularly to engage with point-of-care staff, learn from them, and build new relationships.



The Visit Pyramid tool can be used to track leadership visits and demonstrate commitment and support from the organization over time.

PATIENCE AND ONGOING COMMITMENT

Teams advise taking a long-term approach to implementing the program, being patient through periods of high and low momentum, and staying the course to sustain improvements. The program can deliver impressive results over time, but investments must be made to support the development of point-of-care leaders who are creating new ways of working with their teams.

This does not necessarily happen quickly, and will not be sustained without deliberate attention. Some sites have experienced pressure to implement and achieve results quickly, and this is not always possible when looking to change deeply-rooted culture. Typically it takes six months to one year before teams start to see improved outcomes; this time is required to establish effective communication channels with staff and other stakeholders, complete the team visioning process, and create structures and processes for driving ongoing improvement (such as setting up whiteboards, forming a meeting schedule and agendas, and beginning regular huddles). Given 23 active RT2C teams were trained in 2016 or later, this likely accounts for at least some of those teams not yet having sufficient data to show improvement as a result of the program. Experience has shown that by taking the time up front for the activities noted above, teams set themselves up for success and over the long term RT2C can become a natural part of "the way work is done."

ALIGNMENT WITH ORGANIZATIONAL STRATEGIC DIRECTION

It is also important for the goals and framework of the program to align with the strategic direction of the organization overall. The program uses a grassroots model to develop leadership skills among point-of-care staff. Leaders must therefore afford staff the opportunity and freedom to identify, prioritize, and act on areas of greatest importance to the team, while at the same time ensuring the work is aligned with organizational priorities.

FOCUS ON A BALANCED SET OF MEASURES

Finally, RT2C encourages teams to identify specific measures within the four core areas. It is essential that these measures are identified through a collaborative consultation process led by point-of-care staff, and that evidence-informed decision making is built into the program up front. This ensures alignment with staff priorities and supports ownership of real-time data collection, analysis, and action. Teams are encouraged to achieve results early, when possible, by identifying measures that would qualify as "low-hanging fruit" – to achieve some quick wins and motivate the team.

IMPACT EXAMPLE: IMPORTANCE OF MEASUREMENT

One acute team discovered the importance of measurement by tracking the prevalence of missed staff breaks – something staff had been talking about for a long time and believed was a major issue on the unit. Upon reviewing their data, they realized it was not an issue at all, and in fact very few people regularly missed their break. This allowed them to close that issue and move on to a new priority. Had they not provided evidence for this information, many staff would have likely resisted the shift in attention to a new priority. However, because they all agreed to collect the data and they owned it as their own, the team learned that hunches do not always reflect reality – an important lesson for the value of measurement in the future!

SECTION 5: BARRIERS TO SUCCESS

Implementing RT2C is not without challenges. As with all efforts to improve in a complex system, change in one area is inextricably linked to consequences in another. Improvement does not always happen easily or quickly, and it can be difficult to sustain.

The barriers identified in the qualitative portion of this evaluation and through previous consultation with program stakeholders in many ways represent the flipside of the keys to success outlined in the previous section. Without protected time, a skilled and committed team, ongoing communication, and support from facilitators and leadership the program will not succeed. While we will not go into detail describing reverse scenarios of the previously outlined keys to success, there are a few additional barriers worth mentioning.

RESISTANCE AND CHANGE FATIGUE

The most commonly mentioned barrier is resistance to change, which was raised by all but one of the teams interviewed for this report. Some teams described initially negative reactions to RT2C based on the perception that it would be a "top-down" initiative or that it would pull staff away from more important duties. Protected time for RT2C has sometimes been perceived as a poor use of resources, for instance when staff feel Ward Leaders should be on the floor helping them care for patients. Teams have also encountered apathy and general fatigue with regard to the idea of introducing more change.

The core members of the RT2C team often carry the weight of this resistance on their shoulders, and have had to learn not to take things personally while continually trying to engage others – even when doing so is very difficult. While this can be demoralizing at times, many recognize that overcoming this resistance is part of their role and spoke of how the program has made them more resilient. Connecting with staff one-on-one has been shown to build understanding while breaking down misconceptions, and there are several examples of initial "naysayers" becoming champions of the program once they see their opinions are being considered and can lead to actual results. By responding to negativity or resistance with openness and genuine consideration for how to address concerns, successful teams have been able to build new relationships and reach stronger solutions in their care areas.

TURNOVER AND UNPLANNED ABSENCE

High staff turnover and unplanned absence are undoubtedly a hindrance to the program's success. Interestingly, as the program becomes embedded over the long term, sites in the United Kingdom have seen a drop in turnover and unplanned absence as a result of more engaged and productive teams.[10] Though a few teams have tracked unplanned absence here in BC, none of the datasets received as part of this evaluation included enough data to show improvement in this area (yet!).

