Physician Quality Improvement
Cohort 6
2022 - 2023

Quality Improvement Project Posters

Vancouver CoastalHealth

Providence Health Care
How you want to be treated.

PQI PHYSICIAN QUALITY IMPROVEMENT
Specialist Services Committee

TERRITORY HONOURING

We wish to acknowledge that the land on which we gather is the traditional and unceded territory of the Coast Salish Peoples, including the Musqueam, Squamish, and Tsleil-Waututh Nations.

Vancouver Coastal Health and Providence Health Care are committed to delivering exceptional care to 1.2 million people, including the First Nations, Métis and Inuit in our region, within the traditional territories of the Heiltsuk, Kitasoo-Xai'xais, Lil'wat, Musqueam, N'Quatqua, Nuxalk, Samahquam, shíshálh, Skatin, Squamish, Tla'amin, Tsleil-Waututh, Wuikinuxv, and Xa'xtsa.

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Quality Dimensions Icon Glossary

= Accessibility = Effectiveness = Equity

= Appropriateness = Efficiency = Safety

* Continuation Projects

INTRODUCTION

The Physician Quality Improvement (PQI) initiative is a province wide initiative and a partnership between Vancouver Coastal Health, Providence Health Care, and the Specialist Services Committee (SSC). The vision of PQI is to "empower physicians to enable a continuous improvement culture, to achieve excellence in care for patients and families, where BC is a model for health and wellness globally" - PQI Vision, Mission, Values

Since 2017, over 125 VCH/PHC physicians have graduated from the PQI program. The cohorts have grown each year, and so have the number of projects/physicians supported doing Quality Improvement (QI) work.

This booklet showcases the effort and results of 27 different QI projects that took place at Vancouver Coastal Health, Providence Health Care, and Community-based Practices as part of Cohort 6 of the PQI program (2022 to 2023). Recordings of each QI project presentation are also available to view:

April 18th, 2023 | https://bit.ly/3MWo0mc (Part 1); https://bit.ly/433U0L7 (Part 2)
April 25th, 2023 | https://bit.ly/3IFI9ux

We are proud of the lessons learned and the results of these projects. We are also proud to share some feedback from our PQI alumni:

"I have found myself able to look at many challenges through the QI lens to start problem solving... the principles are invaluable."

"PQI is a wonderful program and I'm so happy to have participated in it – Thank you so much!"

"[PQI] inspired me to keep looking for opportunities to improve patient care in my day-to-day clinical practice."

"Having benefited greatly from peer support during my own PQI project, I understand the value of collaboration..."

"[The PQI] initiative really improved my confidence in system change."

PHYSICIAN QUALITY IMPROVEMENT

PQI provides training and hands-on experience on QI projects, ultimately promoting a culture of learning, openness, and dedication to quality improvement in the health care system.

QI training provided by PQI focuses on capability development through an educational “dosing strategy” approach. This creates a pathway where physicians can participate in training at varying levels, depending on their interest. Participating physicians receive funding and support to design, plan, test, and implement their learning action projects with multidisciplinary teams.

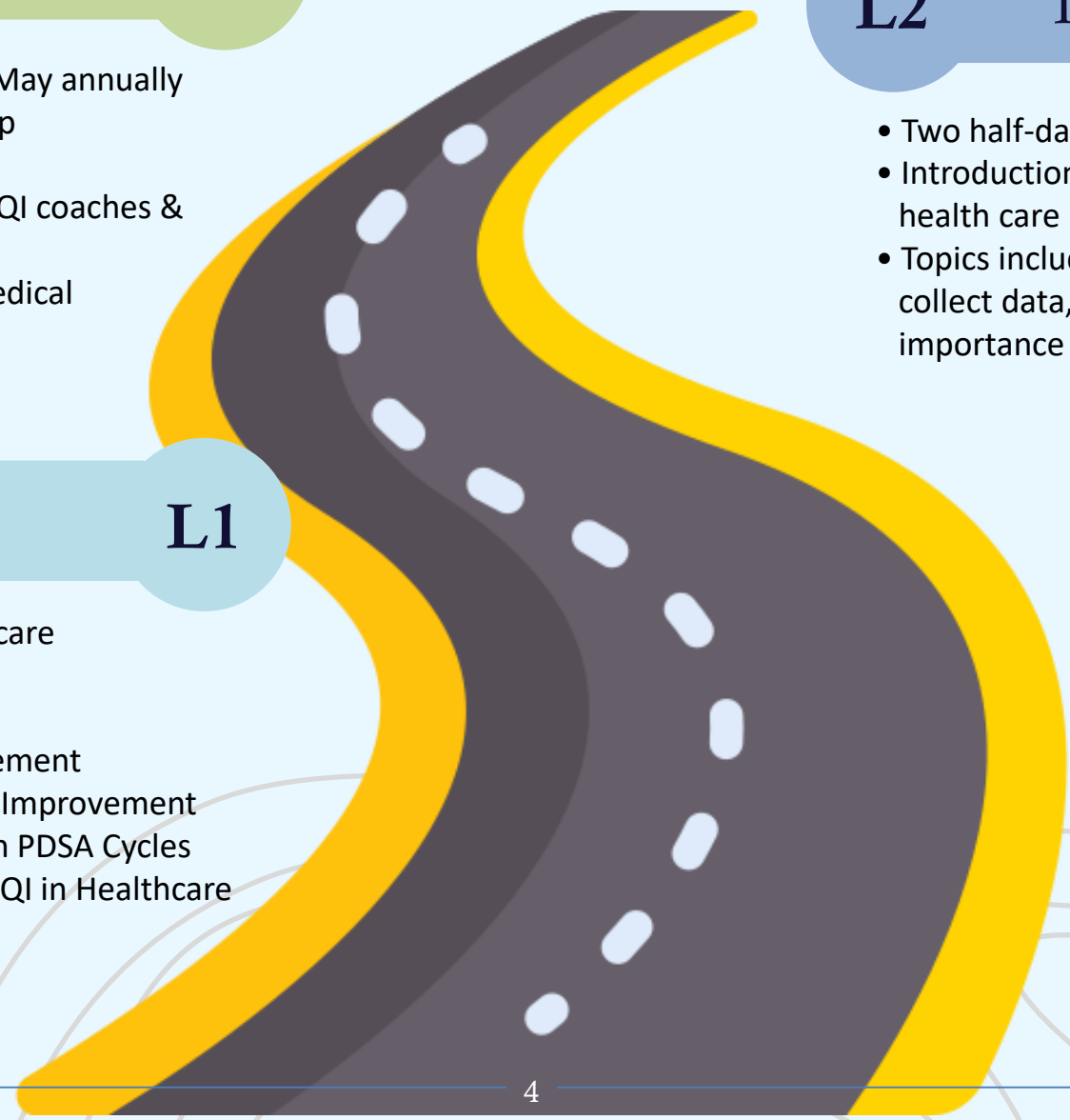
Advanced Cohort Training L3

- Cohort length: Ten months from August to May annually
- Interactive training days with lectures, group activities, and workshops
- Full project support and mentorship from PQI coaches & faculty, program advisors, and data analysts
- Project endorsement from VCH and PHC medical and operational leaders
- Access to data, QI resources, and templates

IHI Open School L1

Online courses offered by Institute for Healthcare Improvement (IHI) Open School:

- QI 101: Introduction to Health Care Improvement
- QI 102: How to Improve with the Model for Improvement
- QI 103: Testing and Measuring Changes with PDSA Cycles
- Dr. Don Berwick presentation - Overview of QI in Healthcare for BC



L2 Intermediate Training

- Two half-days, offered multiple times a year
- Introduction to what is Quality Improvement in health care
- Topics include: Model for Improvement, how to collect data, crafting an aim statement, the importance of the patient voice, and more!

Additional PQI Funding Opportunities

QI Project Funding: Funding for physicians to work on a project charter, data collection and analysis, PDSA cycles, etc. Projects must have a PQI Level 3 trained physician (alumni) on the team. If you need help finding an alumni, we can help you!

QI Coaching: 1:1 Ad-hoc, on demand chat about QI and to answer any questions. We can help get your ideas or project scoped, started, or unstuck. JCC Sessional funding available for coaching time.

Additional information on PQI funding opportunities here: **bit.ly/3ILNVuy**

VCH/PHC PQI TEAM – 2022/23

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Providence Health Care QI Project Posters

Breast Surgery Seed Localization: Reducing Patient Day of Surgery Wait Times and Improving Care

Amy Bazzarelli, Hing Wong and Jefferson Xu (Program Advisors)

CONTEXT

- Patients with non-palpable or vaguely palpable breast lesions requiring localization of the lesion for excision.
- Traditionally, these lesions were localized with wires placed in radiology on the day of surgery.
- A change in practice to magnetic seed localization has occurred and results have been analysed.
- Work completed at Mount Saint Joseph Hospital involving the Breast Clinic, Surgical Department, and Radiology Department.

PROBLEM

- Operative start delays and long patient wait times for surgery occur in patients undergoing surgery for non-palpable breast lesions.
- The placement of a fine wire in the radiology department on the day of surgery requires patients to arrive early in the day. Wire placements vary in complexity and may take longer than expected, resulting in possible delays.
- Seed localization has been shown to decrease patient wait times, but sustaining this change is difficult due to cost of the change.

AIM STATEMENT

- Initial aim statements:
  - To decrease patient surgical wait times for lumpectomy patients requiring localization in the pre-operative area (day care surgery) on the day of surgery by 50% by May 31, 2022.
  - Surgical start times will occur earlier in the day in 50% of cases.
- Second aim:
  - To transition completely to seed localization by February 28, 2023 with 100% of cases completed with seeds

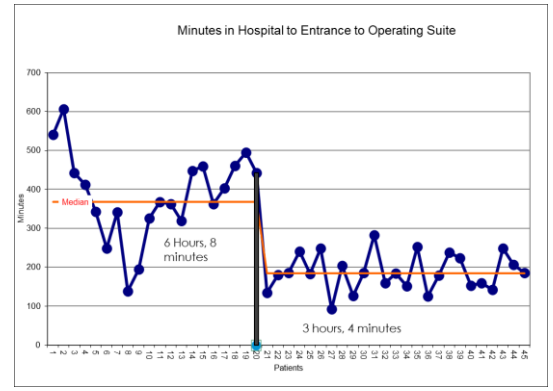
INTERVENTION OR STRATEGY FOR CHANGE

- Initial intervention (2022): Replace same day wire localization with magnetic seed localization placed days ahead of surgery
- Ongoing interventions: Use of various strategies to re-implement and sustain the change idea:
  - St. Paul's Hospital foundation approval to fundraise seed purchase as a priority item and obtaining funding
  - Senior leadership approval and regional development of regional initiative for seed localization
  - Patient and provider education
  - Processes to address challenges with change to seed localization: seed rounds with surgery and radiology to discuss difficult cases, assist in OR, ongoing discussion with vendor
  - Ongoing data analysis with UBC work learn student

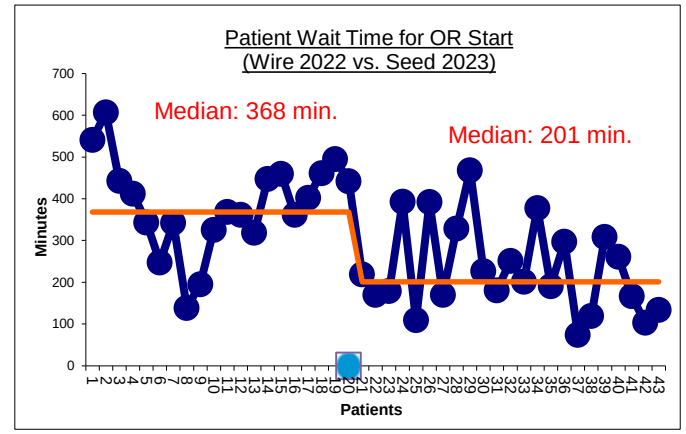
MEASURES OF IMPROVEMENT

- Outcome Measure:
  - Amount of time patients wait in peri-operative area on day of surgery
  - Patient and practitioner satisfaction
- Process measures
  - Time of entry to hospital and time to OR
  - Patient reported outcomes
- Balancing measures
  - Travel for additional procedure

Initial Effect of Change



Sustained Effect of Change



EFFECTS OF CHANGE

- We were able to demonstrate in 2022 a 50% decrease in patient day of surgery waiting times
- This effect has been maintained (45% decrease) since reimplementation of the seed localization program in 2023
- Since reimplementation of seed localization, only 1 case has been performed with wire localization, and all others have been performed with seed localization
- Surgical operative times have not increased with the introduction of seed localization
- Radiology procedure times have decreased with seed placement

LESSONS LEARNED

- Change requires persistence
- Involve key stakeholders early
- Convincing argument is needed to make a change
  - Management, patient and provider by-in is needed
  - Data to support the change is helpful
- Most important is to improve patient care and experience
- Adaptability is needed

SUSTAINABILITY

- Ongoing data collection with work learn student of patient wait times, radiology times, operative times, patient satisfaction, provider satisfaction, surgical margins and re-excision rates, specimen volumes, economics, radiology information
- Ongoing discussions with management re. sustained funding beyond foundation support to make this change a PHC operational budget item

Acknowledgements

- Funding from Specialist Services Committee
- Amy Chang, Stephen van Gaal, Sandra Swanson, Barb Langlois, Elaine McKevitt, Rebecca Warburton, Jin-Si Pao, Carol Dingee, Arveen Gogoani, Providence breast clinic nurses, radiology clerks and technicians, Perioperative and OR nurses and staff, Jessica Farrell, Yvette Cheong, Amie Padilla, Aileen Rankin, Rathi Sivarasa, Rick Domingo, Chris Grubb, Parker Sheehan, Kelly Dawson, Karolina Ged-Piesik, Darren Barnfield, Kelly Third, Providence Health Foundation, Hing Yi Wong, Jefferson Xu, Melina Deban, Jieun Newman-Bremang

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; VGH: Vancouver General Hospital; PHC: Providence Health Care; UBC: University of British Columbia

For questions or for comments, contact Amy Bazzarelli at abazzarelli@providencehealth.bc.ca

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Goals of Care Conversations at the Mount Saint Joseph (MSJ) Family Practice Teaching Service

Dr. Nick Graham and Dr. Tom Tang

CONTEXT

- The MSJ Family Practice Teaching Service (FTPS) is a 12 bed acute medicine unit at MSJ
- The team consists of a weekly staff physician, two R1 residents, and an R2 senior resident
- Most patients are geriatric, and most palliative care patients at MSJ are admitted to this service
- A Goals of Care (GOC) conversation, is a discussion around a patient's values and wishes for their future medical care, and often includes their preference for resuscitation measures if their heart or breathing were to stop (Code Status)
- The Serious Illness Conversation Guide (SICG) is an evidence based, patient tested approach to GOC language and discussions developed by Ariadne Labs our of Harvard Medical School

PROBLEM

- GOC conversations are currently haphazardly charted, and thus are difficult to reference for future hospitalizations, and impossible for community providers to reference
- We risk not providing appropriate end of life care to our patients if we are not properly exploring and documenting their expressed wishes
- In 2021 and 2022, over the course of 863 admissions, an average of only 0.7 GOC conversations per month were documented on the proper GOC Powerform in Cerner

AIM STATEMENT

- To have a high level Goals of Care conversation completed and well documented (easily findable by others, communicated on discharge summaries) within two business days of admission to MSJ Family Practice Teaching Service in > 75% of appropriate (Charlson Comorbidity Index ≥ 3) hospitalized patients by May 2023.

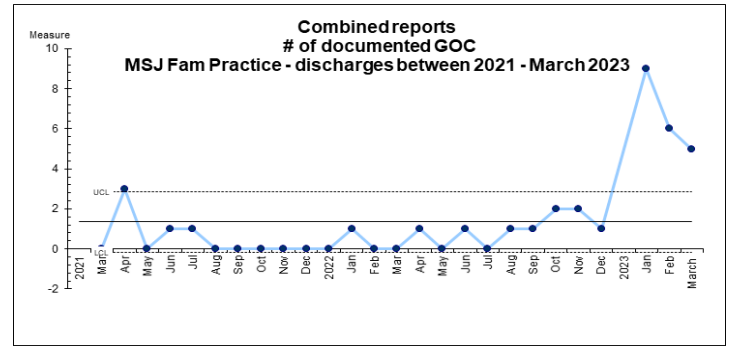
INTERVENTION OR STRATEGY FOR CHANGE

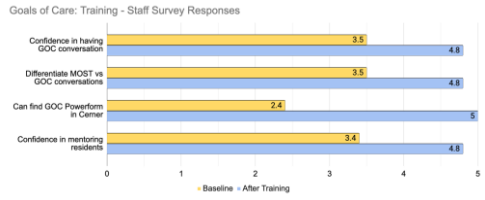
- Jan 2023: Incorporated GOC SICG training and charting expectations into monthly resident orientation
- Jan to April 2023: Created a website to house reference materials for staff and residents; including SICG training videos and summaries, patient/family handouts including translated versions, and Cerner training videos and screenshots
- April 2023: Staff physicians attended an evening in-service on implementing the SICG, hosted by PHC Advance Care Planning Lead Wallace Robinson and Intensive Care physician Dr. Ruth MacRedmond
- June 2023: Plan to include in the R2 senior resident role an expectation to ensure GOC conversations are charted in a timely manner by their team

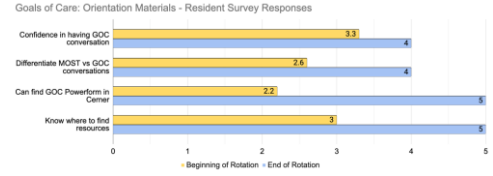
MEASURES OF IMPROVEMENT

- Outcome Measure:
  - Percentage of patients with GOC conversation completed and well documented in Cerner within 2 business days of admission [Cerner data pull]
- Process Measures:
  - Total number of GOC conversations completed and well documented in Cerner on a monthly basis [Cerner data pull]
  - Resident/staff confidence in having GOC conversations, ability to differentiate GOC and Code Status conversations, ability to find the Cerner GOC Powerform, and ability to find other GOC resources [Survey responses]
- Balancing Measure:
  - Weekly time required in GOC conversations [Survey responses]

Total Number of GOC Conversations Completed and Well Documented







EFFECTS OF CHANGE

- Data for the primary outcome measure was not possible to pull from Cerner during the timeframe of this project
- The control chart for the total number of monthly GOC conversations demonstrates special case criteria, with a marked increase from the baseline of 0.7 per month to 5 - 9
- Survey responses demonstrate improved confidence in residents and staff in having these conversations and following this workflow; estimated time spent in GOC conversations increased from 10 minutes to 42.5 minutes per week
- As a result of using the Cerner Powerform, these GOC conversations are flagged as having occurred along the top of all open charts, are well labeled and easily findable in Documents, and are automatically distributed to community providers along with hospital discharge summaries

LESSONS LEARNED

- Requesting data from Cerner is a long a difficult process; manual chart reviews may be feasible for small data sets like this
- Communication amongst the team was a challenge; various online tools helped both asynchronous and virtual communication: Signal groups, Survey Monkey for scheduling Zoom meetings, Google Forms for surveys

SUSTAINABILITY

- By building GOC training and charting expectations into resident orientation, and assigning responsibility to the senior resident to follow-up on completion of these documents, this workflow can persist beyond my involvement
- There are plans for ongoing staff training with our PHC SICG group every few years to keep up our skills and confidence

