

Background

Emergency Departments (ED) in Victoria are struggling with ever increasing patient volumes. Waiting rooms are overcrowded, with average wait times frequently exceeding 6 hours, creating an unsafe environment and limiting the community's access to emergent/urgent care. There are about 100 outpatient Ultrasound (US) scans to rule out DVT at the RJH per month, with about 20 positives requiring therapy. These patients are almost universally diverted to the ED, prescribed Oral Anticoagulants (OACs), and may be sent for follow-up with their primary care provider, Internal Medicine, or Hematology. The inconsistencies in follow-up creates the possibility for inappropriate duration in therapy, long term complications of inadequate therapy, and/or redundant health care visits.

Aim Statement

Reduce the number of Emergency Department visits for patients with acute limb Venous Thromboembolism (VTE) at Royal Jubilee Hospital (RJH) in Victoria, BC by 50% by October 2022.

PDSA Cycles

- PDSA 1 - A Pilot DVT Clinic opened three half-days per week April 13, 2022.
- PDSA 2 - Referral expansion to all RJH outpatient US
- PDSA 3 – Radiology Q&A session
- PDSA 4 – ED Physician Q&A
- PDSA 5 - Clinic coverage expansion to five days/week & new referral form
- PDSA 6 – Referral expansion to Victoria General Hospital (VGH) ED patients

Data Analysis

Outcome Measure: Number of RJH ED visits within 48 hours (before or after) positive VTE ultrasound.

Process Measure: Number of patients captured at our Pilot DVT Clinic.

Source: Data obtained from January 2022 to July 2022 from the Radiology database. Positive US studies were cross-referenced with the Cerner Electronic Medical Record (EMR) databank to pull ED and Ambulatory encounter information. Clinic data collected using REDCap.

Results presented in Figure 1 to display the changes before and after implementation of the DVT pathway.

Project Team

Project Leads: Dr. Khala Albert, Dr. Ali Yakhshi Tafti

Project Partners:

- Dr. Brian McArdle/Dr. Laura Fraser/Dr. Sarah Fraser (General Internal Medicine)
- Dr. Adrienne Lee (Hematology)
- Dr. Chris King and Stephan Tuomi (Radiology)
- Ambulatory Care Admin and Nursing, RJH
- April Ratcliff, Shari Jonasson (Registered Nurses)