Turnover and unplanned absence cause problems for teams for good reason. It can be difficult to maintain momentum when a team loses a Ward Leader, especially if this happens shortly after the program launches. Furthermore, if a Ward Leader was planning to work an RT2C shift and the team is short-staffed, it is not uncommon for them to be asked to care for patients instead. This may be the right thing to do under the circumstances, but it can delay progress with the program. It is for these reasons that teams are advised to have several Ward Leaders trained and working together as a group, which can offset some of the impacts of turnover and unplanned absence.

Furthermore, it is not just turnover in point-of-care staff that can create challenges; leadership changeover can also affect the team. As much as possible, leaders are encouraged to ensure continuity of support for the program during times of transition. As RT2C can take several years to implement, it is vital to develop support for the program at multiple levels in the organization, and to be proactive in maintaining momentum during changeover. A lack of leadership presence can set teams

back on their journey, sometimes stalling progress indefinitely. Anticipating and preparing for turnover at all levels can help teams to mitigate impacts in this area and ensure staff have the time and energy to dedicate to the program's success.

WORKLOAD

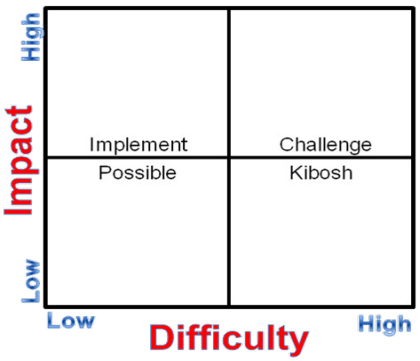
Health care providers are incredibly busy and experience many demands on their time. Though RT2C is designed to provide protected backfilled time for program planning and implementation, there is no denying it requires additional energy and commitment on the part of everyone involved. It can be difficult to motivate staff when they are already experiencing burnout or don't see how they can fit one more thing into their day (such as a huddle, no matter how short).

Again, putting a plan in place to avoid Ward Leader burnout is essential. Distributing responsibilities among multiple Ward Leaders and creating a rotating schedule for program leadership can help to keep the workload associated with the program manageable.

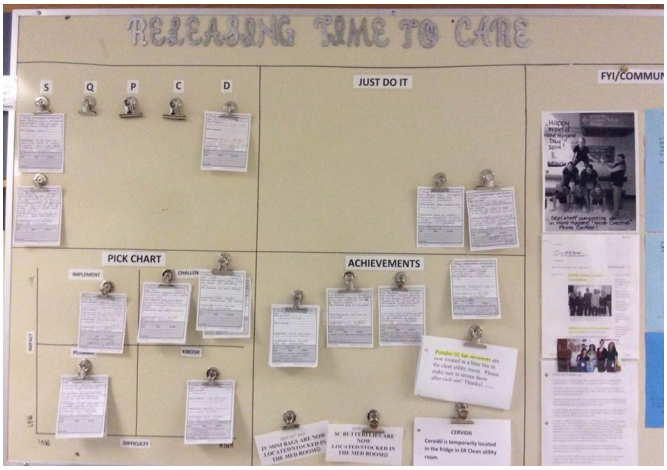
RESOURCE CONSTRAINTS

Some teams identified resource barriers to proceeding with desired changes. Once teams have gone through the process of consulting staff on sought-after changes, if they are then unable to follow through on those changes it can be disheartening. To reduce the likelihood of this happening, teams are encouraged to use the "PICK chart" tool (or a similar resource) to help them consider feasibility along with desirability when it comes to change ideas that have an associated cost.

That being said, there are also examples of teams using data they have collected as part of the program to build a business case. If they can demonstrate cost savings in other areas (for example, improved efficiency) they may be able to justify additional spending.



Teams can use a "PICK" chart to prioritize the feasibility of change ideas. Chart template (left) and chart in use on a team's RT2C board (below).



IMPACT EXAMPLE: BEDSIDE THERMOMETERS

It came to light for one RT2C team that staff did not have ready access to thermometers and spent a lot of time looking for and cleaning them when one was needed. There was a suggestion to have thermometers at the bedside for each patient, but due to cost constraints this was not feasible. Using the data collection techniques learned in RT2C, the team began tracking the number of wipes required to clean an insufficient number of thermometers and their associated cost, as well as the amount of nursing time spent looking for and cleaning thermometers. After a few months of data collection, they presented their case and were able to justify the purchase of one thermometer per patient bed! This not only improved staff well-being on the unit, it also improved efficiency of care.

SECTION 6: OPPORTUNITIES MOVING FORWARD

While RT2C has shown a lot of promise both internationally and in BC, we know that without consideration of the success factors and barriers teams struggle to achieve long-term, sustained improvement. It is not just a few of these factors that must be considered, but all of them. By summarizing these findings in one place we hope the program's potential to yield impressive results is apparent, while also highlighting that success is not a given and teams require dedicated support and resources to be successful.