Acknowledgements

Many thanks to Allison Zentner (Program Advisor), Dr. Cole Stanley (Physician Coach), Sandy Barr (Operations Director), Dr. Nardia Strydom (Department Head), Wallace Robinson (PHC Advance Care Planning Lead), Dr. Ruth MacRedmond (Intensivist and GOC Expert), Ashley Doty and Lindsay Woo (Nurse Leaders)

This project was funded through the PQI program of the SSC

Glossary of acronyms

MSJ: Mount Saint Joseph; FTPS: Family Practice Teaching Service; GOC: Goals of Care; SICG: Serious Illness Conversation Guide; PQI: Physician Quality Improvement; SSC: Specialist Services Committee;

For questions or for comments, contact Dr. Nick Graham at nrgraham@ualberta.net

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Preoperative Multidisciplinary Review for Breast Cancer

Elaine McKevitt, Surgeon
Karina Makarova, Research Assistant
and the Providence Breast Program at Mt St Joseph Hospital

CONTEXT AND PROBLEM

- Breast cancer treatment is increasingly multimodal and multidisciplinary
- Preoperative multidisciplinary review has been shown to change care and is a Canadian and International standard
- Preoperative multidisciplinary review rarely happens in BC due to logistics
- Oncoplastic Reconstruction is a newer approach offering a procedure with shorter recovery and fewer complications but requires coordination of Surgical Oncology, Radiology and Plastic Surgery
- Currently there is a cancer care crisis with staffing shortages and increasing wait times for diagnosis, surgery, chemotherapy, radiotherapy

AIM STATEMENT

To increase the number of Oncoplastic Breast Reconstruction cases that have preoperative multidisciplinary review from 0% to 50% by May 2023

STRATEGY FOR CHANGE

- I began by discussing the project with all departments at meetings and individually: nursing, radiology, pathology, oncology
- The next step was starting to review cases at existing rounds at MSJ and BC Cancer
- We reviewed more cases, looked at the effect of review and how best to review and reviewed cases during the implementation of seed localization
- Finally, based on all learned during the project we have began surgeon review at time of triage/consult

Plan	PDSA 1	PDSA 2	PDSA 3	PDSA 4	PDSA 5	PDSA 6
Do	review case at BCC tumor board EM	email review EM	review case at MSJ diagnostic rounds EM	Other surgeons and increase volume of cases	Molli rounds	surgeons review complex cases at triage
Study	• Change in pathology prevented mastectomy • Input from radiation and medical oncology • Only time plastics has been present	• Delay in reply • As seen at different cancer center patient sent to a different surgeon	• Avoided biopsy of hemangioma • Caught errors in handoff between centers • Helpful to have multiple surgeons for planning	• Change pathology • Delays in path testing • Change 1st treatment	• Preop imaging review with radiology • Clear plan, fewer calls	• Logistics of triage and review • With Nurses

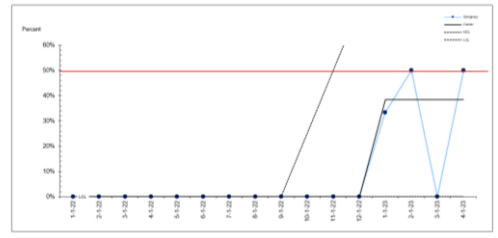
Act:
- *Create consistent **PRETREATMENT** process*
- *Consistent multidisciplinary representation*

EFFECTS OF CHANGE

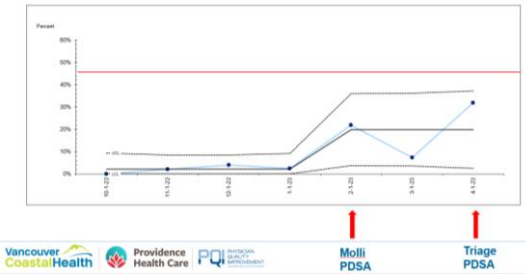
- Multidisciplinary review can change the patient journey
- With review there were significant changes to diagnosis,, staging, and treatment for some patients
- All specialities need to make time for rounds, but additional time to review diagnostic work up is required in radiology and pathology

MEASURES OF IMPROVEMENT AND RESULTS

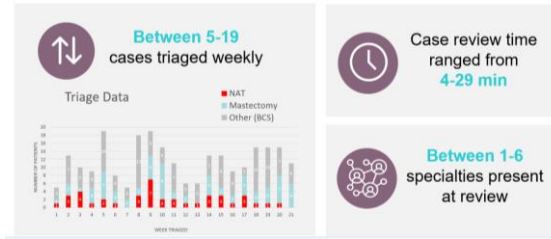
Percentage of Oncoplastic Recon cases reviewed



Percentage of all triaged cancer cases reviewed



Process Measures



Balancing Measures

LESSONS LEARNED

- When considering change it is important to keep the focus on what is best for the patient, despite system challenges, as it is hard to change interdisciplinary processes
- The approach of the PDSA cycle with continued reassessment and modification provided a language to discuss implementing change and was a practical approach
- Our findings support developing systems for pre-treatment multidisciplinary review for breast cancer

SUSTAINABILITY

- We can continue to review cases in existing rounds formats but a dedicated pre-treatment round would be optimal
- We will use the data from this project to develop a business case that will outline the supports needed to implement a sustainable pre-treatment multidisciplinary review
- Implementation of new round will be delayed to allow for on boarding of new staff in near future

Acknowledgements

- PBC Team, PHC leadership, PQI team, Partners in care (oncology, radiology, pathology), Beth Rizzardo, patient partner
- This project is supported by the SSC through the PQI initiative

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; BCS: Breast Conserving Surgery; NAT: Neoadjuvant Chemotherapy; BCC: BC Cancer; MSJ: Mt St Joseph Hospital; PHC: Providence Health Care; PBC: Providence Breast Center

For questions or for comments, contact Elaine McKevitt at emckevitt@providencehealth.bc.ca

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Same-Day Discharge Laparoscopic Hysterectomy

Dr. Fariba Mohtashami

CONTEXT

Hysterectomy is the most commonly performed major gynecological surgery and same day discharge is possible and safe in the majority of these patients. With increasing Technicity Index (number of hysterectomies performed laparoscopically and vaginally divided by total number of hysterectomies), the majority of patients can be safely discharged home on the day of surgery.

PROBLEM

Limited number of in-patient beds available at SPH, affecting the number/types of surgeries one can book each day. Historically, the majority of patients stay one night at SPH after laparoscopic hysterectomy. This leads to an unnecessary hospital stay for the patient when they can be home, and also unnecessarily uses hospital resources. The current Canadian standard is same day discharge for selected patients.

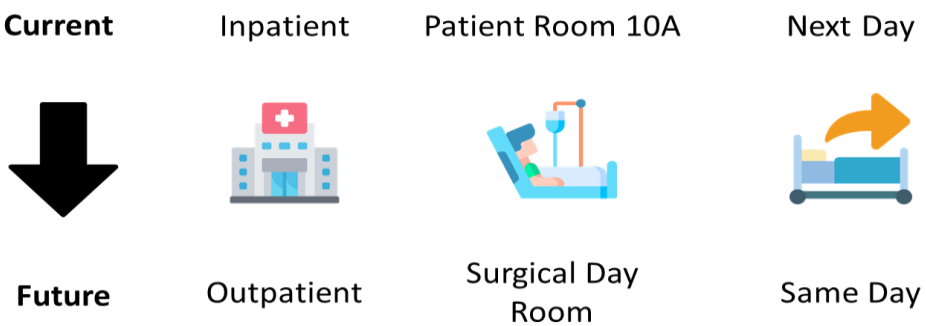
AIM STATEMENT

To discharge **80%** of eligible hysterectomy patients on the **same day** at SPH by **Dec 2023**.

STRATEGY

- ✓ **PDSA 1** with Dr. Mohtashami's patients, **PDSA 2** with 2 surgeons
- ✓ Met with stakeholder
  - ✓ Agreed on future process
- ✓ Developed clear patient exclusion criteria
  - ✓ Agreed by Anesthesia Group
- ✓ Updated patient information booklet
- ✓ Prepared RX for adequate pain/ nausea management at home
- ✓ Patients booked as "Same day discharge"- with no hospital bed being held

Before Vs. After



MEASURES OF IMPROVEMENT

Measure Type	Measure	Jan-Mar 2022 (PDSA 1)	Oct-Dec 2022	Jan-Mar 2023 (PDSA 2)
Outcome	% Same-Day Discharge	9/12 (75%)	13/36 (8%)	10/44 (22%)
Balancing	Readmissions	0		
Balancing	Complications	0		

NEXT STEPS

- Share data from PDSA 2 with the Department and encourage more surgeons to participate in intervention
- Share the results with other hospitals to encourage SDD and improve access to hysterectomy

LESSONS LEARNED

- Leading a project that improves overall patient care at St Paul's hospital
- Meeting the stake holders at SPH and learning about the operational governance
- Meeting other researchers at PHC and discussing future collaboration

SUSTAINABILITY

- Educate the chief resident involved in the surgery about the importance of adequate pain and nausea medication upon discharge
- Get NSQIP data for long term measurement
  - Measure visit to emergency department or readmission rate within 24 hours
  - Percentage of patients who needed unplanned admission

Acknowledgements

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Delivering Value for Patients with Shoulder Pain

Meghan MacLeod, Kathy Ho, Amanda Monteiro, John Jinn, Cherie Au, Barb Langlois, Jill Kipnis, Joanne Moorhen, Karen Tugwell, Allison Chiu, Shannon Jackson, Adrian Huang, Jeffrey Pike.[1]

[1] Department of Surgery, Providence Health Care, Vancouver BC, Value-Based Health Care Team, Providence Health Care, Vancouver BC.

CONTEXT AND PROBLEM

Patients with chronic shoulder pain (>3 months) are often referred to orthopedic shoulder surgeons for diagnosis and management; however, the majority of these patients need nonoperative care. Wait times for orthopedic surgeon consult can be long, and patients' shoulder and associated health outcomes may deteriorate during this wait.

For patients referred to two surgeons at St Paul's Hospital, an interdisciplinary team approach was sought to improve access and a value-based health care approach is enabling improvement in how care is delivered.

AIM STATEMENT

To reduce Wait 1 time (from referral to consultation for non-urgent consultations) from up to 2 years to less than 3 months by May 2023 at SPH for 90% of shoulder pain referred patients

INTERVENTION OR STRATEGY FOR CHANGE

Initial work amended the referral triage system and established a Rapid Access Shoulder Clinic (RASC) for the timely assessment of shoulder pain by an experienced physiotherapist:

Comprehensive Shoulder Pain Intake V1:

- Pre/post clinic review
- Single intake form
- Single fax line
- Definitions and triage urgency set
- Schedule for triage
- Education #1 for referring docs

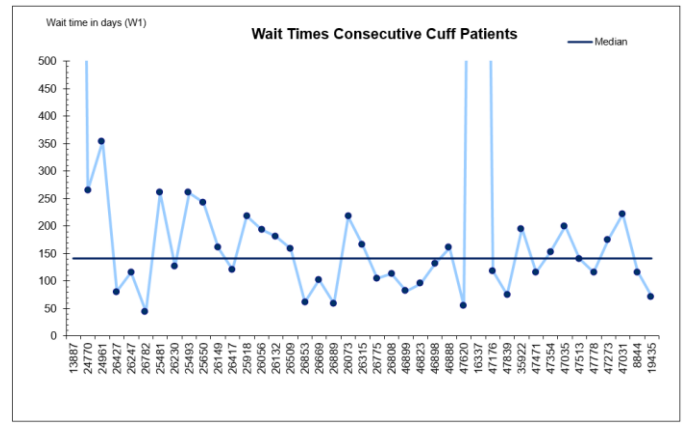
RESULTS

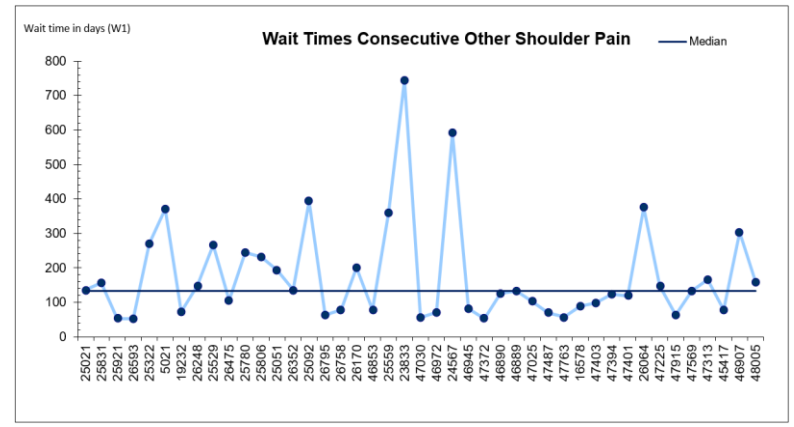
With the establishment of the RASC, median wait time from referral to expert assessment for non-urgent consultation decreased from two years to 4 months. Unwanted variability still exists in wait time for particular segments.

Highlights of what matters to patients include:

- Ability to maintain independence and participate in activities, especially with family
- Ability to work and earn a living
- Comfort of improving function, being free of fear of worsening, and being free of pain to sleep, be social, not need pain medication
- Disruption of waiting, uncertainty, lack of information, minimal collaboration among care providers, difficulty of accessing services

High Variability in Wait Times





DISCUSSION

Wait time

Understanding what matters to patients with non-operative shoulder pain highlights the need for streamlined access to a multidisciplinary care team and access to reliable information about the condition, treatment, appointments, and recovery. Patients and providers recognize the added complexity of comorbidities and normal aging as well as the importance of maintaining mental health despite challenges. Patients also identified the need for coordinated care and access to reliable information about the condition, treatment, appointments, and recovery.

More data is required to facilitate analysis and the subsequent PDSA cycles.

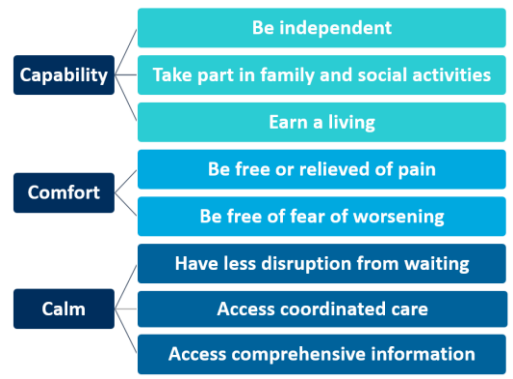


Figure 1. Example outcomes that matter most to patients.

CONCLUSION/FUTURE DIRECTIONS

- Valid and reliable measures reflecting the outcomes that matter most to patients will be determined.
- All findings will inform a co-design session in which care providers (for example, surgeons, physiotherapists, other allied disciplines), patients, and operational leaders will plan changes to the referral process and care pathway. Recommended changes will position the team to measure and achieve the outcomes that matter most to patients and deliver value relative to the cost of care.
- By focusing on outcomes that matter most to patients relative to the cost of care, VBHC offers principles and methodology to effectively redesign service delivery to achieve value for patients.

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Improving Hepatitis C Screening in the St. Paul's Hospital Emergency Department

Dr. Ruphen Shaw, Allison Chiu, Dr. Andrew Kestler

CONTEXT

- Hepatitis C virus infection is a leading cause of chronic liver disease globally, and despite a high prevalence among people who use substances, there are significant barriers to diagnosis and treatment

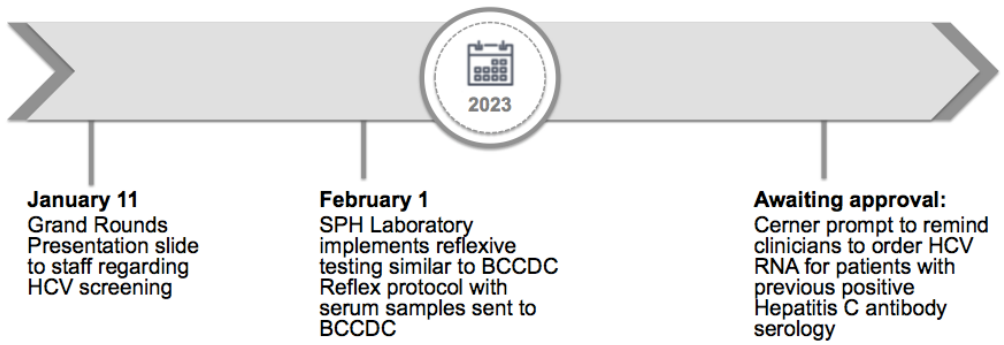
PROBLEM

- The St. Paul's Hospital (SPH) Emergency Department (ED) is an access point for this high-risk population and screening presents an opportunity for education, prevention, and curative treatment with the advent of direct-acting antivirals
- Enhancing HCV screening in the ED can increase diagnosis rates and connect patients to treatment, especially if there is no access to primary care; however, given the high prevalence of Hepatitis C in the demographic seen at SPH, many patients are already Hepatitis C antibody-positive as these antibodies are positive for life and redundant testing was being performed that were not diagnostic of active infection

AIM STATEMENT

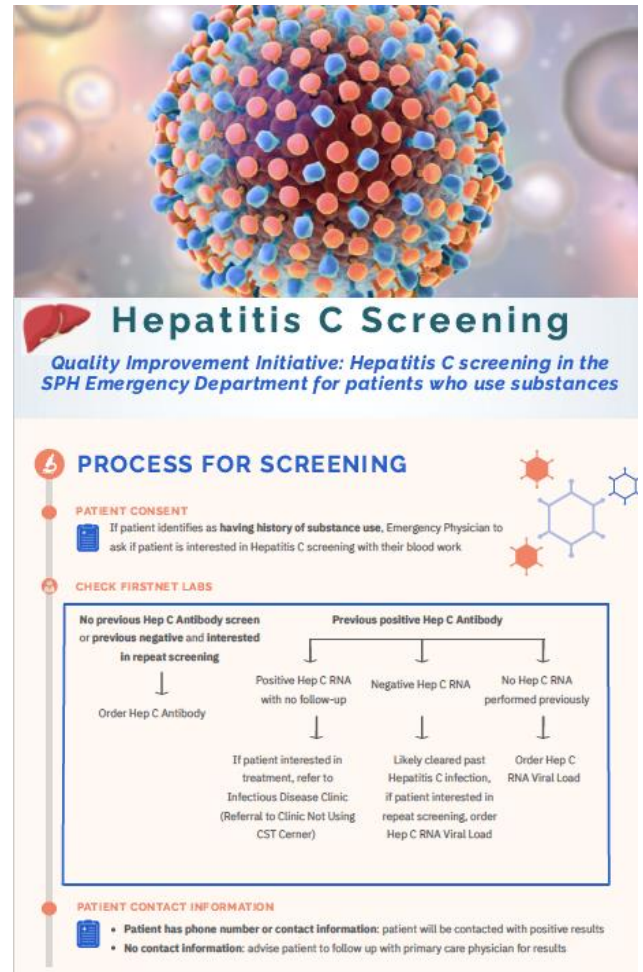
- This was a 2-year project with an initial aim statement to increase Hepatitis C screening in the St. Paul's Hospital ED in patients who use substances by 15% over a period of 3 months
- Subsequent to the first part of the project, the aim statement was changed to improve screening as high redundant testing rates occurred
- **Aim Statement 2:** Decrease redundant Hepatitis C antibody screening by 30% for patients who are already previously antibody-positive and screen for active infection with HCV RNA over period of 3 months.