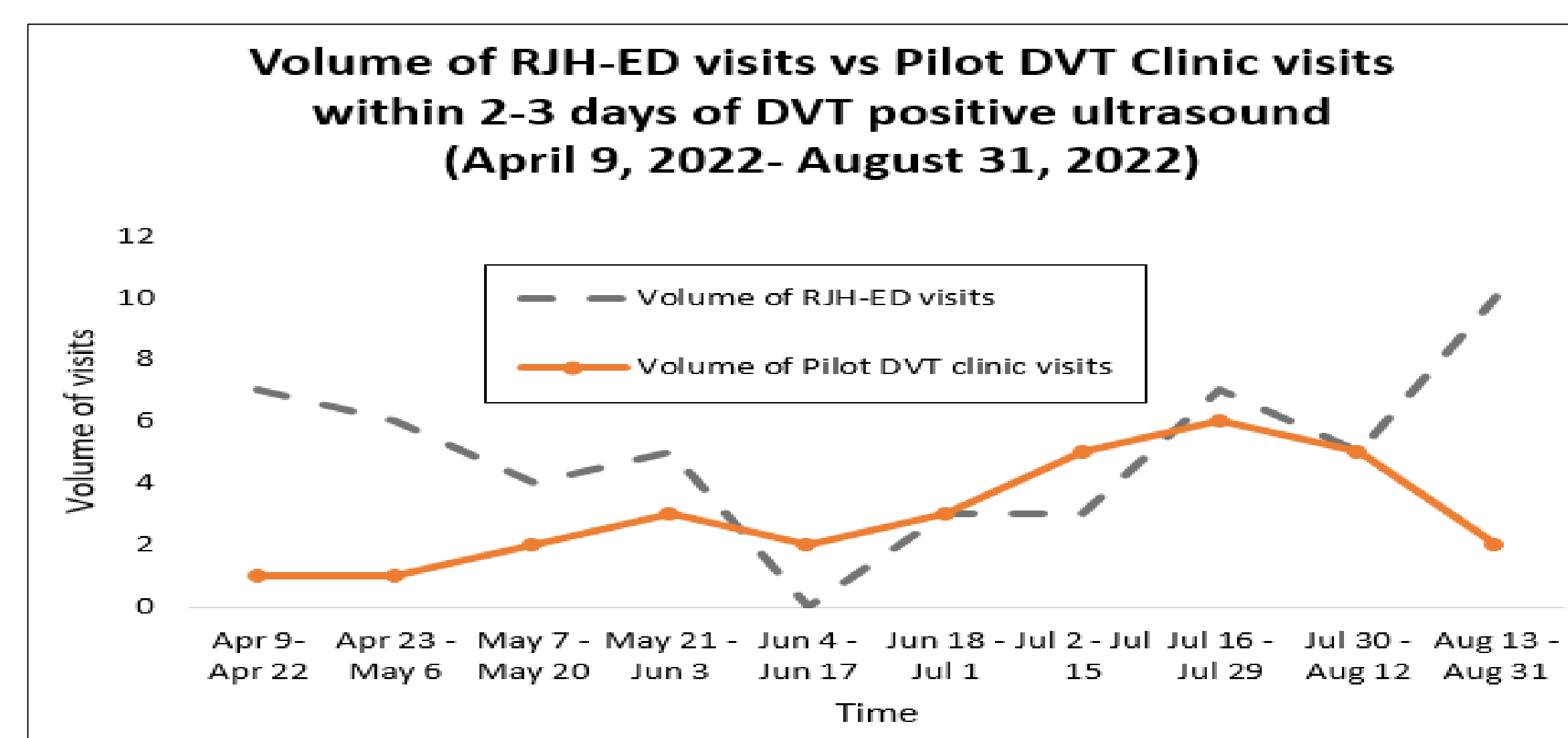