The Council's role in RT2C is to offer guidance and support. Through the development of resources such as the provincial measurement template we have attempted to increase the ease with which teams can collect and analyze data; however, the grassroots nature of the program also means decisions around which measures to track, and for how long, reside with the teams. This presents challenges related to evaluation, and is why the data cannot easily be summarized in a systematic way.

Some opportunities for the future that emerged from this evaluation include:

Greater attention to consistent tracking of measures over time, particularly direct care time. We will be working with teams moving forward to help them embed measurement into all aspects of the program, and to ensure regular reporting on progress. In particular, we will emphasize follow up on baseline data and build in required data collection on direct care time at least once each year.

Increased awareness of, and enhanced access to, standard collected measures that could inform RT2C work. We will explore how the Council can assist teams to examine available data (that may not be the current focus of the team) to inform whether improvements made through the program are being sustained, or if certain measures should be revisited.

More education and skills development opportunities for RT2C team members, including point-of-care managers. We will continue to support booster sessions for existing teams, pursue opportunities for other relevant learning, and explore interest in completing a needs assessment for managers, in particular, to identify and provide the support they need in their roles.

Updates to the RT2C network list and exploration of new ways to reach teams with relevant information and resources. Not all team members are on the provincial distribution list or aware of the support offered by the Council. This is not necessarily a problem, as we have encouraged teams to work closely with their facilitators, whom we support more directly. However, more could be done to ensure relevant resources are reaching the right individuals and we will work on identifying where communication channels could be improved. We would also like to foster more cross-site learning within the network moving forward.

SECTION 7: CONCLUSIONS

This evaluation summarizes a collection of quantitative and qualitative data shared with the Council over the past five years. It highlights some of the achievements of RT2C teams at various stages of implementation, and is by no means exhaustive. It also identifies where teams may be seeing less improvement than we had hoped. Teams have worked on a wide variety of outcome and process-related measures over the years; due to the volume of data, only some examples have been showcased here.

Of the quantitative data received as part of this evaluation, over half of the datasets (51%) were inconclusive – either due to an insufficient number of data points, or lack of detail. This is substantial, and we cannot be certain of the reasons for which this is the case. Many teams shared what they had, regardless of whether or not it was complete. The reasons for sending this type of data could vary for each team, but may include shifting priorities within the organization or team, changes in staffing or leadership, being a "young" team (23 active teams began implementation in 2016 or later), having discontinued measurement too soon, or other unknown variables. We are encouraged, however, that 37% of the data received does show improvement, while only 12% does not. The qualitative data are in some ways more promising, as teams clearly expressed support for the program and a strong belief in its ability to improve teamwork and culture.

The teams' work offers some insights into the potential of RT2C to bring about meaningful improvement to BC's health system, while underscoring that there are no easy answers and teams face considerable challenges with implementation. Nearly all of the data received for this evaluation reflect the work of RT2C teams, and therefore its relevance and applicability to TPOT is limited. That being said, the foundational principles of RT2C and TPOT are the same, and therefore many of the lessons learned apply to both. The work undertaken as part of this program touches all but one dimension of the BC Health Quality Matrix (equity), with the greatest impacts being seen related to acceptability, safety, and efficiency.

Overall, the findings of this report are very promising. When providing qualitative feedback for this evaluation all teams spoke favourably about the program, agree it has helped them improve in all four focus areas, and recommend it as an approach to quality improvement. Much of the quantitative data support this same conclusion. While there is certainly more work to be done to make it even better, we congratulate the teams on their accomplishments and commitment to providing the best possible care for BC patients.

KEY POSITIVE FEATURES OF RT2C, AS CITED BY TEAM MEMBERS:

- Uses a grassroots approach
- Creates awareness of patients' perspectives and needs
- Has demonstrated results
- Quality improvement is necessary, and RT2C can help to achieve this
- Useful in any health care context
- Improves organization and layout on units
- Systematically helps teams to identify issues and develop solutions as a team

> ***"We have a lot of good ideas on how we can improve things. Now we're given this opportunity to actually use those ideas, and management is listening to us."***