INTERVENTION OR STRATEGY FOR CHANGE



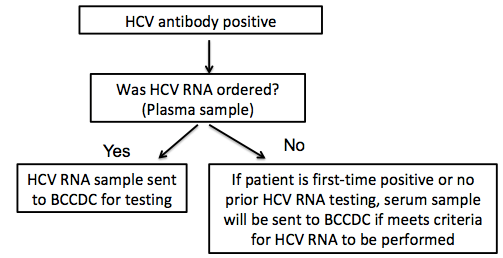
MEASURES OF IMPROVEMENT

Dates	Number of positive Hepatitis C results Follow-Up	Number of patients with previous positive Hepatitis C serology	Percentage of redundant tests
March to July 2022	17	10	58.8%
July to December 2022	23	16	69.5%
January to April 2023 (post-PDSA cycles)	16	11	62.5%



EFFECTS OF CHANGE

- With the initial aim of the project, screening increased; however, encountered high rate of redundant tests with Hepatitis C antibody tests ordered for patients who were previously positive
- Posters and emails are helpful reminders but automated processes streamline the screening
- With the SPH reflexive testing protocol (flowchart below), HCV RNA Is automatically sent if criteria is met although in the first 2 months, the redundant testing rate did not decrease significantly, likely due to clinician ordering practices and patients who did not meet the reflexive protocol criteria



NEXT STEPS

- CERNER prompt if patients are previously antibody-positive to remind clinicians to order HCV RNA if patient requires Hepatitis C screening or testing
- Implement effective strategies for contacting patients without contact information regarding results
- Health outcomes and economic analysis of expanding Hepatitis C screening program

SUSTAINABILITY

- Improve use of CERNER prompts in EMR to implement sustainable changes to physician ordering practices
- Ongoing communication collaboration with SPH laboratory, BCCDC, Microbiology, and Infectious Disease for screening and referral for treatment

Acknowledgements

PQI Team: Sarah MacDonald
SPH: Dr. Eric Grafstein
SPH Medical Microbiology and Lab: Dr. Nancy Matic, Willson Jang
BCCDC: Dr. Sofia Bartlett
NP: Michaela Hanakova

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; VGH: Vancouver General Hospital

For questions or for comments, contact Ruphen Shaw at ruphen.shaw@vrhb.org

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Improving Rates of Primary Care Interventions for HIV Positive Clients at the John Ruedy Clinic

Nathaniel Winata

CONTEXT

- **John Ruedy Clinic:**
  HIV primary care clinic on 5th floor of Burrard Bld of St. Paul's Hospital
- **Population:**
  1350 active HIV+ clients with complex medical needs

PROBLEM

1. Myriad of primary care interventions recommended for HIV+ clients
Due to external constraints (complexity of clients, health care system, time constraints), worsened by the Covid-19 pandemic (staff burnout, mental health challenges), primary care interventions are left unaddressed

2. Lack of awareness of current supporting tool in our EMR that should keep track of all primary care interventions: HIV Chronic Disease Management (CDM) form
Technical issues (slowness, lack of auto-populate, not up-to-date) with current form

AIM STATEMENT

We plan to increase the completion of 5 primary care interventions by 20% for HIV positive clients at John Ruedy Clinic by May 2023.

1. **Hepatitis C**
2. **Pneumococcal Disease**
3. **Colorectal cancer screening**
4. **Cardiovascular disease**
5. **Tobacco use disorder**

INTERVENTION OR STRATEGY FOR CHANGE

1. Staff survey

- 65% use the existing form, but major challenges remain (autopopulation, slow to load, need to enter information multiple places like vaccines, not updated like with covid-19 vaccine)
- Identified top primary care interventions to focus on [see aim statement]
- Decided to create new HIV EMR form with functionalities requested by JRC Clinic

2. New HIV EMR form design

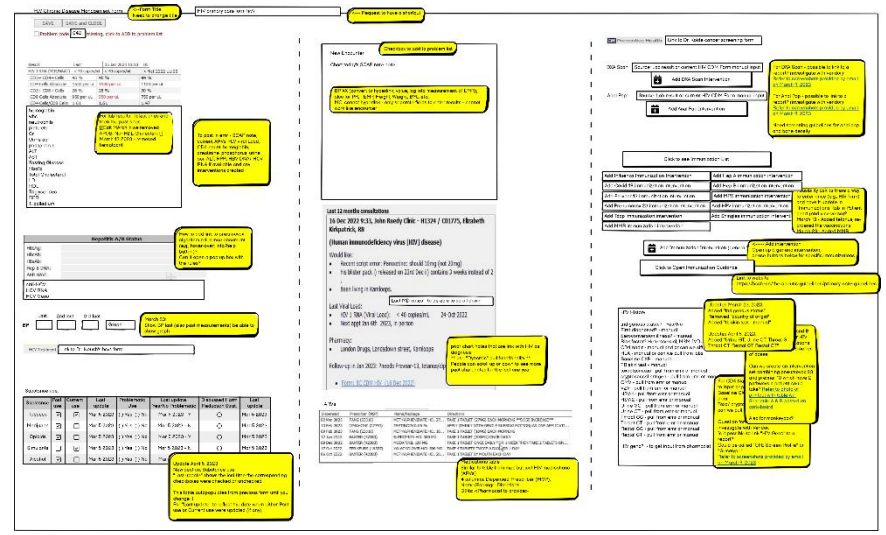
- Feedback from physicians, staff and technical experts (IMITS EMR team)
- Several rounds of redesign
- Lunch session March 2023 with JRC staff to get feedback on contents of the EMR form

[FUTURE] MEASURE OF IMPROVEMENT

- HIV Form creation per month (per site, per user), run chart & bar charts [see mockup] as other VCH sites would be welcomed to use the form

EFFECTS OF CHANGE (… In progress)

- Mock up version of the new HIV EMR form (see figure below
- IMITS team in the process of designing & testing the form
- QI Environment ⍰ Production (live instance of EMR)



Requested new functionalities
- Pulling relevant reports for easier reference (e.g., HIV Genotype, anal pap, bone density)
- Ability to chart SOAP note while looking at the primary care interventions
- Autopopulate by pulling relevant historical lab results (e.g., CD4 Nadir; HLA; etc.)
- May help in future form development for other chronic diseases

LESSONS LEARNED

Proud of

- Organizing the working lunch meeting with JRC staff
- Creating the new HIV EMR form
- Learning how to use Google Forms
- Working on trying to find a systematic way to tackle all the primary care needs for HIV+ clients while improving the provider experience (less workload, less burnout) through new HIV form

Main Lessons

- Set aside time to work on QI
- Don't give up!
- It is important to work with staff at your clinic: try to involve as many people as possible to build momentum

SUSTAINABILITY

- Having uptake of the form at JRC and other VCH sites by continuing to dedicate time to meet to improve on the form
- Getting feedback and meeting with the team members
- Continuing to get data on the form usage and eventually tracking primary care intervention completion, then focusing on improving the rates of completion through planned PDSA cycles and change ideas

Acknowledgements
Pharmacist Erin Ready
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This project was funded by the Specialist Services Committee, a partnership of the Ministry of Health and Doctors of BC

For questions or for comments, contact Nathaniel Winata at Nathaniel.Winata2@vch.ca

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Dyad Care for Neonatal Intensive Care Unit (NICU) Patients

Dr. Judy Wolfe, Alaine Vijandre (CNE), Louise Van Vliet (CNE), Jenna Rider (CNE), Amy Hamill (Program Director)

CONTEXT

- This project is around the location and model of care provided in the Pregnancy, Birthing and Newborn Centre at St Paul's Hospital to birthing parents and their babies requiring NICU care
- Included all care from physicians, nurses, midwives and all other staff after a baby is born who requires NICU care

PROBLEM

- Currently, NICU care is given to the baby in our open NICU room containing up to 9 babies, with parents visiting from their room on the Birthing Unit
- This decreases time for contact, bonding, and adjusting to new parenthood as well as learning to feed, having required pre-discharge teaching, likely increases length of stay as well
- We are an older facility but are currently building a new hospital, giving us an opportunity to dramatically move to a more patient centered model of care for our babies and families

AIM STATEMENT

- Initial aim was to provide dyad care to at least 10 mother-baby pairs by May 2023
    - We wanted to start providing this care immediately to work out issues/prepare for transition to New St Paul's, assist with room design/planning, and give families the best possible care now
    - Despite staff and patient partners embracing this change, we had challenges related to staffing and space that delayed starting this project, have not met our goal for number of patients yet
    - Plan to continue with more PDSA cycles over the next 1–2 years

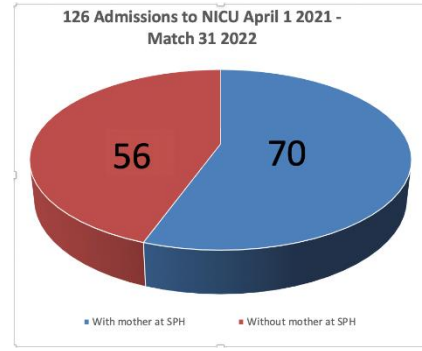
INTERVENTION OR STRATEGY FOR CHANGE

- Working with nursing and administration, we identified the most straightforward dyads for the new model of care, identified a space on the Birthing Centre as suitable, and agreed that Birthing Centre and NICU nurses would share care of the dyad
- Information was shared in nursing meetings and also with the leaders of the physician/midwife groups, Nurse educators worked with the nurses to raise awareness and understanding
- Single page information sheets on the unit, single page info sheet distributed to physician groups and midwifery group
- First dyad enrolled in March 2023 – 20 day stay with some good lessons learned

MEASURES OF IMPROVEMENT

- Quantitative measures looking at how many babies potentially qualify based on current inclusion criteria, length of stay for baby and birthing parent, capturing diversion events to assess for negative consequences on space and staffing
- Qualitative measures with nursing, other staff and family surveys – all paper based and 1 page

- Based on experience so far – we are refining our data capture sheet for identifying dyads, have created and distributed 1 page information sheets around the unit with specific information for nurses and also distributed 1 page with information for the medical/midwifery providers, clear responsibilities guidelines for nursing staff sharing care



Group	Patient Count	Average LOS
Prematurity	100	11.9
Respiratory	72	8.6
Hypoglycemia	19	12.0
Neonatal Withdrawal	7	19.7

Maternity – NICU NB Rooming In

Inclusion Criteria:	***Exclusion Criteria:***
1. Greater than or equal to 35 weeks (may require IV and/or NG) 2. Hypoglycemia (requiring IV and/or NG) 3. Jaundice (requiring IV and/or NG in addition to phototherapy) 4. IV Antibiotics (risk factors for infection) 5. Oxygen therapy up to 30% for less than 6 hours (may require IV and/or NG)	1. CPAP/vent 2. Continuous Monitoring (Cardio-Pulm, oximetry) for greater than 6 hours 3. Complex Maternal Condition (Instability) 4. Space Limitations (Only 1 at a time) 5. Staffing Limitations (No available NICU or Maternity nurse as per unit censuses)

Admission Process:

1. Physician identifies infant meeting criteria (name to be written on in-take sheet)
2. PBNC & NICU CNL/ Charge Nurse review the birthing person and infant's medical histories and the Rooming-In criteria (ensure name written on in-take form)
3. Review exclusion criteria (e.g. Room Availability and Staffing Number) (If unable to room-in mark on in-take sheet)
4. Outlines plan for shared care responsibilities

Date:	Inclusion Criterion Met (#)	Was Rooming-In Done? (Y/N)	If 'No', reason not. (e.g. exclusion criteria (#), unit/staffing constraints, etc.)

EFFECTS OF CHANGE

- Staffing shortages for the Birthing Unit and NICU delayed the start of this project – in March only 1 dyad enrolled of 25 NICU admissions, but this was a 20 day stay with both maternal and baby complications
- Only 6 questionnaires filled out, most by RNs, no MDs
- Family was very happy with care
    - Staff raised concerns about workload and role clarity but felt it was a good model of care

LESSONS LEARNED

- Generally – that the QI lens is a very useful was of approaching a change involving multiple people, to make changes in an evaluate-able and sustainable way
- Specifically – We needed more visible clear reminders and guides for staff to feel comfortable with new steps -> these have now been created, disseminated to all groups and posted around the unit AND we are seeing an increase in enrollment and documentation

SUSTAINABILITY

- The NICU in our new building is built for us to provide this model of care, so we are committed to moving in this direction
- Staff are excited to give this type of care – we still have a way to go in working out some of the details about responsibilities and trouble shooting which is why this project will continue PDSA cycles every 3-5 patients until we feel that giving this care has become the new routine

Acknowledgements

I would like to thank the PQI staff, particularly Hing Yi Wong, Allison Zentner and Enriquez Fernandez Ruiz
Thanks to all of the nurses, physicians, midwives and other staff of the St Paul's Pregnancy, Birthing and Newborn Centre
This project would not have been possible without finding from the BC Specialist Services Committee

For questions or for comments, contact Dr. Judy Wolfe at headofpeds.sph@gmail.com

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A Quality Improvement Project to Improve Intubation Performance and Standardize Documentation Across BC

Jeff Yoo, Sarah Macdonald, Jing Luo, Amy Chang, Allison Chiu, Sandra Chow, Valerie Athaide, Robert Gooch, Neil Long

CONTEXT

- Emergency intubation is one of the highest risk procedures that occur regularly in the Emergency Department (ED) and Intensive Care Unit (ICU)
- Prior to 2016, there was no instrument to document intubation details
- BC Airway Registry was created in 2016 through multi-disciplinary collaboration and standardized documentation after emergency intubation was implemented at 3 hospitals in Vancouver, BC

PROBLEM

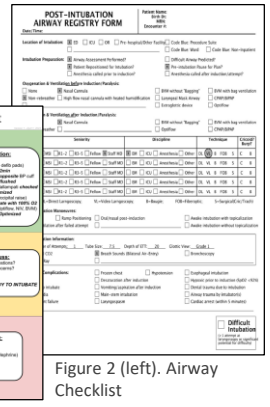
- In early 2020, COVID-19 was emerging as a major threat
- Intubation is an aerosol generating medical procedure
- Intubation performance at St. Paul's Hospital ED was below the North American benchmark in the 2 years leading up to the pandemic

	First-Pass Intubation Success	Complication Rate
North American Benchmark	83%	12%
St. Paul's Hospital ED	78.2%	17.6%

DESIGN

- BC Airway Registry (Figure 1) used to (1) identify practice patterns, (2) design QI interventions, and (3) monitor the impacts of interventions
- 6 QI interventions rapidly implemented using PDSA cycles and iterative learning
    1. Pre-intubation checklist
    2. Intubation PPE with PPE donning and doffing pictogram checklists
    3. 100 (VL) during first attempt
    4. Portable airway kits
    5. Attending physicians to perform first attempt of intubation
    6. Multi-disciplinary simulations with physicians, nurses, and respiratory therapists to practice all of the above interventions
- Compared a pre-intervention cohort (all intubations from Q1 2018-Q4 2019) to a post-intervention cohort (all intubations from Q1 2020-Q4 2021)

Figure 1 (right). Airway Registry



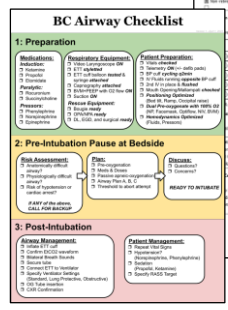


Figure 2 (left). Airway Checklist

MEASURES OF IMPROVEMENT

- Improvement of all outcome measures (Figure 3 & 4)
- No significant harm was demonstrated
- Improvements were sustained two years after QI implementation

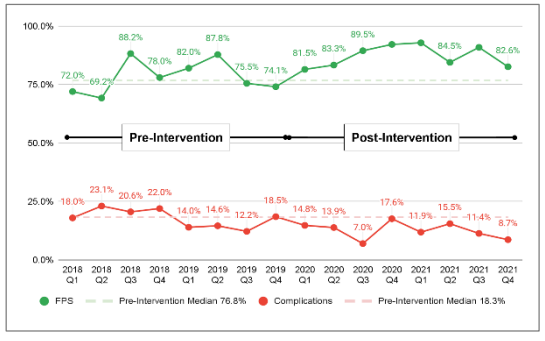


Figure 3. First Pass Success and Complications

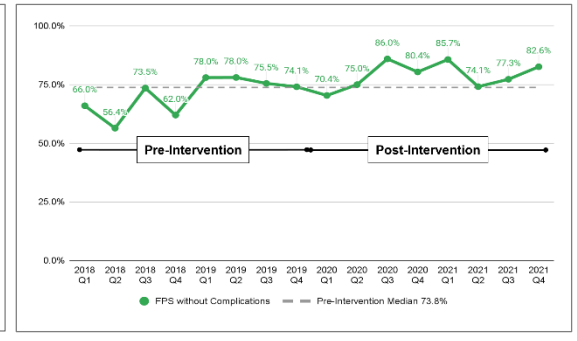


Figure 4. First Pass Success Without Complications

		Pre-Intervention *(n=340)*	Post-Intervention *(n=338)*	
PROCESS MEASURES	Airway Assessments	55.9% (190/340)	67.2% (227/338)	↑ 11.3% , *p=0.003*
	Pre-Intubation Pause	47.6% (162/340)	60.9% (206/338)	↑ 13.3%, *p=0.0006*
	VL used as primary tool	58.5% (199/340)	89.9% (304/338)	↑ 31.4%, *p<0.0001*
	Attending physicians as primary operator	52.4% (178/340)	61.2% (207/338)	↑ 8.9%, *p=0.02*
OUTCOME MEASURES	First Pass Success (FPS)	78.2% (266/340)	87.9% (297/338)	ARR 9.6%, NNT 10.4 *p=0.001*
	Complications	17.6% (60/340)	12.7% (43/338)	ARR 4.9%, NNT 20.3 *p=0.076*
	FPS w/o Complications	70.3% (239/340)	79.3% (268/338)	ARR 9.0%, NNT 11.1 *p=0.008*
BALANCING MEASURES	Hypoxia directly prior to intubation	7.4% (25/340)	8.3% (28/338)	ARR 0.9%, NNH 107.4 *p=0.65*
	O2 desaturation during intubation	12.4% (42/340)	10.9% (37/338)	ARR 1.4%, NNT 71.1 *p=0.57*

*ARR = Absolute Risk Reducation, NNT=Number Needed to Treat

QI SPREAD

- Airway Checklist (Figure 2) updated for increased generalizability and use across the province
- Spread QI interventions across hospitals (VGH, RCH, SPH, MSJ, and KGH) including:
    1. Routine use of pre-intubation checklist
    2. Encourage VL as primary tool
- Pilot QI interventions in the ICU

EXPANSION OF BC AIRWAY REGISTRY

- Expansion of standardized intubation documentation across the province using Cerner and Meditech Expanse EMRs
    1. Standardized form and data collection tool created and adopted for VGH, SPH, MSJ, and LGH
    2. RCH collecting Airway Registry data using paper forms until the site adopts the Meditech Expanse EMR
    3. Stakeholder approval for Airway Registry adoption in FHA and IH health authorities using Meditech Expanse EMR and in VIHA using Cerner EMR
    4. Airway form and tool created for Meditech Expanse
- Currently working with EMRs to build data export program so that data is automatically transferred to centralized data cloud at UBC

Acknowledgements

Many thanks to PQI and SSC for providing invaluable support and guidance for this QI project

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; VGH: Vancouver General Hospital; SPH: St. Paul's Hospital; MSJ; Mount Saint Joseph Hospital; LGH: Lion's Gate Hospital; RCH; Royal Columbian Hospital; VIHA: Vancouver Island Health Authority; IH: Interior Health Authority; KGH: Kelowna General Hospital

For questions or for comments, contact Dr. Jeff Yoo at jeffhyoo@gmail.com

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Community-based QI Project Posters