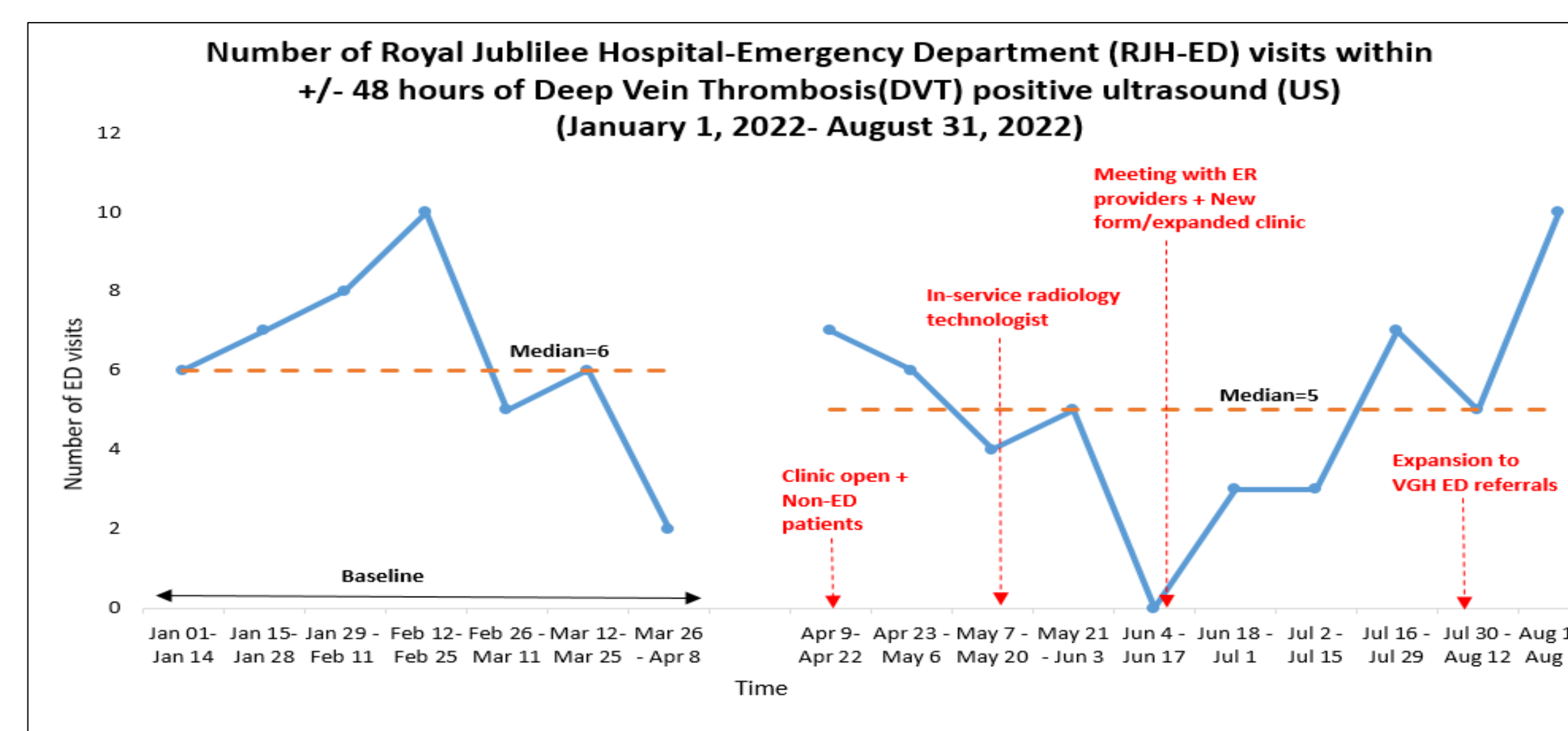
Change Ideas