APPENDIX A | IMPLEMENTATION TEAMS IN BC

**Teams in grey are considered "young" teams, as they began implementation in 2016 or later.*

Active Teams: Releasing Time to Care, Acute

UNIT	SITE	ORGANIZATION	BEGAN
Medicine	Delta Hospital	Fraser Health	2016
Medicine	Ridge Meadows Hospital	Fraser Health	2016
Medicine	Surrey Memorial Hospital	Fraser Health	2016
Pacific Adult Congenital Heart	St. Paul's Hospital	Providence Health Care	2015
Postpartum	BC Women's Hospital & Health Centre	Provincial Health Services Authority	2015
Postpartum	BC Women's Hospital & Health Centre	Provincial Health Services Authority	2016
Postpartum	BC Women's Hospital & Health Centre	Provincial Health Services Authority	2016
Combined Units	Bella Coola General Hospital	Vancouver Coastal Health	2017
Acquired Brain Injury	GF Strong Rehabilitation Centre	Vancouver Coastal Health	2016
Spine	GF Strong Rehabilitation Centre	Vancouver Coastal Health	2015
Medicine	Lions Gate Hospital	Vancouver Coastal Health	2015
Surgical	Lions Gate Hospital	Vancouver Coastal Health	2015
Surgical	Lions Gate Hospital	Vancouver Coastal Health	2015
Surgical	Lions Gate Hospital	Vancouver Coastal Health	2017
Surgical	Lions Gate Hospital	Vancouver Coastal Health	2017
Surgical (Orthopedics)	Lions Gate Hospital	Vancouver Coastal Health	2015
Medicine/Surgical/ Pediatrics	Powell River General Hospital	Vancouver Coastal Health	2015
Emergency Department	Richmond Hospital	Vancouver Coastal Health	2016
Intensive Care	Richmond Hospital	Vancouver Coastal Health	2017
Medicine	Richmond Hospital	Vancouver Coastal Health	2012
Medicine	Richmond Hospital	Vancouver Coastal Health	2015

Active Teams: Releasing Time to Care, Acute (continued)

UNIT	SITE	ORGANIZATION	BEGAN
Medicine Sub-Acute	Richmond Hospital	Vancouver Coastal Health	2012
Medicine Telemetry	Richmond Hospital	Vancouver Coastal Health	2012
Short Stay Pediatrics	Richmond Hospital	Vancouver Coastal Health	2016
Surgical	Richmond Hospital	Vancouver Coastal Health	2015
Combined Units	R.W. Large Memorial Hospital	Vancouver Coastal Health	2017
Acute Care for the Elderly	Vancouver General Hospital	Vancouver Coastal Health	2015
Neuroscience	Vancouver General Hospital	Vancouver Coastal Health	2016
Medicine	Vancouver General Hospital	Vancouver Coastal Health	2016
Solid Organ Transplant	Vancouver General Hospital	Vancouver Coastal Health	2016
Urology & Gynecology	Vancouver General Hospital	Vancouver Coastal Health	2014
Transitional Care/ Medicine	UBC Health Sciences Centre	Vancouver Coastal Health	2015

Active Teams: Releasing Time to Care, Community

UNIT	SITE	ORGANIZATION	BEGAN
Complex Rehabilitation	GF Strong Rehabilitation Centre	Vancouver Coastal Health	2016
n/a	South Community Health Centre	Vancouver Coastal Health	2015
n/a	Transition Nurses, Richmond Community	Vancouver Coastal Health	2017

Active Teams: Releasing Time to Care, Residential Care

UNIT	SITE	ORGANIZATION	BEGAN
n/a	Delta View Campus of Care	Delta View Life Enrichment Centre	2015
Extended care	Peace Arch Hospital	Fraser Health	2016
n/a	New Vista Care Home	New Vista Society	2015
n/a	Royal City Manor	Revera	2015
n/a	George Pearson Centre	Vancouver Coastal Health	2017
n/a	Minoru Residence	Vancouver Coastal Health	2017
n/a	Richmond Lions Manor	Vancouver Coastal Health	2017

Active Teams: Releasing Time to Care, Mental Health

UNIT	SITE	ORGANIZATION	BEGAN
Psychiatric	Cowichan District Hospital	Island Health	2014
Youth	Ledger House	Island Health	2014
Children	Ledger House	Island Health	2016
Psychiatric	Nanaimo Regional General Hospital	Island Health	2014
Adult Mental Health	Royal Jubilee Hospital	Island Health	2014
Adult Mental Health	Royal Jubilee Hospital	Island Health	2014
Medical Detox & Stabilization	Royal Jubilee Hospital	Island Health	2015
n/a	Seven Oaks Tertiary Mental Health	Island Health	2015
Psychiatric	St. Joseph's General Hospital	Island Health	2014
Psychiatric	Powell River General Hospital	Vancouver Coastal Health	2014
Inpatient Mental Health	Richmond Hospital	Vancouver Coastal Health	2014

Inactive Teams (trained, began, discontinued implementation)