Advance Care Planning in Patients Over Age 70 in Family Practice

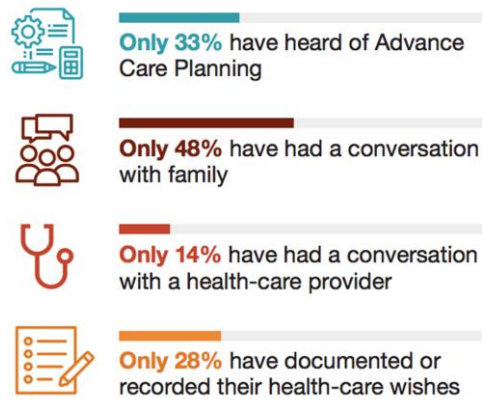
Dr. Nam Phuong Julie Nguyen

CONTEXT

- Community family practice in East Vancouver, mainly Vietnamese patients

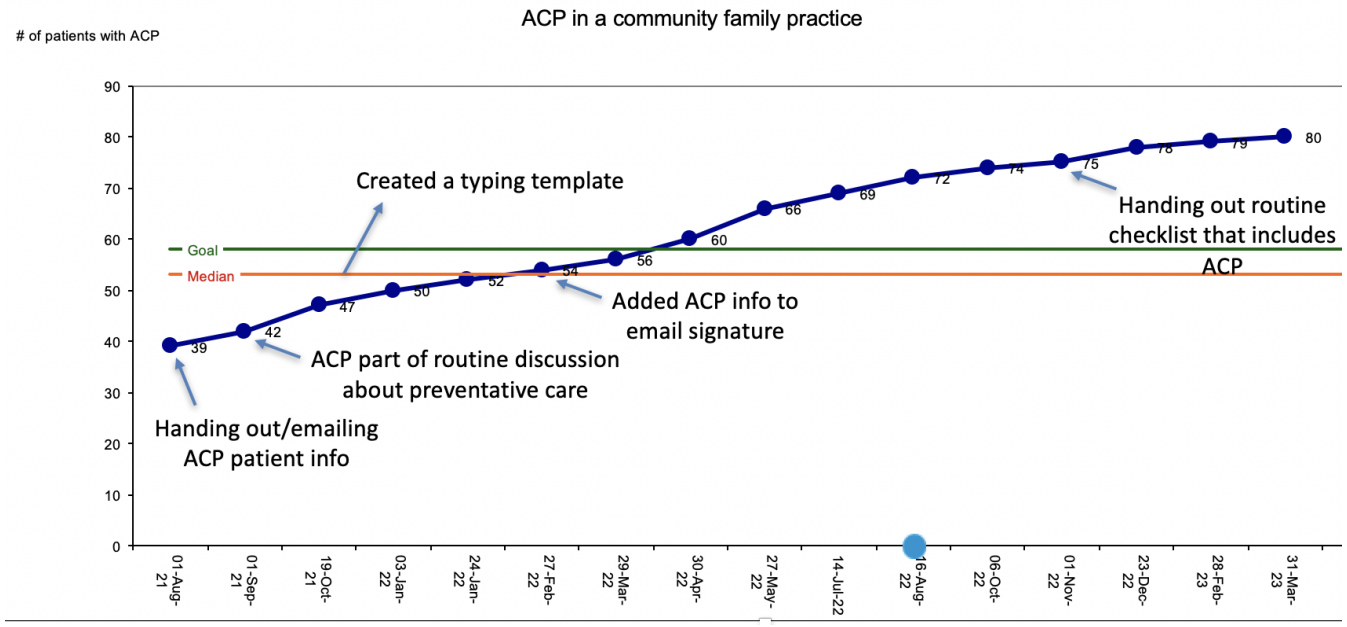
PROBLEM

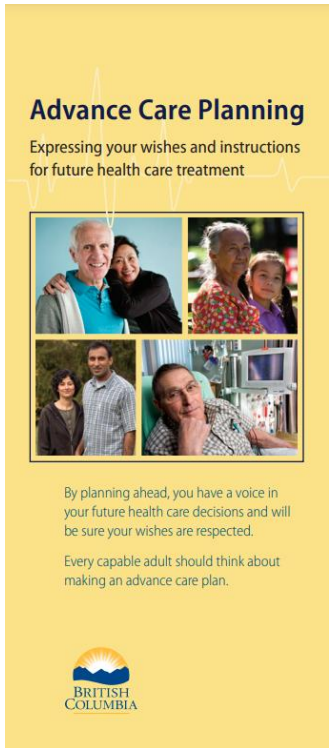
- BC public opinion poll 2020: 76% of British Columbians agree that it is important to talk about what matters most for their future health care with those close to them and their health care provider
- Lack of ACP discussion/documentation for patients
- EMR audit: only 33% had Advance Care Planning
- ACP increases likelihood that patient's wishes were known and followed, i.e. goal concordant care 86% vs 30% of the time (*Detering, K. BMJ. 2010;340:c1345*.)



AIM STATEMENT

> 50% of patients over the age of 70 in at Lotus Medical Clinic to have a Advance Care Planning





INTERVENTION OR STRATEGY FOR CHANGE

- Found ACP documents in English and Vietnamese – either printed out for patients or emailed to patients
- Printed out ACP information documents at work station and pdf on all work stations
- Integrated ACP discussion to routine prevention (vaccines, SDM, emergency contact)
- Created typing template for ACP and vaccine reviews
- Added ACP info to email signature and website
- Most changes were done within 1 week
- Trial of getting patient's chart to the hospital by fax

MEASURES OF IMPROVEMENT

- Created codes in EMR (ACP, ACPFull)
- Ran audit every month to see how many had documented ACP – see Figure One Run Chart

EFFECTS OF CHANGE

- More patients with documented ACP
- Decreased the amount of time spent explaining what care planning is
  - Average extra time to discuss ACP was 6 minutes
- Impact: Yet to be determined as most patients have not had to make decisions about their care during this time frame
- This would likely improve patient centered care and wishes during acute illnesses
- Unanticipated effects: more pneumococcal/shingles vaccinations, documentation of emergency contact and SDM

LESSONS LEARNED

- If you are a family doctor, your patients are open to this discussion
- Not everyone who is healthy wishes to be full code
- Some patients did not really want to be part of the discussion, some asked to discuss with their kids instead

SUSTAINABILITY

- I will encourage other doctors to do it and share my resources

Acknowledgements

Sandra Chow, Rochelle Szeto, Dr. Cole Stanley, Dara Lewis, Wallace Robinson, Dr. John Yap, Dr. Jane Gustafson, Dr. Nick Graham
This project received funding from SSC

Glossary of acronyms

PQI: Physician Quality Improvement
SSC: Specialist Services Committee
ACP: Advance Care Planning

For questions or for comments, contact Dr. Julie Nguyen at npjnguyen@gmail.com

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Communication for Follow-Up Care Planning

Dr. L. Olivia Tseng

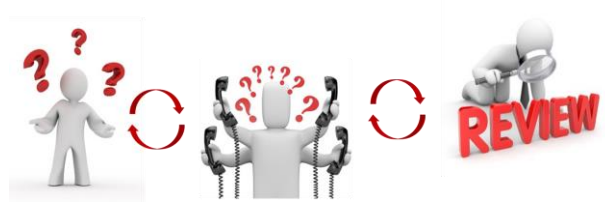
CONTEXT

Setting
- Longitudinal primary care
- Resident-lead teaching clinic on the UBC campus

Care team
- 15 part-time physicians who review cases and reports
- 10+ residents and medical students who see patients
- 5 front staff who book follow-up appointments

PROBLEM

- Structural limitations (e.g., rotation schedule that result in multiple hand-overs of a given case), and different personal preferences in how and where to document information by the care team (e.g., in encounters, or message to front desk, or beside reports) create challenges in follow-up care.

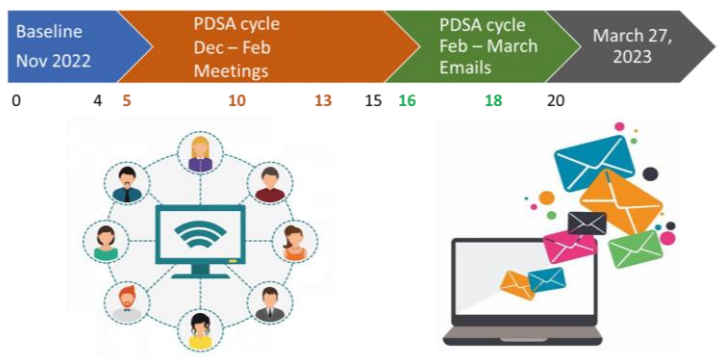


AIM STATEMENT

- To increase accurate follow-up care plans from 10% to 50% at the UBC Health Clinic from Jan 2023 to March 2023

INTERVENTION OR STRATEGY FOR CHANGE

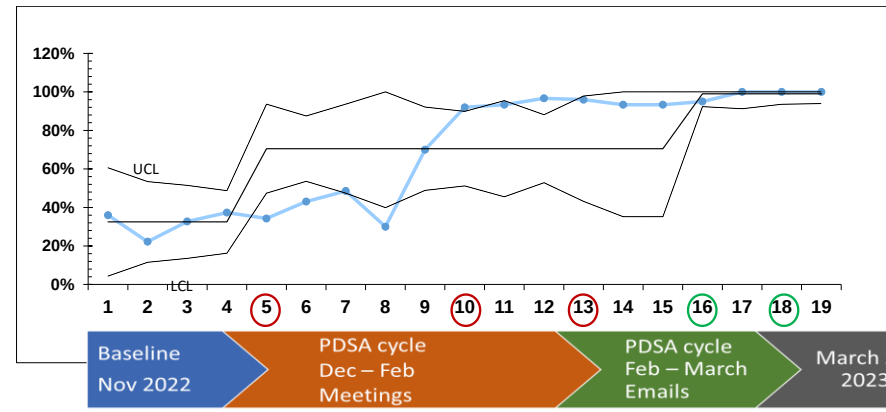
1. Group meetings
   - Challenging to find time in agenda
   - Provided protected time to core members
   - Team grew from 3 → 6
   - Retreat to review data
   - PICK Chart [Team email]
2. Team emails
   - Reason
   - Who will see the patient
   - Specific preceptors
3. Developed guidance
   - Examples of communication
   - Guiding questions
   - Shared findings from data (good vs bad)



MEASURES OF IMPROVEMENT

- Developed checklist, reviewed files against the check list
- Sent survey to entire team
- Core team members provided feedback

% of Follow-up Care Messages with Adequate Information



EFFECTS OF CHANGE

- Standardized process & language
- Message content; codes
- Efficiency
- Satisfaction

LESSONS LEARNED

- Quality Improvement – essential skills
- Local context – customization
- Common interest – engagement
- Limited resources – being creative
- Calling for help
- Sharing ideas

SUSTAINABILITY

- Human are forgetful
- Team turnover is the challenge

- Periodic reminders
- Continuous monitoring
- Adding information to orientation packages for staff, trainees and providers
- Involving patients for their feedback

Acknowledgements
- PQI, Enrique Fernandez Ruiz
- PQI, Marla Gordon
- The PQI team
- The clinic team

Funding for this project was provided by the Specialist Services Committee, a partnership of the Ministry of Health and Doctors of BC

For questions or for comments, contact Dr. Olivia Tseng at olivia.tseng@ubc.ca

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Vancouver Coastal Health
QI Project Posters

Finding Our Way Home: Cultural Connections to Improve the End of Life Journey of Indigenous Patients

Susan Burgess, MD

CONTEXT

- Vancouver Integrated Palliative Care Service
- Department of Palliative Medicine, UBC, Vancouver
- Downtown Eastside neighbourhood, Vancouver, BC

PROBLEM

- Urban Indigenous patients can be disconnected from cultural, spiritual, family roots
- Medical systems often confusing and neither culturally nor trauma informed
- Often patients are not asked whether they are Indigenous, which prevents the delivery of culturally-informed care

AIM STATEMENT

- To improve the end of life services to identified Indigenous palliative patients of the Home Hospice program by incorporating an Indigenous cultural lens
- **50% of identified DTES Indigenous patients will have met with an Indigenous Palliative Care Navigator to incorporate their individual cultural and spiritual needs and goals**

INTERVENTION OR STRATEGY FOR CHANGE

- Build on existing work and create community coalitions for change — Indigenous Health Outreach Team, Vancouver Integrated Community Clinics
- Engage VIPC leadership/management for institutional support
- → **Secure position of Indigenous Palliative Care Navigator and embed strategies to identify race-based data into Home Hospice referral process**

MEASURES OF IMPROVEMENT

- Engage measures appropriate to Indigenous epistemologies
- Ongoing assessment: Kilala Lelum Health Centre — Elders, staff, Indigenous patients in circle
- **Collective inquiry** on cultural teachings and patient experiences of living and dying — identify service gaps/needs through several circle meetings, informing the role of navigator within the lived experiences of patients and providers

EFFECTS OF CHANGE

- Improved patient care and advocacy - 9 patients have since been accompanied by an Indigenous PC navigator in the past 3 months (Jan-Mar)
- Cultural goals and norms explored and understood; Families re-engaged- bereavement support
- Death journeys became passages of healing

LESSONS LEARNED

- Stories are data
- We are all family; We all belong
- **Community engagement and inquiry centering Indigenous knowledge is quality improvement**

SUSTAINABILITY

- Profile EMR/Cerner embed race-based information
- The position of Indigenous Palliative Care Navigator supported by Indigenous Health Outreach Team with a widely distributed referral form
- Application to SET for an increase in number of Indigenous Palliative Care Navigator positions

Acknowledgements

Providence Palliative Care Service; BCCA Pain and Symptom Team; Bloom Group – May's Place/Cottage Hospices; Department of Palliative Medicine, UBC; Pender Home Health Service; Luma Clinic; VIHC

Glossary of acronyms

SET: Senior Executive Team; DTES: Downtown Eastside; VIPC: Vancouver Integrated Palliative Care; VIHC: Vancouver Indigenous Health Clinic

For questions or for comments, contact Susan Burgess at Sue.Burgess@vch.ca

Caring for Medically At-Risk Elderly Patients in the Emergency Department (ED): Community Patient in Acute Team (CPAT)

Justin Chan

CONTEXT

- Over the past few years, there have been increasing pressures at Lions Gate Hospital relating to congestion in the ED
- The frail elderly population has been particularly impacted by this congestion as they often have less physiologic reserve to endure what is at times a prolonged stay in the ED

PROBLEM

- Oftentimes, there is an opportunity to transition a frail elderly patient back to community safely
- However, in the midst of the congestion, this opportunity is often missed as a safe transition requires a significant level of care coordination between Providers in Acute and Community, along with activation of appropriate community support
- This is a lost opportunity for the patient and for the congested hospital

AIM STATEMENT

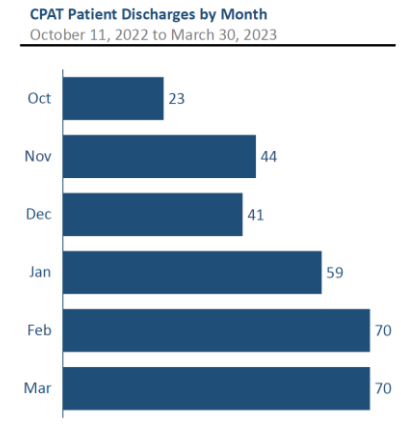
- We aim to improve the care of medically at-risk elderly patients in the Emergency Department. Specific objectives for this population include:
  a) Expedite investigations and treatments in the ED
  b) Prevent medical and functional deterioration while in ED
  c) Facilitate safe return home by supporting ideal transitions of care and care coordination
- Within 6 months of launch, we aim to transition 1-2 frail elderly patients home safely per day

INTERVENTION OR STRATEGY FOR CHANGE

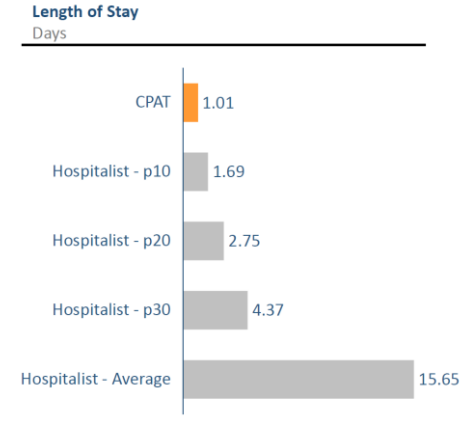
- We pursued a collaborative approach, bringing people together from different disciplines and specialties who share a common concern for the frail elderly population in the ED
- We recruited physicians from Family Medicine, Internal Medicine, Palliative Care, Hospitalist and Emergency Medicine
- We enlisted support from nursing, OT, PT, nurse practitioners and community-based home support workers who all actively participate in this initiative

MEASURES OF IMPROVEMENT

- We evaluated the launch of the CPAT program using process measures such as CPAT discharges by month, and number of actively rostered physicians
- We tracked the impact of the program using outcome measures such as overall ED admission rate, and CPAT length of stay (relative to admission to other inpatient services)
- We monitored unintended effects by tracking balancing measures such as ED 7-day revisit rates and ED average length of stay for non-admitted patients



CPAT volumes steadily increased in the inaugural 6 months, achieving over 2 discharges per day



CPAT LOS is significantly shorter compared to other inpatient services

EFFECTS OF CHANGE

- Over the first 6 months, the CPAT program was able to transition 324 frail elderly patients home from the ED
- The cohort of CPAT physicians has now reached 31, with many other physicians keen to learn more and join the team
- ER physicians have provided feedback that CPAT has provided relief both in terms of relieving congestion and improving the patient experience
- There have been 0 associated deaths or serious adverse events

LESSONS LEARNED

- The main message we would like to convey is that the ED does not have to be a vulnerable experience for the frail elderly patient. There are practical ideas and workflows that can be implemented to assure excellent care and efficient flow
- We hope that CPAT can be proof of concept to be shared with and spread to our sister hospital sites

SUSTAINABILITY

- The CPAT program is supported by 31 physicians presently, each of whom support the program sustainably while maintaining their other professional commitments
- There is a standardized and codified workflow to which all the physicians and allied staff follow
- Further expansion of the CPAT concept is limited by the fact that some patients indeed require inpatient acute care
- We hope to further solidify the impact of CPAT by launching ancillary programs (post-discharge) to provide rapid access follow-up and home visit support for this frail elderly population

Acknowledgements (in alphabetical order)
Allison Zentner, Dr. Andrew Kestler, Dr. Bella Hughan, Dr. John Vyselaar, Dr. Lisa Lange, Liz Ford, Nicky Huang, Dr. Peter Edmunds, Yas August, CPAT Physicians, ER Physicians, SSU Nursing and Care Aid Team, PSS+ Team

Glossary of acronyms
PQI: Physician Quality Improvement; SSC: Specialist Services Committee; VGH: Vancouver General Hospital;

For questions or for comments, contact Justin Chan at justin.chan2@vch.ca

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Pre-Operative Assessments and Peri-Op Care at Lions Gate Hospital (LGH)

Dr. Adam Chruscicki, Vanessa Kong

CONTEXT

- LGH Internal Medicine (IM) launched a new peri operative service to serve increasingly complex medical patients undergoing surgery
- There exists an outpatient IM service (pre-op), but due to inpatient/outpatient divide no formal link between the two
- Ideally patients should be seen by pre-op IM outpatient prior to surgery, and then peri-op IM service when inpatient, the two services should be able to communicate easily and coordinate
- Due to Cerner and EMR constraints, this is not the case and not an easy task

PROBLEM

- There was a lack of communication between the pre-op and perio-op IM services at LGH
- This is caused by the inpatient/outpatient divide, including different EMRs, Cerner constraints, unclear system of how surgical patients get referred, booked for surgery and at which point each of the services should see them/can see them