UNIT	SITE	ORGANIZATION	PROGRAM	BEGAN
Medicine	Mission Hospital	Fraser Health	RT2C-acute	2014
Adult Mental Health	Royal Jubilee Hospital	Island Health	RT2C-mental health	2014
Surgical	University Hospital of Northern BC	Northern Health	RT2C-acute	2015
Cardiac Surgery	St. Paul's Hospital	Providence Health Care	RT2C-acute	2015
Complex Rehabilitation	GF Strong Rehabilitation Centre	Vancouver Coastal Health	RT2C-community	2016
HOpe Centre	Lions Gate Hospital	Vancouver Coastal Health	RT2C-mental health	2015
Operating Room	Lions Gate Hospital	Vancouver Coastal Health	TPOT	2014
n/a	Regional Pediatric Team, Vancouver Community	Vancouver Coastal Health	RT2C-community	2016
n/a	Robert & Lily Lee Family Community Health Centre	Vancouver Coastal Health	RT2C-community	2015
Operating Room	Richmond Hospital	Vancouver Coastal Health	TPOT	2014
Psychiatric Emergency	Richmond Hospital	Vancouver Coastal Health	RT2C-mental health	2014
Acute Inpatient	Squamish General Hospital	Vancouver Coastal Health	RT2C-acute	2014
Operating Room	Squamish General Hospital	Vancouver Coastal Health	TPOT	2014
Acute Home-Based Treatment	Vancouver General Hospital	Vancouver Coastal Health	RT2C-acute	2014
Psychiatric Assessment	Vancouver General Hospital	Vancouver Coastal Health	RT2C-mental health	2015
Psychiatric Inpatient	Vancouver General Hospital	Vancouver Coastal Health	RT2C-mental health	2014

Inactive Teams (trained, did not implement)

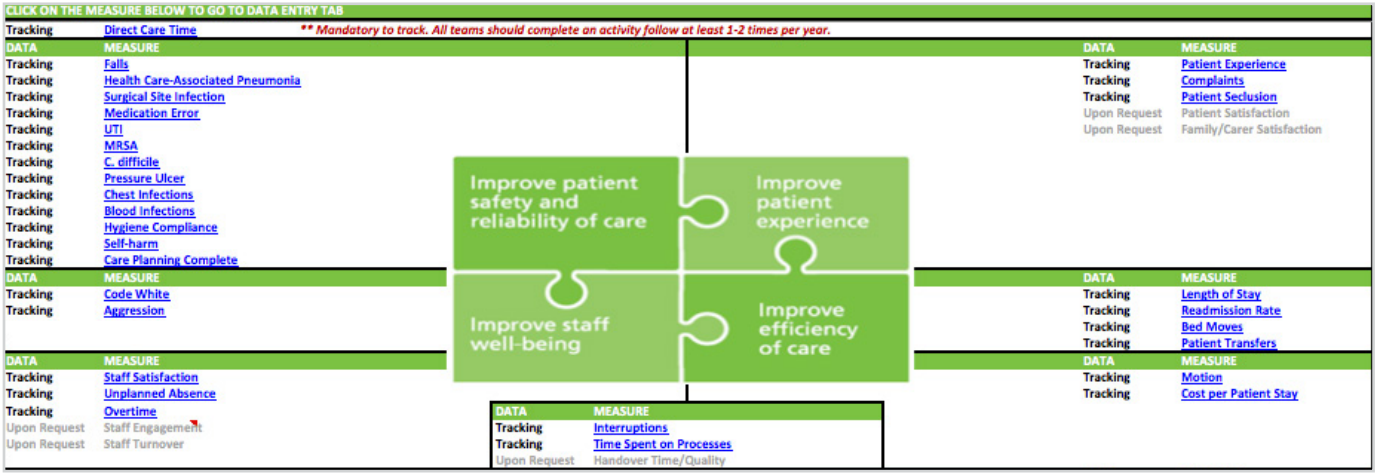
UNIT	SITE	ORGANIZATION	PROGRAM	BEGAN
n/a	Suncreek Village	Suncreek Village	RT2C-residential care	2015
n/a	Clearview Detox Centre	Island Health	RT2C-mental health	2015

APPENDIX B | PROVINCIAL MEASUREMENT TEMPLATE

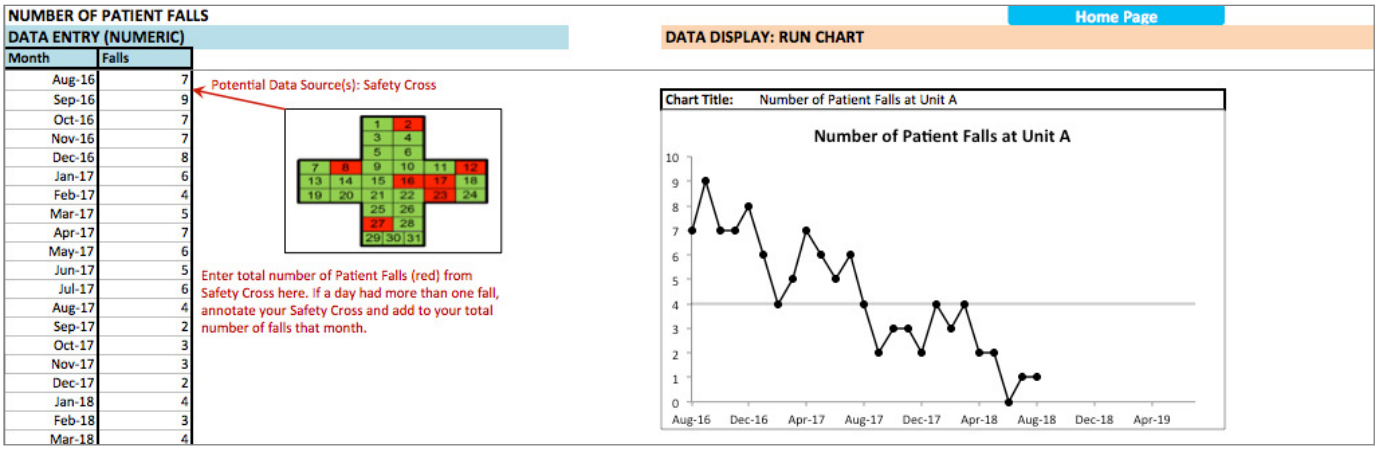
A provincial measurement template was created by the Council to provide a mechanism for teams to collect and display data tracked through the program. Data are sourced from RT2C-related tools (e.g. safety cross, activity follow spreadsheet) and automatically converted from raw numbers into a run chart displaying progress over time.

The expectation is not that teams collect data on every measure included below; rather, through consultation with other staff working in their areas, they identify priority measures within each of the four core program objectives (represented by the green puzzle pieces at the centre of the template). Each measure links to a separate tab on which teams can enter their data for that measure. Teams have had the opportunity to customize this template for their areas of focus, and the Council continues to support them in these efforts.

Home tab of provincial measurement template:



Sample measures tab of provincial measurement template – Falls (artificial data):



APPENDIX C | RUN CHART RULES FOR QUALITY IMPROVEMENT[11]

WHAT IS A RUN CHART?

The run chart is a universal data analysis tool for improvement projects. It is easy to use and intuitive to interpret, making it ideal for illustrating and understanding variation.

A run chart is useful for:

- Displaying data to make process performance visible
- Visually determining whether a change has resulted in an improvement
- Visually determining if results of the improvement effort are being sustained

FEATURES OF A RUN CHART

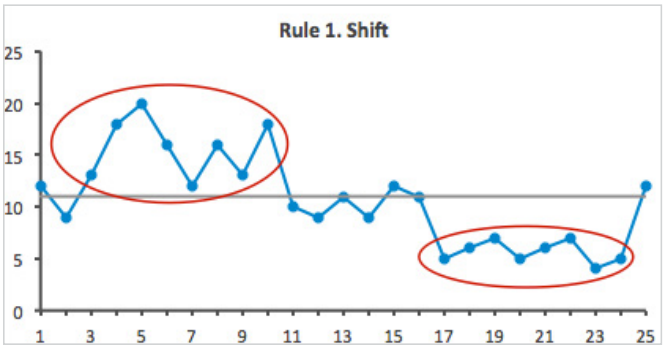
- Data points are displayed in time order
- Time is displayed along the horizontal axis (x-axis)
- Data point values are displayed along the vertical axis (y-axis)
- Each data point corresponds to one sample of data (a subset of the data for that time)
- A median line is displayed on the chart and used for analysis
- The median value is: "denoting or relating to a value or quantity lying at the midpoint of a frequency distribution of observed values or quantities, such that there is an equal probability of falling above or below it" (i.e. half of all data points fall above or below the median.)
- Run charts can be used right away, even with little data (i.e. start using a run chart when data for the first point are available)

PROBABILITY-BASED RULES FOR DETECTING NON-RANDOM CHANGE

Run charts are analyzed by using probability-based rules. The rules can determine whether the data are exhibiting random fluctuation or are a non-random "signal" of change. There are four probability-based rules to determine if there is a signal:

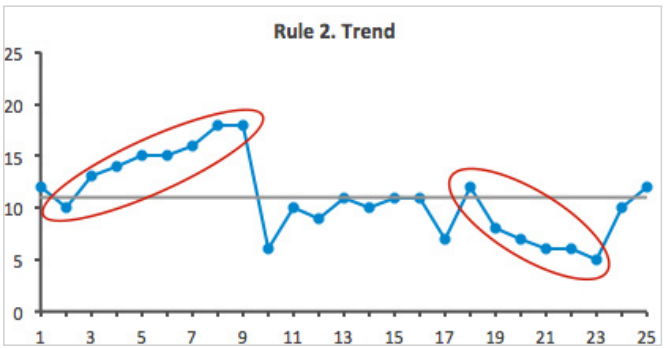
Rule 1: A Shift

Six or more consecutive points either all above or all below the median. Skip any points that fall right on the median and do not add them to the count.