AIM STATEMENT

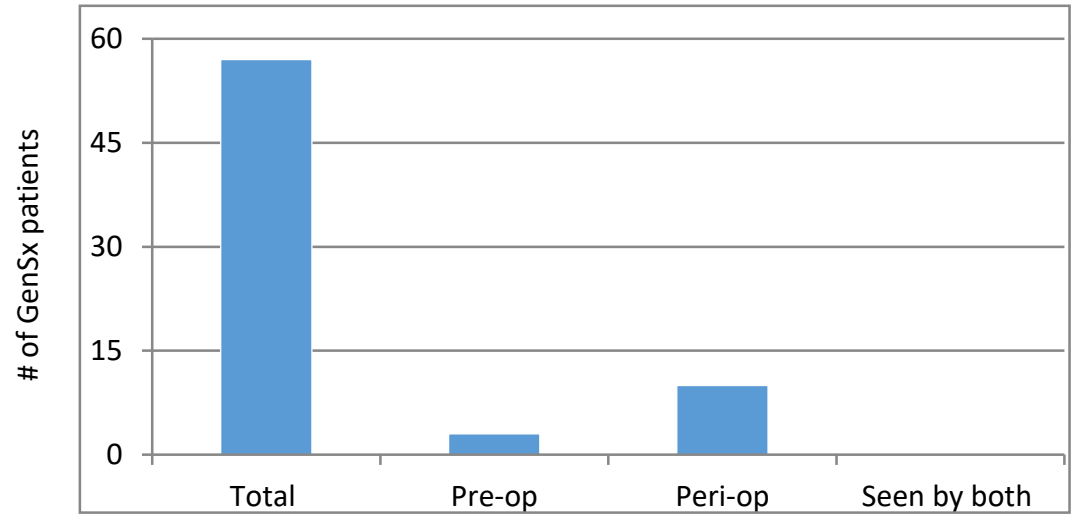
- Aim to increase the rate of communication between pre-operative and peri-operative IM services at LGH
- Increase in communication rate (shared notes/handover) by 50% from baseline by March of 2023

INTERVENTION OR STRATEGY FOR CHANGE

- Defined communication as ability to share notes and document in Cerner
- Followed patients admitted under General Surgery
- Involved peri-operative NPs, anesthesia and internal medicine specialists
- Work to understand the system involved in surgical patient journey
- Incremental changes to charting and outpatient to inpatient communication
- Plans and information shared mainly informally, via email, telephone and in-person communication
- Initial timeframe was 3-4 months, but given some of the difficulties encountered, the time frame became the entire year

MEASURES OF IMPROVEMENT

- Longitudinal follow up of General Surgery patients
- Basic data extracted, including presence of pre-operative IM consultation and peri-operative IM consultation in Cerner
- Small, iterative changes
- Calculate the percentage of patients admitted under General Surgery who have both pre-operative and peri-operative IM consultation in chart
- Unfortunately not enough data to make a control chart, or to perform any other analysis



EFFECTS OF CHANGE

- Cerner is not designed to work outpatient and there is no easy way to link outpatient EMR to it
- Eventually all pre-op IM physicians stated to copy and paste notes into Cerner
- Anecdotally communication is improved, but the data failed to show it as low utilization of service by General Surgery specifically
- Improved communication and more efficient between the services, presumed less complication, better follow up but no clear data to show that yet, main negative effect is added administrative workload

LESSONS LEARNED

- Often simple solutions like copy and paste are a good band aid
- Ultimately the pre-operative assessments will be done as part to peri-op anesthesia clinic, with Cerner encounters and charting in Cerner thus bypassing the inpatient-outpatient divide, learned that sometimes need to think outside the box
- Cerner is incredibly inflexible and not suited for merging inpatient with outpatient care outside of hospital

SUSTAINABILITY

- The ultimate benefit of this project was integration of pre-operative IM assessments at LGH into peri-op anesthesia clinic, which is an in hospital entity. This is the main success as it will bypass a lot of Cerner issues and also increase collaboration between the two services

Acknowledgements

Vanessa Kong, Dr. Allison Zentner, Hing Yi, Dr. Andrew Shih, Dr. Katherine Shoults, Jefferson Xu, Corey Hammond, Kristi Rivison, Dr. Nasim Mahmoudi, Dr. Kevin McLeod

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; VGH: Vancouver General Hospital;

For questions or for comments, contact Dr. Adam Chruscicki at adamchruscicki@gmail.com

Improving Perioperative Care for Patients Undergoing Pituitary Surgery

Brandon Galm, Peter Gooderham, Arshia Beigi

CONTEXT

- The pituitary gland controls many important hormones. Pituitary surgery is usually performed for pituitary masses
- Patients can develop hormone deficiencies after surgery, which can be life-threatening & result in re-admission to hospital
- Roughly 70–80 pituitary surgeries per year at VGH, performed by 3 neurosurgeons & 2 ENT surgeons
- Typical hospital stay is 3–4 days. Sodium & cortisol monitored routinely in hospital. Endocrinology may be involved (ad hoc)
- Endocrine guidelines recommend outpatient bloodwork monitoring at 7 days, 6 weeks, and 12 weeks after surgery

PROBLEM

- No standardized protocol at VGH for postop monitoring after discharge
- Many physicians/teams involved, including neurosurgery, endocrinology (inpatient & outpatient), ENT, ophthalmology, GP
- Transition between inpatient & outpatient care is challenging
- Lots of instructions for patients from various specialists, can be overwhelming for patients
- Readmissions for bloodwork abnormalities may occur, but unclear how frequent
- Also unclear how often patients have recommended testing & how often testing is abnormal

AIM STATEMENT

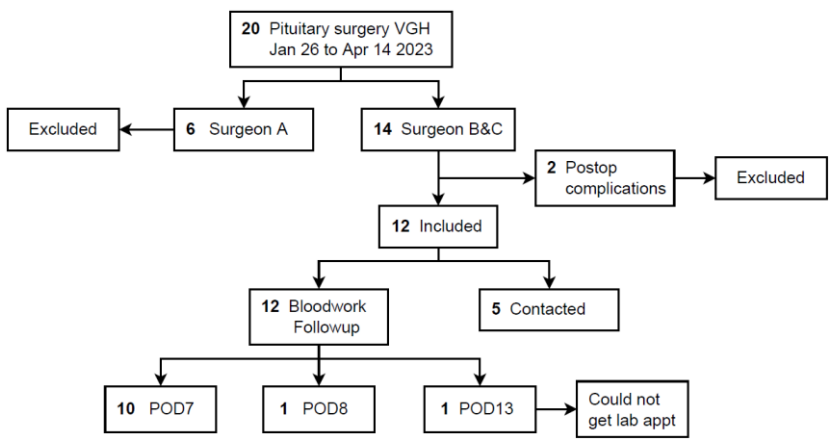
- To increase the number of patients who have postop day 7 bloodwork from ~20% to ~90% by May 2023

INTERVENTION OR STRATEGY FOR CHANGE

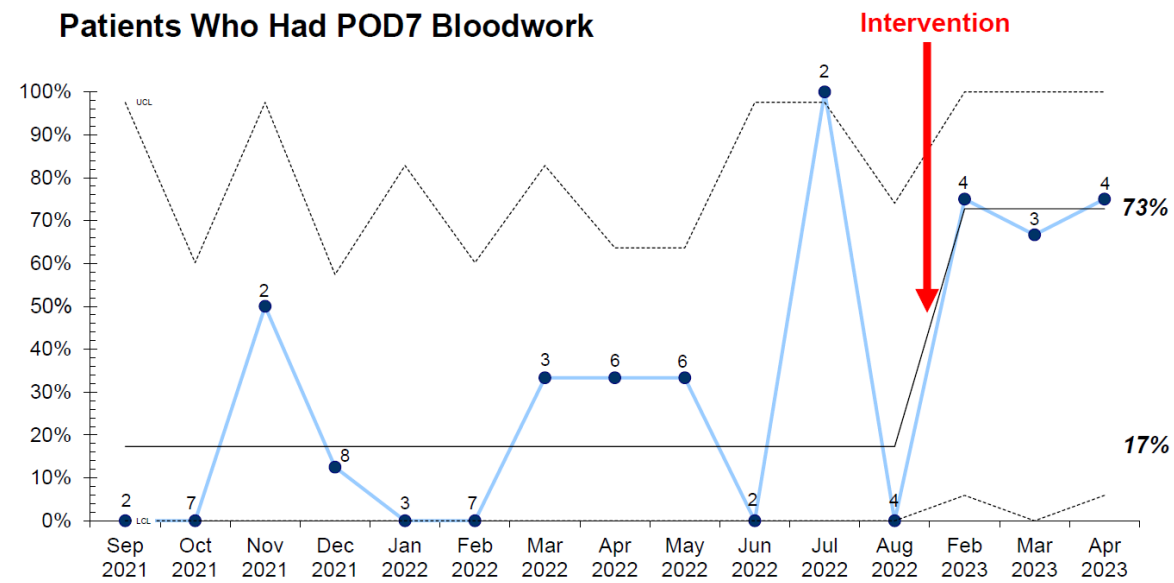
- Facilitated collaboration between specialists, particularly endocrinology & neurosurgery, including nurse practitioners
- Provided education for specialists & trainees: importance of testing, evidence, guidelines
- Created standardized endocrine testing protocol after discharge
- Created patient handout that provides clear instructions for patients upon discharge, including lab requisitions
- Contacted patients for feedback on the process & their perioperative course

MEASURES OF IMPROVEMENT

- Outcome measures: Percent of patients who had POD7 sodium (± cortisol)
- Balancing measures: Workload for physicians & nurse practitioners, readmissions for subclinical lab abnormalities, bloodwork burden for patients
- Process measures: Number of patients who received handout/requisitions, number of patients contacted (see below)



*Number on the left of each box denotes number of patients



*Number above points indicate total number of surgeries that month

EFFECTS OF CHANGE

- Understanding of current situation, issues with process, importance of testing & monitoring
- So far, increased POD7 bloodwork testing from ~17% to ~73% (not enough data to deem significant change yet)
- Generally well-received & adopted. Some resistance to change, but open to discussing solutions
- No significant increase in workload (in fact, has reduced workload by creating a standardized package)
- No patient yet readmitted for subclinical lab abnormality. No patients have yet complained of bloodwork burden
- Improved patient communication. Patients satisfied with process, clear instructions (expressed by 5/5 patients contacted)

LESSONS LEARNED

- Standardization is very important & simplifies process for many teams involved
- Collaboration with other stakeholders is key
- Early brainstorming for sustainability & long-term maintenance

SUSTAINABILITY

- Ongoing education of specialists, trainees, other stakeholders (including at rounds, academic activities)
- Regular meetings with neurosurgery NPs, as they are present year-round (vs rotating trainees)
- Simplification of process, including plan for implementation in Cerner
- This project is also part of a pituitary integrated practice unit (IPU)
- Retrieval of data via Health Data Platform (HDP) BC

Acknowledgements (alphabetical by last name)

Ryojo Akagami, Ranbir Atwal, Andrea Brovender, Arianna Cruz, Marshall Dahl, Peter Gooderham, Michelle Johnson, Sunny Khangura, Sarah MacDonald, Jessica Mackenzie-Feder, Serge Makarenko, Michael Rizzuto, Jessie Rodrigue, Steven Tam, Ehud Ur, Hing Yi Wong, Jefferson Xu, Allison Zentner.

This project was supported by the Specialist Services Committee through the Physician Quality Improvement initiative.

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; VGH: Vancouver General Hospital;

For questions or for comments, contact Brandon Galm at brandon.galm@vch.ca

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Improving Oral Dispensing at Richmond Cancer Clinic (RCC)

Jeremy Ho, Ann Enno, Lisa Chao, Vince Wong and Steve Chong

CONTEXT

- Richmond Cancer Clinic is an outpatient full service chemotherapy center that delivers both IV and oral cancer treatment
- Oral treatments normally fall under the responsibility of pharmacy including reviewing orders, checking bloodwork, filling prescriptions, medication counseling and dispensing.
- However, due to workload and capacity issues within pharmacy, these roles had been absorbed into nursing duties over many years despite this not being part of their professional practice responsibilities.

PROBLEM

- Nurses were dissatisfied with having to dispense medication, and also observed many inefficiencies in the process
- Baseline nursing survey showed 5/6 nurses were dissatisfied or very dissatisfied with the current process
- Pareto analysis identified patients missing bloodwork and and delinquent pick-up of medication as major issues
- Root cause analysis and process mapping also found that duplication of work between nursing and pharmacy, delivery of bloodwork, logistical issues with home delivery, significant weekday variability of dispensing, and unclear bloodwork and appointment reminder slips contributed to significant inefficiencies

AIM STATEMENT

- The initial aim was to improve nursing satisfaction with the dispensing process over 6 months.
- However, in the interim, due to improved capacity at pharmacy with an increased 0.5 FTE pharmacist, dispensing was transitioned over to pharmacy May 1, 2022.

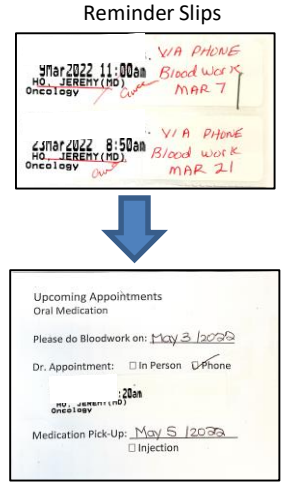
INTERVENTION OR STRATEGY FOR CHANGE

- Multiple interventions were approached simultaneously to address the various issues identified:
  - Reducing weekday variability of dispensing – UC gradually adjusting appointments (Feb 22)
  - Developing new bloodwork and appointment reminder slip – UC incorporate into existing work flows (Mar 22)
  - Stopping home delivery of medications (Apr 22)
  - Developing consensus for processes in place for reviewing of pre-dispense bloodwork between MD and pharmacy (Apr 22)
  - Improved electronic delivery of bloodwork results through coordination with RH Lab/Excelleris/UC (May 22)
  - Developing a patient education pamphlet regarding oral medication dispensing at RCC (Jan 23)

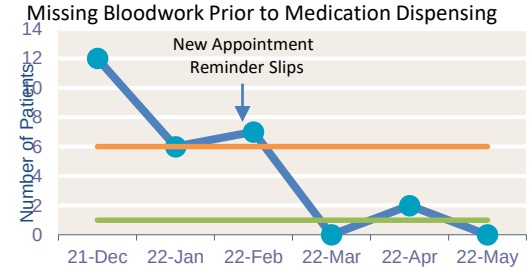
MEASURES OF IMPROVEMENT

- Missing bloodwork prior to dispense run chart
- Delinquent medication pick-up and missing bloodwork run charts
- Tracking average weekday dispensing variability
- Patient feedback for new appointment reminder slips, stopping home delivery, oral medication FAQs pamphlet

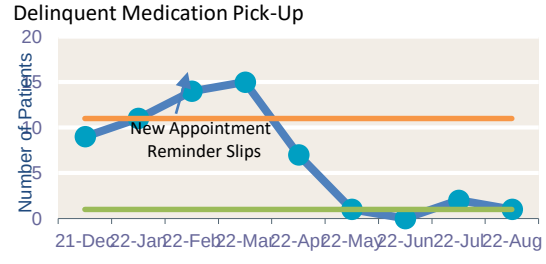
New Appointment Reminder Slips



Missing Bloodwork Prior to Medication Dispensing



Delinquent Medication Pick-Up



Oral Medication Dispensing Pamphlet

EFFECTS OF CHANGE

- Patients felt the new appointment reminders were “very clear” and better understanding of upcoming appointments
- Eliminating home delivery (process implemented during pandemic) and having pharmacy dispense simplified workflow and no complaints regarding stopping home delivery
- Still awaiting gradual changes in leveling out weekday dispense variability, and improved adherence to BW and pick-up appointments from new appointment reminders

LESSONS LEARNED

- Engaging with your colleagues to make the workplace a better place to work builds morale and trust within a team and fosters a culture of Quality Improvement that will allow future projects to be successful
- In order to increase the chance that your patient will do what you need, it may require reminders and reinforcement coming from various sources and tools

SUSTAINABILITY

- Implemented changes are now part of the normal workflow

Acknowledgements

Glenda Au-Yeung, Navi Dulai, Catherine Andrews, Sandra Chow, Stephen van Gaal

Project supported through funding by SCC

For questions or for comments, contact Jeremy Ho at jho3@bccancer.bc.ca

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; VGH: Vancouver General Hospital; UC: unit clerk; BW: bloodwork

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Improving the Emergency Department Discharge Process

Jatina Lai, Andrew Kestler, Allison Chiu

CONTEXT

- Interdisciplinary Learning Reviews (ILR) were performed on 10 ED bounceback patients at Lions Gate Hospital between March 2020-March 2021 found 121 Opportunities for Improvement (OFI)
- This project involved Emergency Department (ED) physician champions from VCH, PHSA, BCCH hospitals, as well as a collaboration with the VCH informatics team.

PROBLEM

- ILR results showed 5 areas for OFIs to decrease adverse events and recurrent visits to the ED.

Discharge support: supporting at risk patients upon discharge from ED	**Documentation/ vital signs:** standardization of ED documentation as well as rechecking vital signs before discharge	**Consults/diagnostics:** improving process and timing of consulting specialists and use of diagnostics in the ED	**Discharge instructions:** improving communication and discharge instructions to ED patients	**Deteriorating patient:** improving early recognition and treatment of deteriorating patients in ED

- My focus was on improving the discharge process, in particular, discharge information provided to the ED patient
- Currently many Emergency Physicians discharge ED patients by giving verbal instructions on their diagnosis, treatment plan, and return precautions. Specialist referrals and follow up information are frequently given out to patients on paper.
- Verbal instructions can be difficult for patient to understand especially if there is a language barrier or if there is concomitant dementia, delirium, sedation, or if the patient is a child.

AIM STATEMENT

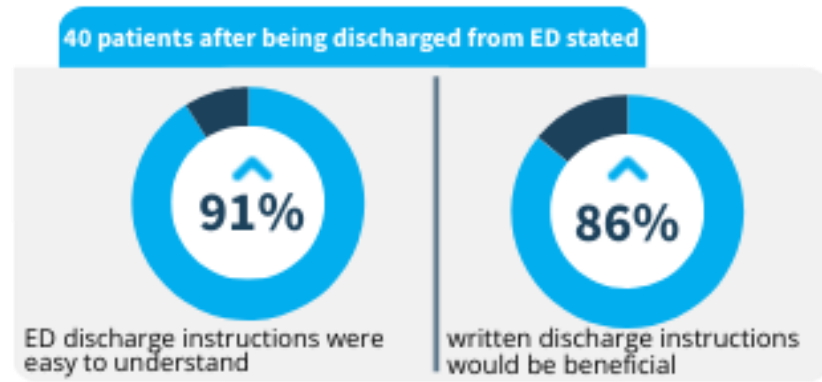
- The goals of this project:
  - Increase patient satisfaction with the ED discharge process
  - Decrease patient adverse events by 20%
  - Decrease unnecessary visits to the ED by 20%

INTERVENTION OR STRATEGY FOR CHANGE

- Improve ED discharge communication and quality of information for the patient by giving them a handout upon discharge with all the pertinent information about their visit to the ED
- An ideal ED discharge information sheet (EDDIS) was designed in collaboration with ED physician champions from VCH/PHSA/BCCH
- Approval from Regional Emergency Services Program (RESP) was obtained
- Work with Clinical informatics team to create a new EDDIS that could be given to patients when they are discharged—this change would be CST enterprise wide

MEASURES OF IMPROVEMENT

- Because this was a large scale enterprise-wide change for all CST users, EDDIS design and implementation took considerable time and required multiple stakeholders' approval
- Completion of the project will include PDSA cycles to assess:
  - Pre and post EDDIS implementation patient and staff satisfaction with ED discharge process
  - % usage of EDDIS by providers



Biggest issues that need to be fixed:

- ED waits times
- Lack of staff
- Explanation of what's going on

Ideal EDDIS components:

- Patient Info, Date, Provider
- Provisional Diagnosis
- Patient Instructions
- Medications in ED
- Prescriptions
- Results from lab and imaging
- Follow-up appointments
- Referrals
- Patient Resources

LESSONS LEARNED

- Working toward change management in the era of electronic medical records is difficult. It involves many more stakeholders and approval from everyone who is using the same EMR platform. Any CST wide changes takes a long time (9 months in this case).
- The informatics team has a very complex organizational chart. It is important to know it to understand who should be the IT lead of the project.
- The Regional Emergency Services Program needs to approve all projects that involve any CST wide changes. They meet once every 2 months and projects need to be presented at the meeting.

SUSTAINABILITY

- The EDDIS project is part of a larger change to CST to improve the ED discharge process. It will be presented for final approval by RESP.
- Once approved, sustainability will be maintained by ED working group champions to socialize the use of EDDIS in their respective groups.
- Patient satisfaction surveys and staff satisfaction surveys are important to analyze.
- Each site that uses EDDIS can customize the document to their desired specifications. It is a powerful document that can embed QR codes or hyperlinks to patient resources. These customizations will depend on the site.

Acknowledgements

Shane Barrill, Erin Barbour, Eric Grafstein, Sean Staniforth, Sherry Moon, PQI educators and Cohort 6 participants

This project is kindly funded by VCH, SSC

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Improving Access to Community Palliative Care Physician Consultation

Dr. Nori MacGowan, Vancouver Community Palliative Care Program

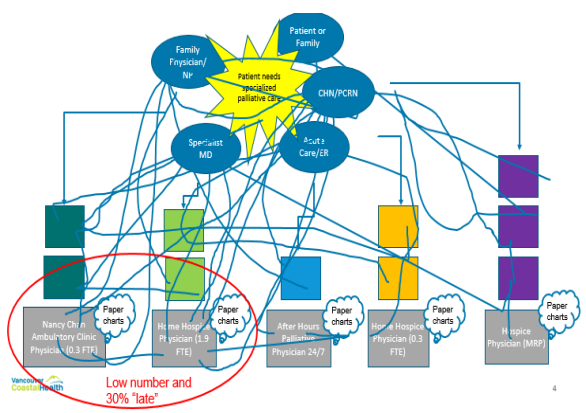
CONTEXT

- Specialized palliative care physician consultations in home, long-term care facilities, Nancy Chan Ambulatory Palliative Care Clinic, and hospice (MRP)
- Provide pain and other symptom management, psychosocial support, end-of-life care
- Purpose of palliative care is to reduce suffering and improve quality of life throughout the continuum of care for patients with chronic or life-limiting illness, aligned with goals of care
- Access to timely and responsive palliative care improves patient outcomes
- Care coordination between specialist and primary palliative care providers is essential

PROBLEM

- High use of health care system, multiple providers
- To access community palliative care physician:
  - Five distinct referral pathways and forms
  - Low physician FTE across multiple services
  - Paper charting system for physicians

→
- Referrers bypass processes OR do not refer
- Low number of referrals and many received too late for timely and effective care



AIM STATEMENT

- **To decrease "late referrals" for palliative physician consultation from 30% to 15% by May 2023**
- **To increase "percentage of Home Health palliative clients known to the specialized palliative physician" from 5% to 15% by May 2023**

INTERVENTION OR STRATEGY FOR CHANGE

Focus Groups (October 2022):
- Conducted with nursing and allied health at 5 CHC's
- Staff shared challenges with current processes, including:
  - ➢ Unclear which palliative physician to contact, especially when urgent
  - ➢ Referral process time-consuming
  - ➢ Delay between front-line provider identification of palliative needs and palliative physician consultation

MEASURES OF IMPROVEMENT

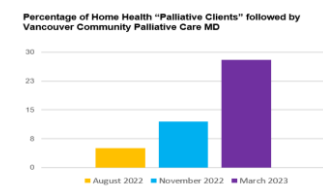
OUTCOME:
(1) Percentage of late referrals: patient died or was admitted to acute care for end-of-life care within 48 hours of initial consult OR within 7 days of receipt of referral.
(2) Percentage of Home Health "palliative clients" known to community palliative physicians

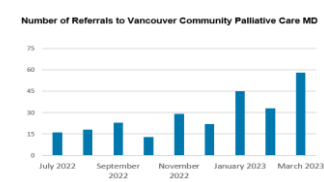
PROCESS: Number of new referrals per month

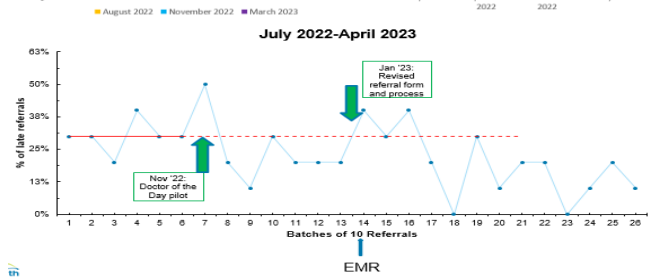
BALANCING: Impact on provider workload and workflow; provider satisfaction

EFFECTS OF CHANGE

With no increase in physician FTE:
- Home Health clients known to community palliative physicians increased from 5% to 28%
- Number of new referrals to palliative physicians tripled
- Late referrals decreased below initial baseline of 30%







LESSONS LEARNED

- Communication is more effective if visuals such as infographics and posters are utilized
- Physician involvement in quality improvement helps project ideas to gain traction

SUSTAINABILITY

- This work is aligned with VCH Clinical Operations priorities: Vancouver Integrated Palliative Services (VIPS) Project, and VCH Regional Palliative Standards
- Doctor of the Day is an embedded role in the community palliative physician service
- There is one referral form, to access both home consult and ambulatory clinic services, and established processes to complete and upload it to the program electronic medical record

Acknowledgements

Funded by the SSC through the Physician Quality Improvement Initiative. Thank you to Allison Chiu, Dr. Amrish Joshi, Mandy Tanner PCRN, Dr. Lynn Straatman, Dr. Conor Barker, Dr. Moe Yeung, Dr. Joseph Westgeest, Chloe Rajah FSSP, Hsin Chen, Moema Franco and Wayne Tse

Glossary of acronyms

PQI: Physician Quality Improvement
SSC: Specialist Services Committee
CHC: Community Health Centre
PCRN: Palliative Care Resource Nurse
FSSP: Family and Social Support Practitioner
MRP: Most Responsible Practitioner

For questions or for comments, contact Dr. Nori MacGowan at nori.macgowan@vch.ca

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Improving Recognition of Deteriorating Patients on a Medical Unit

Dr. Ingrid McFee, Palliative Care LGH

CONTEXT

- Following spike in mortality rates, Interdisciplinary Learning Reviews were conducted at Lions Gate Hospital
- Mortality cases on each unit in hospital were identified, regardless of attending service, admitting diagnosis
- Cases were reviewed by physicians, nurses, ethics, SW and other allied staff to identify "Opportunities for improvement"
- One of the key themes identified was "Failure to recognize the deteriorating patient" (in 45% of cases)

PROBLEM

- A group of physicians, nurses, educators and managers convened to seek the root causes of our "failure to recognize the deteriorating patient". Targeted a medical unit, palliative flagged patients.
- Many factors involved, used various tools: fishbone diagram, 5 why's to determine key rot causes:
    - Culture that focuses on cure and not quality
    - Lack of more experienced nurses to serve as mentors and to answer questions
    - MDs often not understanding why they are being called to deteriorating patient

AIM STATEMENT

- Aim to improve recognition of unexpectedly deteriorating patients with a palliative flag on 4 east to 80% (mixed unit 34 beds) by April 2023.
- This will improve patient outcomes, patient and family experiences, improve staff morale and reduce escalation of care in patients that would not desire/benefit from it

INTERVENTION OR STRATEGY FOR CHANGE

- PDSA 1: use structured system to look for adverse change (NEWS – National Early Warning System)
- PDSA 2: share simple algorithm for how to ask for help/escalate care/who to call
- PDSA 3: improve handover of info using SBAR

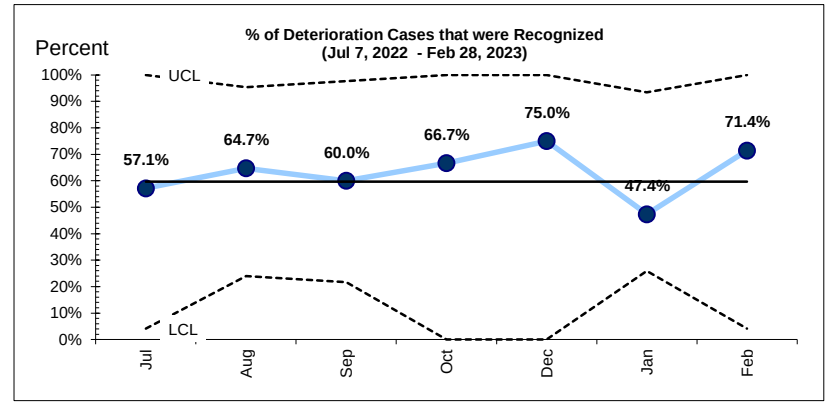
- Changes were announced via update emails, nursing huddles, PCC reminding at rounds, poster on unit
- Changes implemented over several months, and still require fine tuning

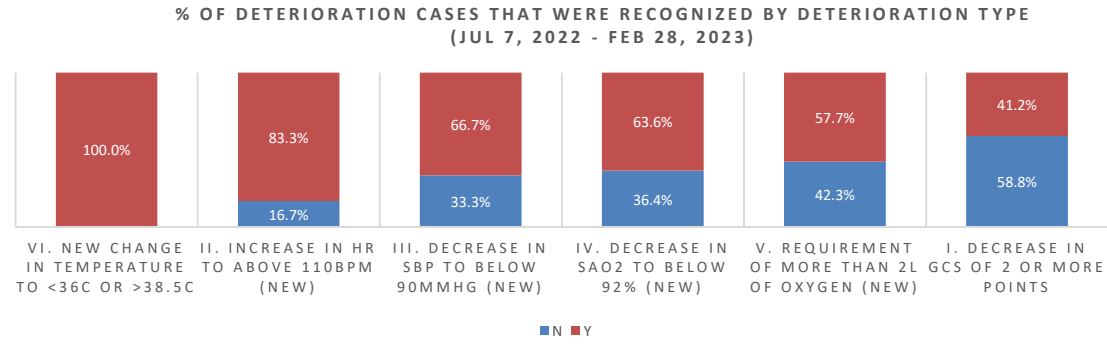
MEASURES OF IMPROVEMENT

- % patients with deterioration that was recognized
- Is there a specific type of deterioration not being recognized
    - •Change in GCS
    - •SpO2/oxygen requirements
- Baseline data collected from July/Aug/Sept. Changed implemented at beginning of October.
- Charts: % deterioration recognized then breakdown by deterioration type.

EFFECTS OF CHANGE

- Improved recognition of the deteriorating patients
- Problem not resolved but helped to identify patterns that we are missing, developing education strategies to target our knowledge gaps (specifically around changes in level of consciousness)
- Unanticipated effects: anecdotally increased work, physicians not receptive, improved collaboration between interdisciplinary groups





LESSONS LEARNED

1. Attempting to change work flow is very difficult
2. Multilayered problems require more than automation and a few PDSA cycles
3. Cerner collects a lot of data, it is difficult to access most of it
4. Bringing stakeholders together early creates a collaborative atmosphere

SUSTAINABILITY

- Building in NEWs/education to formal unit orientation → Half day in person orientation session, Q6 months refresher sessions
- Deteriorating geriatric/palliative patient SIMs – they look different than the "typical" acute medical patient
- Automation of NEWs calculation – pending Cerner implementation
- Data collection a big issue – Chart review required for the majority of data collection which is not attainable or sustainable

Acknowledgements

Allison Zentner, Dr. Vandad Yousefi, Sarah MacDonald, Jefferson Xu, Loveday Blake, Erika Yamada, Susan Sinnott, Ada Chan, Christy Kennedy

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; VGH: Vancouver General Hospital;

For questions or for comments, contact Ingrid McFee at Ingrid.mcfee@vch.ca

Optimizing Type 2 Diabetes Mellitus Care in the Downtown Eastside (DTES)

Kimberly Merkli MD, Marie Sproule RN, Marina Deziel RN, Cherryl Pacheco RPh

CONTEXT

Pender CHC
- Multi-disciplinary Primary Care
- Downtown Eastside

Team
- MD, RN, RPh, wound care clinician
- Patient advisor

PROBLEM

- High rate ulcers/wounds/cellulitis
- Challenges with DM care
  - Google form survey: 90% response rate
  - 0% use current DM EMR form
- Baseline data: poor data0% patients receiving guideline based bundle of care: BP, IZ, foot

AIM STATEMENT

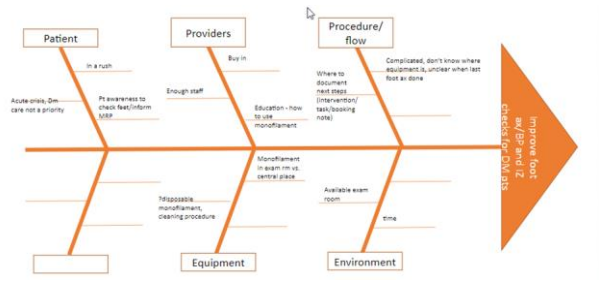
By 2023, the number of Type 2 Diabetic patients at Pender with all three interventions done together as a bundle of care in last 6/12 months:

BP check | **immunization review** | **foot assessment**

…. will increase from 0% to 25%

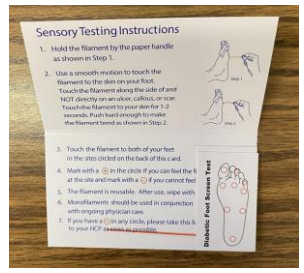
ROOT CAUSE ANALYSIS (FISHBONE)

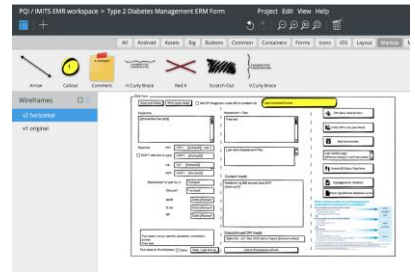
- Lack of monofilaments
- No standardized approach
- Insufficient time
- Need for education
- Acute concerns > CDM



STRATEGY FOR CHANGE

- **Smooth workflow**
  - add monofilaments to exam rooms
  - PDSA over 1 month
- **Reminders**: huddles and team meetings
- **Standardized approach**: EMR form

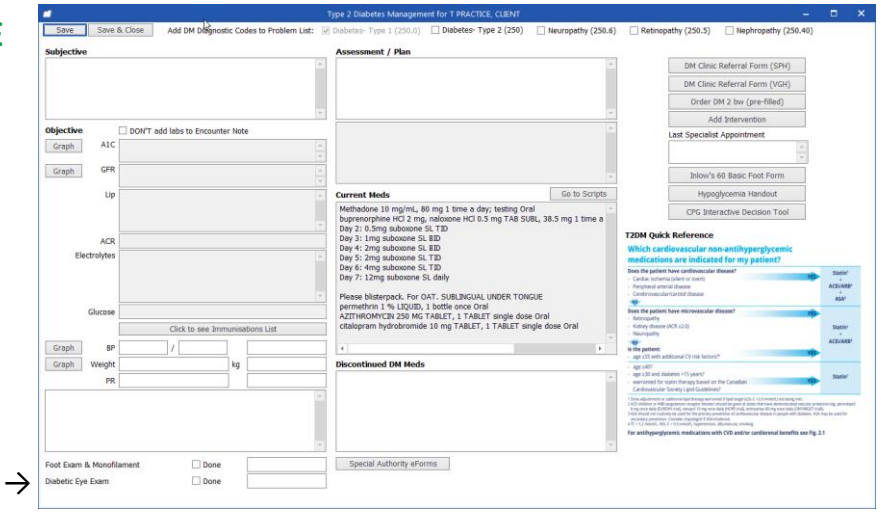




EFFECTS OF CHANGE

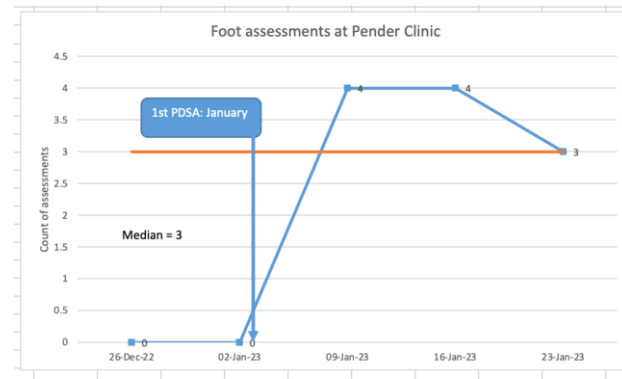
- **Barrier** = foot assessment
  - PDSA – from 0% to 50%
- **Guideline based care**
  - Hope to reduce wounds, infections, ED visits
- **Awareness**
  - "I've wanted to use your form 3 times today"
- Potential **negative effects**
  - Longer appointments
  - Increased nursing workload

EMR Form →



MEASURES OF IMPROVEMENT

- **Observation**: Current and future process maps
- **Surveys**
  - Pre and post google forms
  - 90% response rate for both
  - 100% intend to use new form
- **Count**: Increased # of foot assessments
- **Run chart**



LESSONS LEARNED

- Teams are **FUN**
- **QI support** exists
- Google forms, EMR QI environment, writing a charter and aim, data
- patient and provider **experience**
- TOP thing about PQI: **TECH SUPPORT**

SUSTAINABILITY

- EMR form
- Scheduled team meetings
- EMR queries (vs. chart reviews)
- Monofilaments in exam room
- Multi-disciplinary approach

Acknowledgements

- Enrique Fernandez & PQI team
- Michael Chang, Teresa Li
- Cole Stanley
- Pender team
- Susan Small

Glossary of acronyms

BP: Blood pressure; CDM: Chronic Disease Management; DM: Diabetes Mellitus; DTES: Downtown Eastside; EMR: Electronic Medical Record; MD: Medical Doctor; NP: Nurse Practitioner; RN: Registered Nurse; RPh Registered Pharmacist

For questions or for comments, contact Dr. Kimberly Merkli at kimberlymerkli@gmail.com

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To Enhance Accessibility to Primary Care for Those with Complexity Related to Their Social Determinants

Dr. Mike Norbury

CONTEXT

- Clients who are homeless (city-wide)
- Community Health Area 5 (CHA5) – light blue on map
- Clients sleeping in 29 target CHA5 sites – see list
- Raven Song Primary Care Clinic team within CHA5

PROBLEM

- People who sleep in shelters, SROs, supported housing or who are homeless, are known to have worse health outcomes than the general population
- This population therefore has the greatest need for access to longitudinal primary care
- However, only 22.7% (289) of this population in the CHA5 area (1,269 eligible clients) were attached to Raven Song Primary Care Clinic in 2022
- Supporting these clients was a focus of the updated VC Primary Care Program mandate implemented in Dec 2021