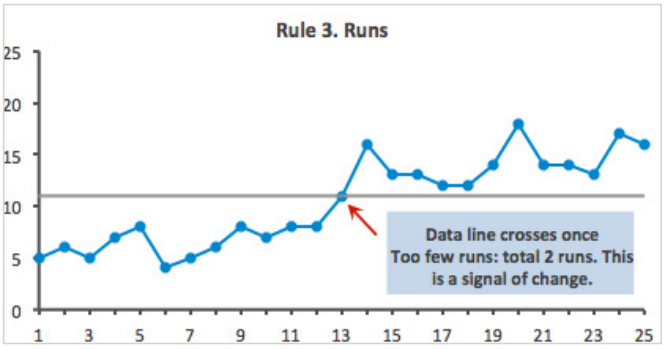
Rule 2: A Trend

Five or more consecutive points all going up or all going down. Skip any points that are the same in value as the point next to them, and do not add them to the count.



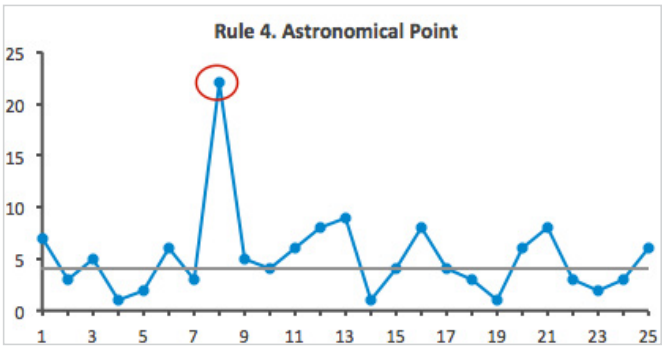
Rule 3: Runs

A run is a series of points in a row that falls on one side of the median. Having too few or too many runs signals that the fluctuation in data is non-random. Too few runs means there is less fluctuation than expected; too many runs means there are differences in the data due to other variables and may require further stratification (e.g. difference in day and night shifts). A simple way of counting runs is to count the number of times the data line crosses the median and then add one.



Rule 4: Astronomical Point

An obvious data point that is unusual and different than the other data points. Anyone studying the chart would agree that the value is out of place.



APPENDIX D | LIST OF TEAM-PROVIDED MEASURES

Measure	Program(s)
48/6 audits	RT2C-acute
5S audits	RT2C-mental health
Admissions	RT2C-mental health & residential care
Admissions (to ED) within target time	RT2C-acute
Aggression	RT2C-mental health
Ambulatory visits	RT2C-community
Absences Without Leave	RT2C-mental health
Braden scale audits	RT2C-acute & mental health
C. difficile	RT2C-acute
Cancelled appointments	RT2C-acute
Chest infections	RT2C-residential care
Code Whites	RT2C-mental health
Completed antibiotic prophylaxis	TPOT
Completed assessments	RT2C-mental health
Completed community meetings	RT2C-mental health
Completed evening group sessions	RT2C-mental health
Completed evening staff debriefs	RT2C-mental health
Completed night checklists	RT2C-acute & mental health
Completed standby cases	TPOT
Completed surgical checklists	TPOT
Direct care time	All
Discharges against medical advice	RT2C-mental health
Discharges by target time	RT2C-acute
Falls	RT2C-acute, mental health & residential care
Family & carer feedback	RT2C-acute & mental health
Hand hygiene	RT2C-acute
Handover time	RT2C-acute
Hospital transfers	RT2C-residential care
Huddles	RT2C-acute & mental health, TPOT
ICOUGH audits	RT2C-acute & mental health
Interruptions	RT2C-acute
Length of stay	RT2C-mental health
Medication incidents	RT2C-acute
Missed appointments	RT2C-acute
Missed breaks	RT2C-acute & mental health
Missed group sessions	RT2C-mental health

Measure	Program(s)
MRSA	RT2C-acute
Nursing time to assist with car seats	RT2C-acute
On-time ending	TPOT
On-time starts	TPOT
Overcapacity	RT2C-acute & mental health
Overtime	RT2C-acute, mental health & residential care
Patient experience/satisfaction	RT2C-acute, mental health & community
Pneumonia	RT2C-acute
Pressure ulcers	RT2C-acute
PSLS events	RT2C-mental health
Reasons for late starts	TPOT
Respiratory infections	RT2C-residential care
Safety rounds	RT2C-mental health
Seclusion	RT2C-mental health
Staff achievements	RT2C-acute
Staff meetings	RT2C-mental health
Staff priorities	RT2C-acute
Staff satisfaction	All
Staff shortages	RT2C-mental health
Stays under 2 days	RT2C-mental health
Surgical site infections	TPOT
Teamwork	RT2C-residential care
Time completing physician order forms	RT2C-community
Time sorting kardex	RT2C-acute
Unnecessary motion	RT2C-acute, community & residential care
Unplanned absence	RT2C-acute, mental health & residential care
UTIs	RT2C-acute & residential care
UTIs (catheter-associated)	RT2C-acute & mental health
Wait times	RT2C-acute

NOTES

1 NHS Institute for Innovation and Improvement. (2011). Rapid impact assessment of the productive ward: Releasing time to care. Retrieved from: https://bcpsqc.ca/documents/2017/07/Rapid-Impact-Assessment-of-the-PW-2011.pdf

2 NHS Institute for Innovation and Improvement. (2012). Calculating the financial benefit of the productive ward: Releasing time to care. Retrieved from: https://bcpsqc.ca/documents/2017/07/Calculating-the-financial-benefit-of-The-Productive-Ward-2012.pdf

3 BC Patient Safety & Quality Council. (2012). BC health quality matrix handbook. Retrieved from: https://bcpsqc.ca/documents/2012/09/BCPSQC-Health-Quality-Matrix-February2017.pdf

4 Provost, L.P. & Murray, S.K. (2011). *The health care data guide: Learning from data for improvement*. San Francisco, CA: Jossey-Bass.

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7 Vancouver Coastal Health. (2014). New ICOUGH strategy reduces pneumonia by 39%. *VCH News*. Retrieved from: http://vchnews.ca/news-richmond/2014/07/16/new-icough-strategy-reduces-pneumonia-by-39/#.WS4Aluvyupo

8 Manser, T. (2009). Teamwork and patient safety in dynamic domains of healthcare: A review of the literature. *Acta Anaesthesiologica Scandinavica,* 53, 143–151.

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10 NHS Institute for Innovation and Improvement, 2011.

11 Associates in Process Improvement and Corporate Transformation Concepts. (2011). Reproduced from Provost, L.P. & Murray, S.K. *The health care data guide: Learning from data for improvement.* Used with permission.

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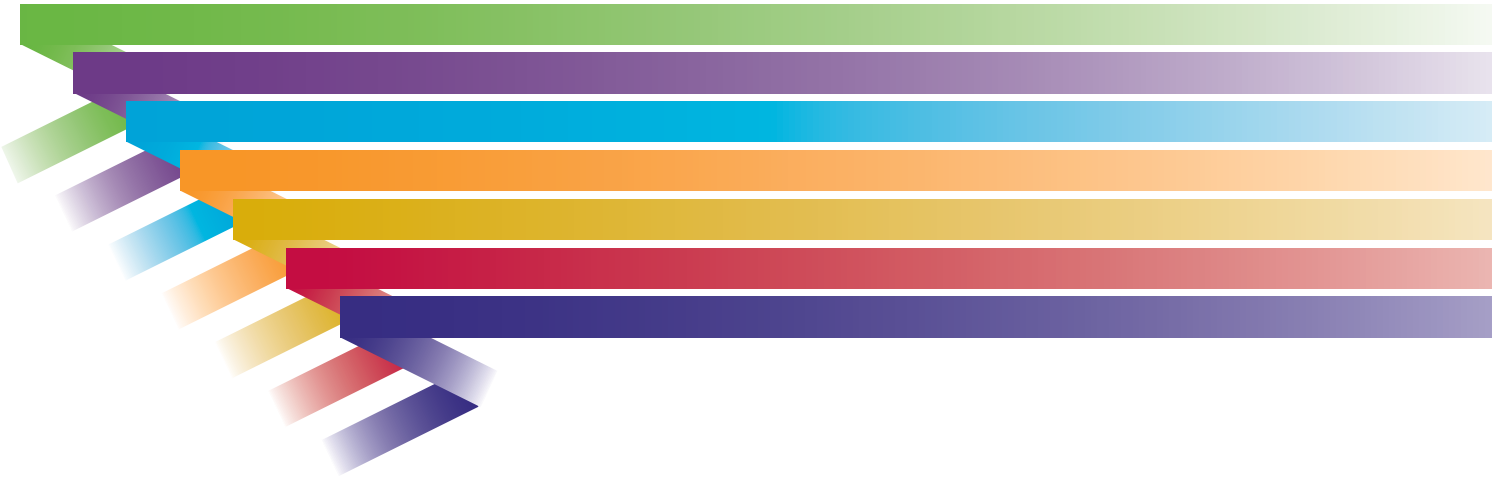
World Health Organization. (1998). Health promotion glossary. Retrieved from: http://www.who.int/healthpromotion about/HPR%20Glossary%201998.pdf



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