AIM STATEMENT

- A 10% increase (by May 2023) in the number of clients seen at Raven Song Primary Care Clinic who are NFA or who sleep in SRO's, shelters or supported housing sites within CHA5

INTERVENTION OR STRATEGY FOR CHANGE

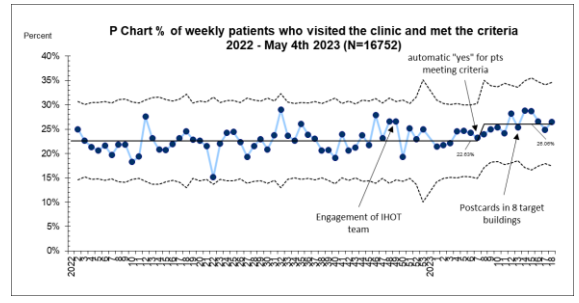
Change Idea #1 23 Jan – Week 4
Just Saying **YES** to patients who state being homeless or living in target buildings

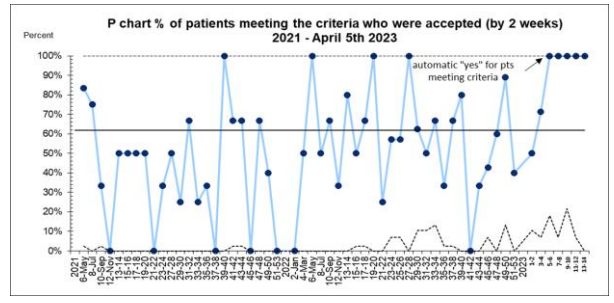
Change Idea #2 13 Mar – Week 11
Say **YES** if client NFA/homeless even if intake capacity reached

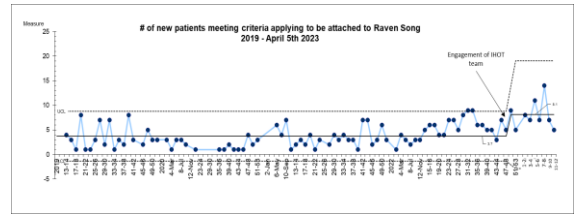
Change Idea #3 27 Mar – Week 13
Marketing to 8/29 of the target buildings
Those with > 50 units

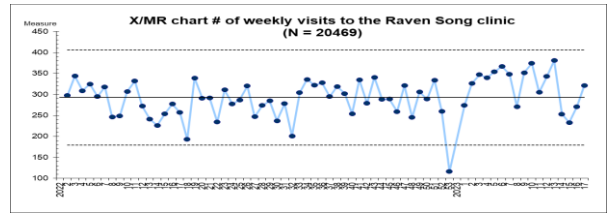
MEASURES OF IMPROVEMENT

- Outcome measure
  - Percentage of all clients who visited Raven Song Primary Care clinic and who met the criteria
- Process measures
  - Percentage of clients who met the criteria who were accepted following intake screening at Raven Song
  - Percentage of all new clients accepted at Raven Song who met the criteria
  - Percentage of clients presenting to Raven Song requesting attachment who met the criteria
- Balancing measure
  - Staff and medical staff satisfaction
  - Number of completed visits each week at Raven Song Primary Care clinic









EFFECTS OF CHANGE

- Since week 4 of the project 100% of clients who met the criteria and came for Primary Care have been accepted
- Around 36% of clients accepted for the first 12 weeks of 2023 were not from the target CHA5 group
- The average number of clients coming from target CHA5 group to be attached increased from 3.7 to 8.1/week
- Since the first change idea was implemented there has been an average increase of around 37 visits/week but the change isn't statistically significant

LESSONS LEARNED

- Implemented measurable change!
- Validated that others had shared system perspectives
- Connecting with front line staff is key i.e. process maps & driver diagrams
- Data shines light - but is hard to come by
- Hope reduces burnout
- Time pressures are real/not enough hours in the day
- Quality structures are not fully integrated
- Resources are limited
- Co-ordination & prioritization can be lacking
- Expect the unexpected

SUSTAINABILITY

- A handover of learnings to the Operations and Medical Director dyad for the Vancouver Community Primary Care Program occurred on 18 April 2023 in the presence of the Program Quality Improvement Advisor, Senior Clinical Planner and Clinical Nurse Specialist
- The leadership team committed to continuing the existing work at Raven Song and to aim at spread across the Program

Acknowledgements

Project Team: Brant Amos; Sabine Bruyere; Camilo Cortes; Greg Gracey; Cherryl Pacheco; **Raven Song Primary Care Team; Intensive Housing Outreach Team** (IHOT); **Susan Small**, Patient Advisor; **Allison Zentner** & **Dr. Cole Stanley; Dr. Stan deVlaming** – EMR guru; **Karl Tegenfeldt** – Project Manager, Homelessness & Supported Housing

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; VGH: Vancouver General Hospital;

For questions or for comments, contact Dr. Mike Norbury at michael.norbury@vch.ca

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The Sliding Sign Initiative

Emily Pang (lead), Caroline Lee, Maddie Wiseman

CONTEXT

- Setting: VGH/UBCH Ultrasound Departments
- Stakeholders: Patients with risk factors for endometriosis, radiologists, gynecologists, sonographers

PROBLEM

Endometriosis is a prevalent, chronic condition which can cause significant reduction of quality of life. Symptoms are often nonspecific, leading to delayed diagnosis (5-10 years). Most patients will undergo pelvic ultrasound at some point during their work-up, however routine ultrasound is generally unable to detect deep endometriosis. A dynamic endovaginal ultrasound maneuver, the "sliding sign" can help detect the most common location of deep pelvic endometriosis (Sens 85%, spec 98%), and is relatively easy and quick to perform.

Thus by introducing the sliding sign into the pelvic ultrasound protocol for patients at risk for endometriosis, there is an opportunity for earlier detection. Risk factors include premenopausal, non-pregnant patients with one of chronic pelvic pain, infertility, history of TOA/PID, known endometriosis, or endometrioma/adenomyosis

AIM STATEMENT

To have at least 95% of the patients who the meet the inclusion criteria for ultrasound sliding sign (SS) endometriosis assessment have it performed correctly and reported appropriately by May 2023.

INTERVENTION OR STRATEGY FOR CHANGE

Prior to PQI (Oct 2021)

Had training sessions for techs and rads, memo issued. Early enthusiastic uptake which tapered off.

Main issues identified:

- Forgetting the inclusion criteria
- Only one person championing SSI
- Eligible patients not flagged prior to US
- Some radiologists unaware of SSI

PDSA 1 (Feb 2023)

Change Idea: Reminder posters placed in the EV probe sanitation room
Rationale: Inclusion criteria reminder, targets all techs needing to perform TVUS
Implementation: 2 weeks - Design and feedback, poster printing

PDSA 2 (Mar 2023)

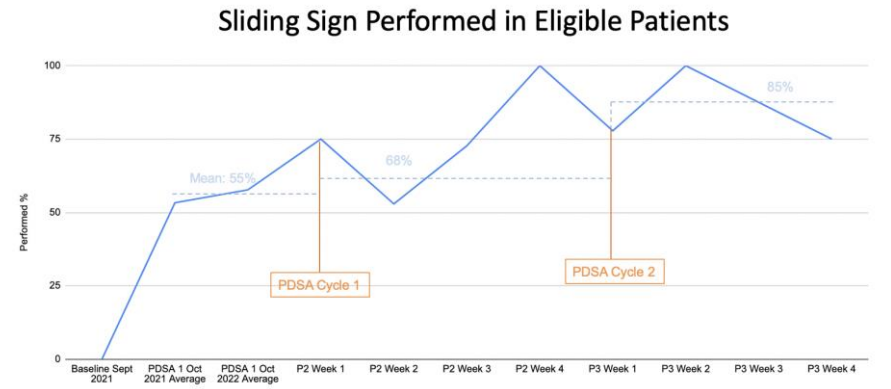
Change Idea: Posters redesigned and relocated to individual US rooms
Rationale: More immediate reminder, improve readability
Implementation: Initiated by team member, done over 3 days

MEASURES OF IMPROVEMENT

Data collected at baseline (Oct 2022) and with each PDSA cycle:

- Review imaging and reports to determine (4 measures):
    - If the sliding sign was 1) performed and if so, was it 2) performed correctly
    - If the sliding sign results were 3) reported and 4) interpreted correctly
    - PDSA cycle results aggregated weekly
- Secondary aim: Identify all abnormal sliding sign cases – chart review to assess how many patients newly diagnosed

Poster utilized for PDSA cycle 2



Modified run chart demonstrating improvement in the frequency of sliding sign performance in patients meeting inclusion criteria. Inset (bottom right) – still ultrasound image of sliding sign being performed.

EFFECTS OF CHANGE

- **Outcome measures:** SS performed correctly: Baseline (BL) 87%, PDSA1 96%, PDSA2 94%; BL 67%, PDSA1 73%, PDSA2 63%
- **Process measures:** SS performed in eligible patients: Baseline 55%, PDSA1 68%, PDSA2 85%; SS reported: BL 67%, PDSA1 80%, PDSA2 68%
- **Balancing measures:** In progress
- **Secondary aim:** 22 patients newly diagnosed with endometriosis (in 12 mo period) as a result of the sliding sign initiative
- **Anecdotally:** Positive feedback from gynecologists, expedited access to appropriate specialists

LESSONS LEARNED

- Earlier diagnosis of endometriosis making an tangible difference in patient Quality of Life.
- PQI was instrumental in learning and applying formal techniques to move the project forward, identify barriers to change, get buy-in from stakeholders, and hopefully allow for future publication to help disseminate to other sites
- Next steps: identify barriers to change from radiologist perspective to inform next PDSA cycle target

SUSTAINABILITY

- Plan to ingrain the new protocol into workflow (i.e. incorporate SS into the tech worksheets and rad reporting templates)
- Keep posters up as reminders
- Spread to other sites, hopefully become a new standard of care at least at the regional level

Acknowledgements

Project funding from Docs of BC SSC. Hing Yi Wong, Alison Chiu, Jefferson Xu, Dr. Stephen Van Gaal for QI assistance. Marion Cairnduff for help with PDSA implementation. Siobhan Leir (FLEX student) and Dr. Esraa Khalifa (research fellow) for data analysis

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; VGH: Vancouver General Hospital;

For questions or for comments, contact Emily Pang at emily.pang@vch.ca

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Code Blue: Improving Quality of In-Hospital CPR

Dr. Kevin Shi, CCFP(EM) FCFP Emergency Physician
Mark D'Angelo UBC Medical Undergraduate Program (MSI2)

CONTEXT

- Cardiac Arrests are stressful situations for everyone because of the need to act quickly
- Fortunately, they rarely occur in non-critical care areas of the hospital.
- Anecdotally from code blue teams at Richmond Hospital, chest compressions are sometimes not initiated until after the code blue team arrives.
- Chest compressions (CC) should be initiated as soon as possible for patients in cardiac arrest.
- CPR Skills must be maintained over time.
- CPR skills obtained from traditional BLS Courses deteriorate significantly after 6 months without practice.
- Courses need to be scheduled on own time outside of working hours and are often unpaid.

PROBLEM

- Survey was sent to all non-critical care nurses at RH, received a response rate of 96/~300 (~32%) .
- 47% of nurses who responded took a CPR course >12 months ago.
- 41% last practiced chest compressions > 12 months ago.
- 52% were uncomfortable initiating chest compressions independently.

AIM STATEMENT

- Increase the percentage of ward nurses who feel confident in initiating chest compressions AND able to coach others to 90%.
- Increase the percentage of effective chest compressions to 98%.
- Increase the percentage of ward nurses who have practiced and reviewed chest compressions in the past 6 months to 80%

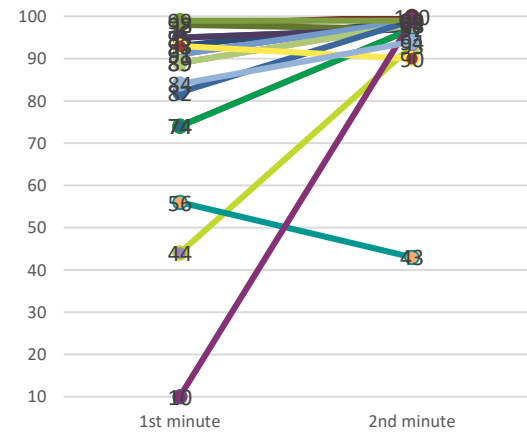
STRATEGY FOR CHANGE AND INTERVENTIONS

- Created a 3-5 minute refresher activity, focusing on chest compressions while ON SHIFT.
- Worked with Nurse Educators to coordinate dates to run the refresher activity.
- Sessions were originally instructor-led using a mannequin that provides real time feedback on rate, depth recoil and percentage of effective chest compressions.
- Switched feedback device from a mobile device to a dedicated device to allow for easier setup without an instructor.
- Created handouts and posters to allow for independent practice on the ward without an instructor present.
- Mannequin was left on the ward overnight to give more time for nurses to participate.

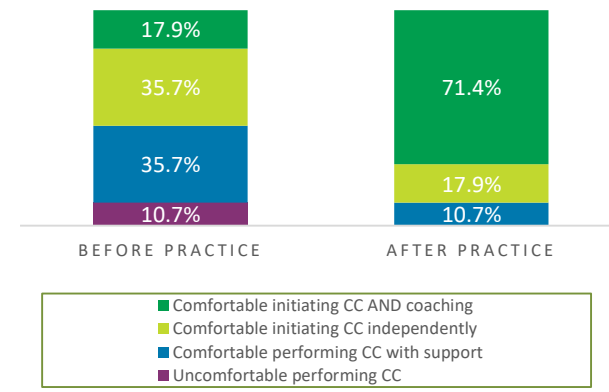
MEASURES OF IMPROVEMENT

- Data was collected from the mannequin to determine the percentage of effective chest compressions completed after the 1st minute and 2nd minute of practice .
- Chest compressions are effective if they are adequate rate and depth and allow for recoil.
- Participants completed a survey describing their confidence level with chest compressions before and after the practice opportunity.

% of Effective Chest Compressions (CC)



Improved confidence with Chest Compressions (CC)



EFFECTS OF CHANGE

- Increased effectiveness of chest compressions across nearly all participants after 1 minute of practice.
- Scores of two nurses dropped due to fatigue.
- Improved overall confidence with chest compressions after practice. 71.4% compared to 17.9% were comfortable initiating CC AND coaching after 2 minutes of practice. Nobody was uncomfortable performing CC.
- With the switch to handouts and independent practice, all nurses on the ward during the day and night practiced CC while on shift.

LESSONS LEARNED

- Short duration chest compressions refresher activities can help maintain and improve skills.
- Mannequin can be set up easily during off hours without an instructor.
- Practice can be completed while on shift.
- Some nurses preferred practicing without an instructor or colleagues observing.
- 57% of nurses wanted to practice once every 2 months, another 29% wanted to practice once every 6 months.

SUSTAINABILITY

- Mannequins have already been purchased at Richmond Hospital for training.
- Handouts and instructions have been created so that nurses can practice with the mannequin during their shift without an instructor.
- The goal is to rotate mannequins on all wards throughout Richmond Hospital to provide nurses with the opportunity to practice chest compressions and maintain their skills on a regular basis.
- Develop a schedule or reminders for nurse educators to bring mannequins to the ward on a regular basis.

Acknowledgements

Thalia Martens, Nurse Educator, Dr. Paul Huang – physician advisor, Allison Chiu – PQI Program Advisor, Judy Yang – ED Nurse, TBQI

Glossary of acronyms

RH: Richmond Hospital
CPR: cardiopulmonary resuscitation
BLS: Basic Life Support
CC: chest compressions

For questions or for comments, contact Kevin Shi at kevin.shi@vch.ca

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Lions Gate Hospital (LGH) Perioperative Care Improvement Project: Inpatient Service

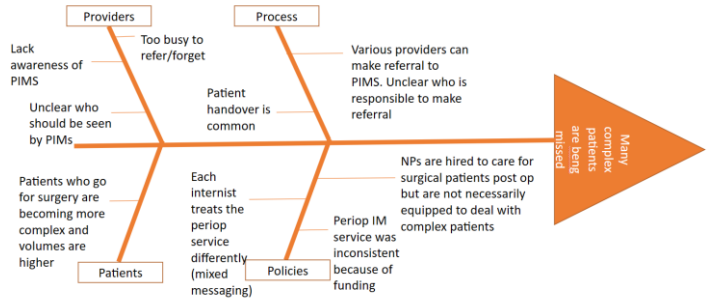
Dr. Katherine Shoults, Hing Yi Wong, Allison Zentner, Vanessa Kong

CONTEXT

- The number of complex patients having surgery at LGH is increasing
- Historically there has been no formal inpatient periop service
- Evidence supports medical and surgical co-management of complex patients

PROBLEM

- In October 2021, internal medicine implemented an inpatient periop service (PIMs) to support all surgical specialties at LGH
- The service was consistently underutilized and many complex surgical patients were not being co-managed



AIM STATEMENT

- Increase the number of complex patients receiving post operative medical care by 50% by May 2023
- Hopefully by increasing the number of patients seen by the periop service we will improve the quality of care for these patients.
- Complex was defined as age >75 or >65 with 1+ CV risk factor

INTERVENTIONS FOR CHANGE

Proposed Change: Increase awareness of the Periop IM service

- Make criteria for complex patients – November 2022
- Elevator pitch for surgical services – November 2022
- Labelling notes "PERIOP IM" – December 2022
- PACU/surgical ward posters – January 2023

Proposed Change: Standardize how the service functions in the hospital

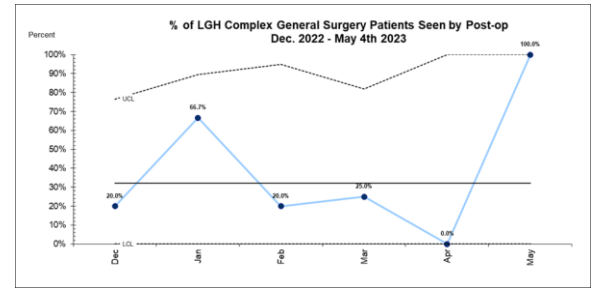
- Service expectations document reviewed in person and sent to involved internists – Jan 2023
- Feedback meetings with nurse practitioners – ongoing

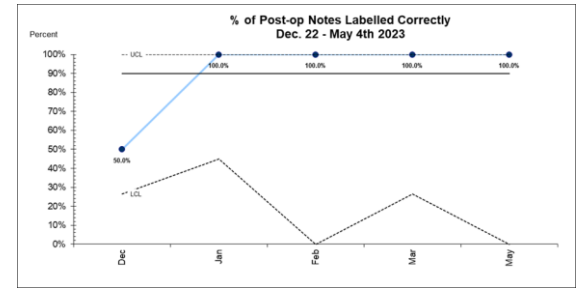
Proposed Change: Decrease barrier to consultation

- Autopopulation of list with complex patient admitted to hospital – January 2023/ongoing
- Tick box in order set - pending

MEASURES OF IMPROVEMENT

- Outcome measures: % of complex general surgery seen by PIMs, # of HAU/ICU consults, deterioration in renal function
- Process measures: % of notes correctly labelled
- Balancing measures: length of stay
- *While PIMs is available to all surgical specialties, only general surgery patients were used for data analysis. While this allowed for easier data collection it introduced an important caveat in that the data may not accurately reflect the increased utilization of the service from other surgical specialities.*





EFFECTS OF CHANGE

- Quality of patient care was improved:
  - 14% (9/65) of general surgery patients admitted experienced a decrease in renal function, measured by an increase in CR levels above 10% on discharge compared to admission
  - 9% (3/32) of *complex* patient with no periop consult experienced a decline
  - 0% (0/13) of patients seen by periop service experienced a decline in renal function on discharge
- Length of stay for patients seen by periop service was unsurprisingly longer than for an average general surgery patient (35.5 vs. 8.5 days)
- Number of ICU/HAU consults did not significantly change over the time period.

LESSONS LEARNED

- Starting a new service in a hospital even if it is evidence based comes with challenges and changing engrained clinical practice is difficult.
- Data to support improved quality of care is a good catalyst for perseverance.
- Aim statement and project charter are very useful for staying on track and knowing which data to examine.
- Community hospitals with ORs and no identified perioperative services should consider creating this within call schedules and promoting it within the hospital.

SUSTAINABILITY

- Periop service schedule has been made for remainder of 2023 and fully available to switchboard.
- Time and exposure to service will hopefully support practice adoption even in early non-adopters.
- Preop medicine is expanding which is directly tied to post op service expansion.
- Data will continue to be collected and is currently being expanded to look at outpatient medical follow plan for surgical patients as this may encourage surgical services to use periop services and show improved quality of care.

Acknowledgements

Enrique Fernandez Ruiz, Jefferson Xu, Krisi Rivison, Corey Hammond, Dr. Adam Chruscicki, PQI team and funding from SSC

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; LGH: Lions Gate Hospital; PIMs/Periop: Perioperative IM service

For questions or for comments, contact Katherine Shoults at katherine.shoults@alumni.ubc.ca

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Goals of Care Documentation on Emergency Department Temporary Admission Orders at Richmond Hospital

Dr. James Simmonds

CONTEXT

- The Richmond Emergency Department has approximately 50,000 visits per year
- This project involved the Richmond Emergency Physician Association (REPA), the unit clerks in the Emergency department (ED), as well as the Regional Palliative Approach to Care Education (RPACE)

PROBLEM

- Richmond Hospital, being a community hospital, often has emergency physicians writing covering orders or "Temporary Admission Orders" for consultants overnight. These patients are then seen in the morning by the MRP (Most Responsible Physician). Occasionally these patients unexpectedly deteriorate overnight and the emergency physician responding may not know the patient or if any goals of care were established
- There has been a variety of practices for documenting Goals of Care discussions (GOC); including on the Emergency Department paper chart, dictated, or on the temporary order set
- Patient care and provider satisfaction suffers as a result of this process

AIM STATEMENT

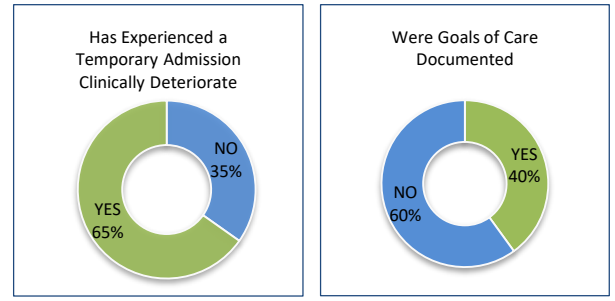
- The aim of this project was to improve documentation of goals of care on emergency department temporary admissions and standardize where this occurred. The goal was to have over 80% of these admissions to have this documented on the temporary admission order set by July 1, 2022
- Secondary outcome was to assess emergency physicians comfort levels with these discussions and work towards improving this

What is Regional Palliative Approach to Care Education (RPACE)?

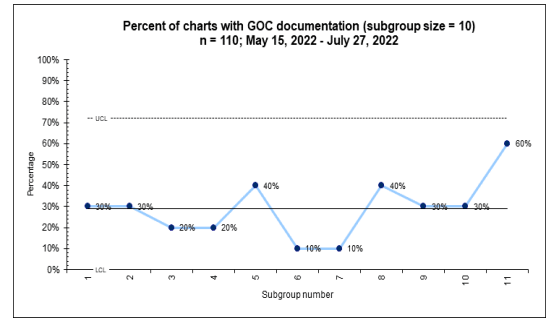
RPACE is an interdisciplinary team that supports VCH communities and programs in engaging in an early palliative approach to care.
Services provided include:

- Education for all staff disciplines around defining a palliative approach, identifying patients who would benefit, and having goals of care conversations.
- Coaching and mentorship with goals of care conversations
- Support with implementing a palliative approach to care within your work setting

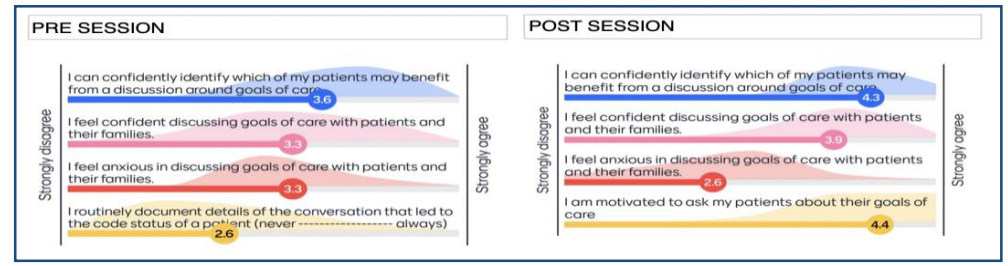
Richmond Emergency Physicians Survey Results



Final Results

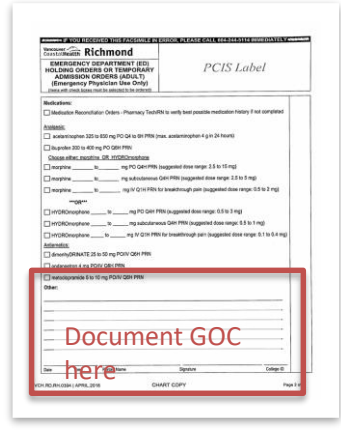


RPACE Session Evaluation



INTERVENTION OR STRATEGY FOR CHANGE

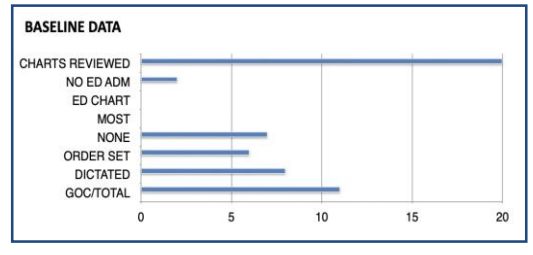
Improve provider comfort level with Goals Of Care conversations	• Anonymous survey to ask the team for ideas on how to improve comfort levels amongst providers • Collaborated with VCH multidisciplinary team RPACE and offered an ED focused GOC teaching session to REPA members • Three hour teaching session with active participation of applying a framework to cases relevant to the ED
Standardize location of documentation	• Informed by initial survey results to open questions • Propose to have Goals Of Care documented in a single location on the temporary admission orders
Implement physical prompts at work stations to promote change	• Reminders in high traffic areas • Point of care reminders at workstations and emails outlining change



MEASURES OF IMPROVEMENT

- Surveys of comfort level among REPA members, as well as qualitative data on process and GOC comfort level
- Obtained baseline quantitative data on current GOC documentation on temporary admissions. Charts were tracked over a two week period. **60% of charts had some form of GOC documentation.**
- Pre and post survey after RPACE teaching session
- Run chart of effect of implementing standardization of GOC on temporary admission orders (ongoing data collection at this time)

Initial Chart Review



EFFECTS OF CHANGE

- Overall goal of standardization of documentation was tracked over ten weeks, showed week to week variation but overall trending towards modest improvement
- GOC teaching session lead to improvement in comfort level and decreased anxiety with these conversations
- Interdisciplinary Review Committee recently reviewed a patient's journey and the positive effect of project and RPACE teaching session was mentioned during the review by a provider, positively influencing the patient's journey

LESSONS LEARNED

- Even seemingly small changes can have a large impact, however even small changes take significant time and work.
- Goals of care discussions are complex and can be stressful. Teaching sessions such as the RPACE session allow a safe environment for physicians and other providers to practice cases, apply frameworks and patient tested language

SUSTAINABILITY

- Work station reminders for GOC documentation at work desks will help remind physicians to include this on the order set
- Eventual CERNER implementation will bring a "forcing function" that will ensure that this step is completed. This project hopes that providers are more comfortable with these conversations prior to this systems change, and with the overall benefit being to the patients and their families

Acknowledgements

Amy Chang and Allison Chiu PQI Program Advisors, Cole Stanley PQI Physician Coach, RPACE (Regional Palliative Approach to Care Education), Richmond Emergency Department Unit Clerks, Richmond Emergency Physicians Association

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; VGH: Vancouver General Hospital; REPA: Richmond Emergency Physicians Association; RPACE: Regional Palliative Approach to Care Education; GOC: Goals of Care

For questions or for comments, email james.simmonds@vch.ca

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Increasing the Number of Patients Who Are Accessing Addictions Resources from the Emergency Department

Dr. K. Anne Sutherland (Lead)
Dr. Ashley Smith (Team Member), Tyler Tam (UBC Flex Student)

CONTEXT

- BC Coroner Report: 2, 272 people died of suspected drug poisoning in 2022
- January- March 2023: 596 drug poisoning deaths thus far
- 1/11 ED visits related to substance use
- 7% 1 year mortality rate of patients who visit the ED with visits related to substance use
- 19 patients per month with visits directly related to substance use, leave without being seen (LWBS) from VGH

PROBLEM

- Patients who use substances often leave the department prior to being seen by an Emergency Physician, or an Addiction Medicine Physician
- VGH is a busy emergency department, with long wait times
- Patients may go into withdrawal while waiting to be seen, or waiting to see a CPAS Physician

AIM STATEMENT

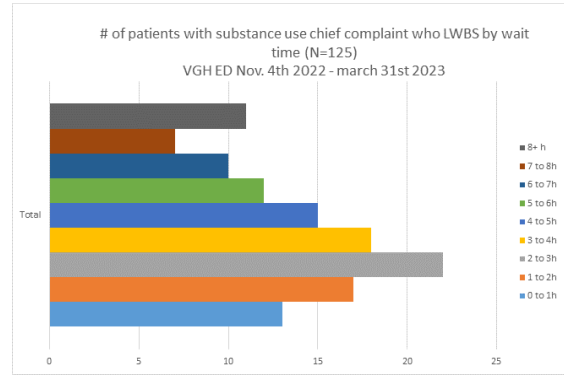
- The aim of this project was to reduce the number of patients who presented to VGH ED with substance use complaints, who LWBS by 25%
- Connecting with individuals in the ED who use substances to offer harm reduction resources, medications, connections to the community

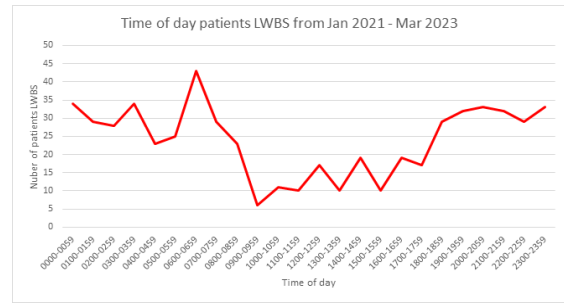
INTERVENTION OR STRATEGY FOR CHANGE

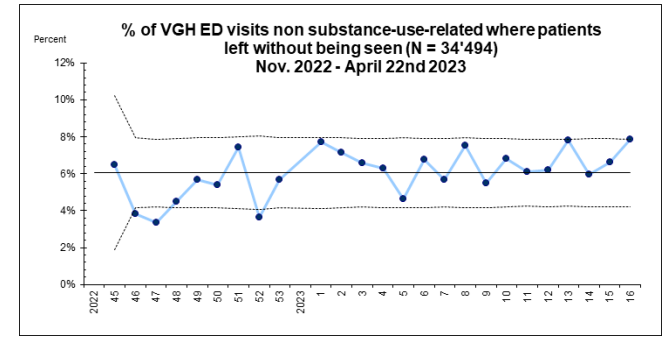
- Communication strategy:
  - ED "Tidbits" email to all staff
  - Speaking in VGH Emergency Physician meeting
  - Computer cards for consultation reminders (TBA)
- Implementing an "Emergency Department" CPAS line during the weekdays (Mar 3/23)
- Developing a CPAS Physician case finding/triage workflow for the morning (Mar 27/23)
- Embedding Addictions Nursing 7 day/week with extended hours in ED from 0730hr (Apr 26/23)

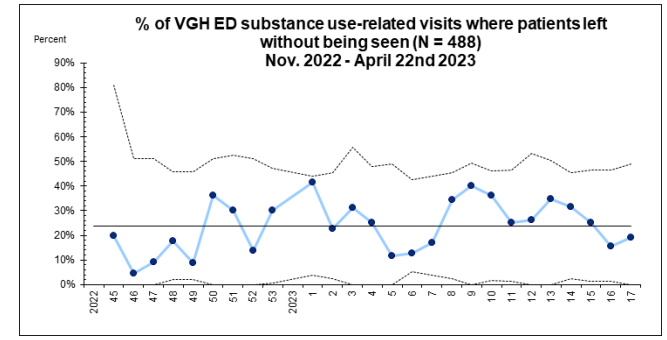
MEASURES OF IMPROVEMENT

- **Outcome measures:** Reduced pts LWBS, reduced readmits/"bouncebacks"
- **Balancing measures:** Pt length of stay in ED, increased number of pts LWBS, increased number of CPAS consults
- **Process measures:** Number of naloxone kits/safe consumption supplies dispensed, Percentage of people with substance use complaints who receive "Addiction Medicine" consults in ED, wait time from triage to CPAS consult



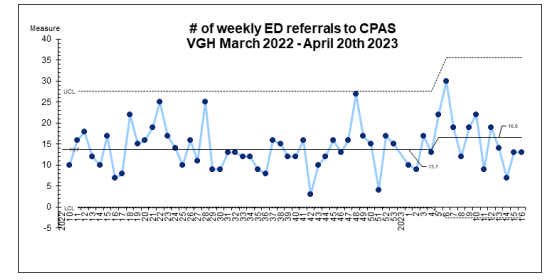






EFFECTS OF CHANGE

- Increasing numbers of CPAS consults during PDSA cycles
- No patients who presented with "Overdose" reason for visit LWBS
- No patient care metrics at this time



LESSONS LEARNED

- Future PDSA cycles could focus on early identification of individuals who use substances, trigger a "reassessment" at 2 hour mark to determine change in patient condition, extending hours of Addictions Nurse in ED
- Increase capacity by education of ED staff, Cerner power plans
- Embedding Addiction Medicine staff in EDs can increase retention to care of patients who use substances

SUSTAINABILITY

- CPAS ED triage process is now standard workflow of serve, ED CPAS line is a priority of service coverage
- Addictions Nurse coverage in ED extending service hours – acting to expand role/numbers
- ED CPAS Liaison position created within CPAS to aid in communication & further improvements in ED

Acknowledgements

Allison Zentner (PQI coach), Dr. Andrew Kestler (PQI physician coach), Susan Small (Patient Advisor), Dr. Jessica Moe (EMED Study lead), Dr. Jessica Hann (VGH ED Physician), Emilie Viens (CPAS SW), CPAS ED team (Dr. Pouya Azar, Dr. Martha Ignaszewski, Jessica Machado, Victor Li, Jacqueline Roth), VGH ED Nursing Education Lead (Roberto Benassi, Kaela Pozsgay)

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; VGH: Vancouver General Hospital; CPAS: Complex Pain and Addictions Service; ED: Emergency Department

For questions or for comments, contact k.anne.sutherland@gmail.com or anne.sutherland@vch.ca

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The Year Waiting Room Disappeared

Dr. Brian Xin-Yong Wang MD CCFP

CONTEXT

- In the Labor & Delivery unit and in our private clinics, patients demand IMPROVED in-person care after experiencing virtual care during the pandemic.
- Keys to patients' satisfaction: Convenience, Safety, Infection control…

PROBLEM

- Crowded waiting rooms and unpredictable wait times affect patient experience with care
- Heightened awareness of risks of cross infection due to crowded waiting rooms

AIM STATEMENT

- Reducing the number of patients waiting in the clinics

INTERVENTION OR STRATEGY FOR CHANGE

- Implementing a virtual check-in process and providing updates to patients via multilingual text messages

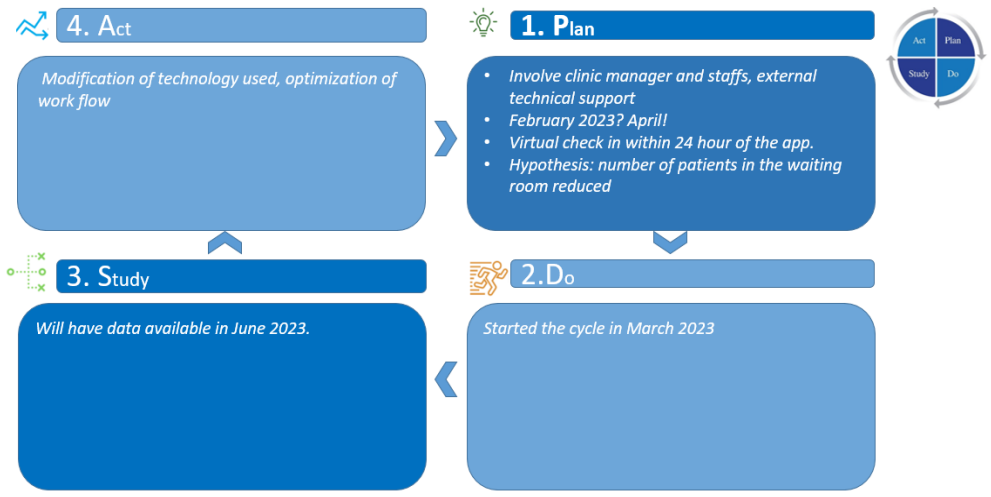
From an idea to
A PLAN

- Multilingual
- Accessible
- Integration - CHECK-IN FOR YOUR APPOINTMENT
- Technical feasibility
- Facilitating urgent care

MEASURES OF IMPROVEMENT

- **Outcome measure(s):** average number of patients in the waiting room
- **Process measure(s):** number of patients who are unable to check-in
- **Balancing measure(s):** physician idle time, total number of patients seen

Implementing a Virtual Check-in Process for Patients



EFFECTS OF CHANGE

- We are able to come up with a workable change idea despite of technical challenges
- We have secured the funding for the first 6 months and have initiated the implementation process

LESSONS LEARNED

- EMR synchronization remains challenging
- Staff training can take much longer than planned
- Patient education is the key

SUSTAINABILITY

- Patients demand better experience of in-person care, and technology makes it feasible.
- We have secured funding to support the first 6 months of the technology
- We will continue monitoring the project outcome and process measures to demonstrate impact on waiting room capacity

Acknowledgements

I want to thank Labor & Delivery Unit at Richmond Hospital; Department of OBGYN at Richmond Hospital; and Richmond Division of Family Practice. I also want to thank all PQI staffs, especially Rochelle and Hing Yi.

Glossary of acronyms

PQI: Physician Quality Improvement; SSC: Specialist Services Committee; VGH: Vancouver General Hospital;

For questions or for comments, contact Dr. Brian Xin-Yong Wang at wangx@vandoctors.com

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Design Details

Fonts

The two texts used are below:

Aa — Calisto MT

Aa — Calibri body

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RGB: 101, 75, 92

Community-based

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RGB: 20, 16, 53

Vancouver Coastal Health

RGB: 3, 159, 77

RGB: 25, 92, 47

Texts

RGB: 74, 126, 87

Background

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