Primary:

Creation of outpatient urgent follow-up DVT Clinic run by thrombosis specialist

Secondary:

- Empiric Anticoagulation education
- Morning US booking to facilitate follow-up
- Radiology initiated diversion to clinic



Problem

There is no standardized outpatient process for the work-up and follow-up management of Deep Vein Thrombosis (DVT) in Victoria, resulting in patients being diverted to Emergency Departments (ED) for anticoagulation initiation. This results in inefficient use of healthcare resources, contributes to ED overcrowding and leads to inconsistent and unreliable care for patients.

Findings:

- Our process outcome data and feedback from stakeholders at all levels suggest increased familiarity and utilization of the Clinic.

Keys to success:

- PARTNERS: Collaboration and ongoing engagement with outpatient partners was key. Medical oversight for the Pilot DVT Clinic is currently provided by Internal Medicine.
- COMMUNICATION, COMMUNICATION, COMMUNICATION!
- FRONT-LINE STAFF: Adoption closely correlated to how minimally disruptive changes are to already busy front line staff.

Barriers:

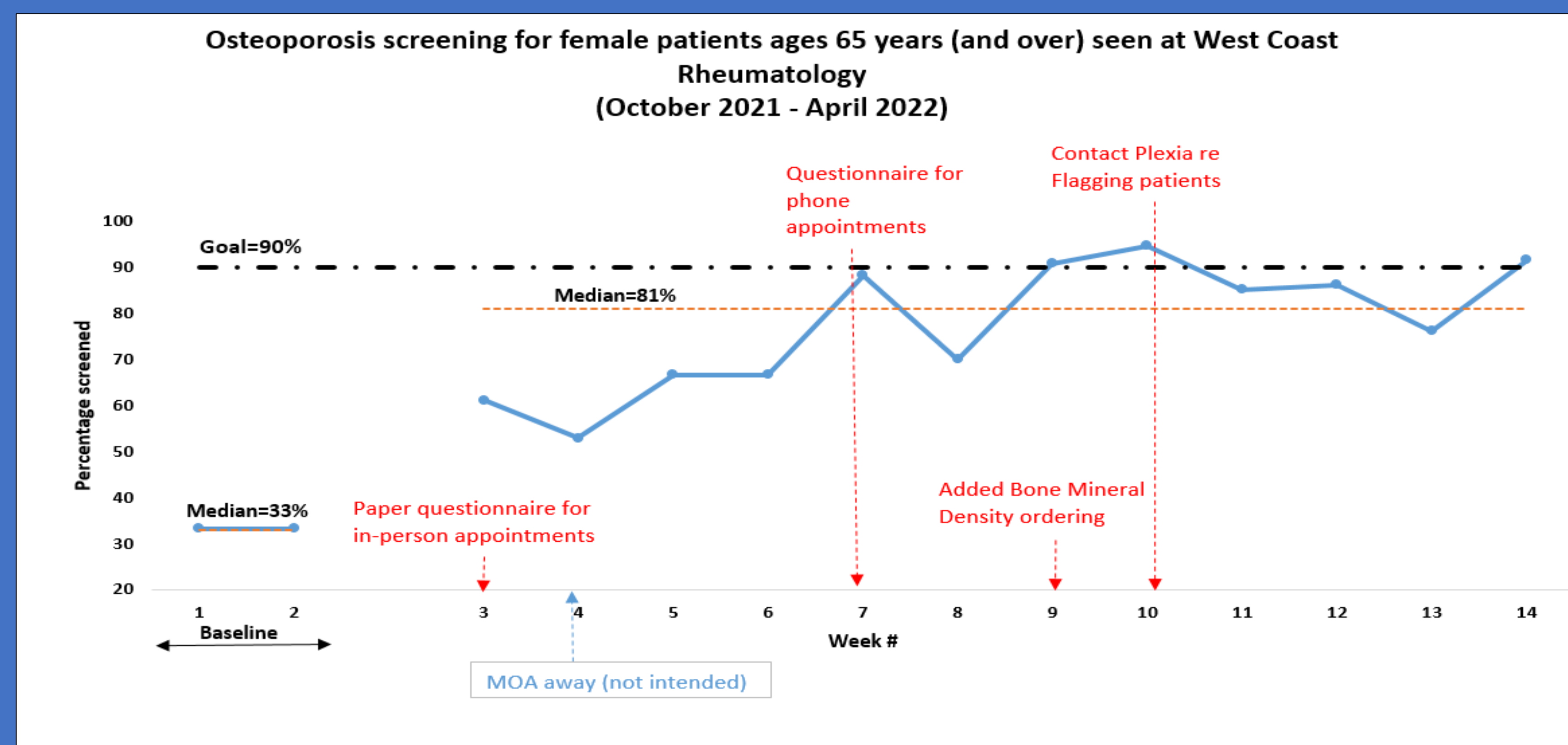
- INFRASTRUCTURE: Obtaining appropriate clinic space, nursing and administrative support is essential for stability and long term viability. We have been lucky with local leadership support in securing this on a trial basis.

Next Steps:

- The Pilot Clinic will continue until January 2023, with a planned Return on Investment (ROI) analysis to assess for long term feasibility.
- Utilization of SIFEI grant to fund ongoing improvement and PDSA cycles.
- Future PDSA cycles targeting ED providers re-engagement and future expansion to outpatient providers through UPCC.
- Dr. Ben Schwartzentruber has joined Cohort 7 of PQI training and will build on this foundation.

Osteoporosis screening improved from 33% to 73% for all patients:

- 92% for in person visits
- 70% for phone visits



Osteoporosis Screening in a Rheumatology Practice

Osteoporosis:

- **Common:** 11.9% Canadians over age 40 are diagnosed
- **Underdiagnosed:** <10% of people have a bone density within 1 year of a fracture
- **Important:** leads to fracture, hospitalization, increased morbidity and mortality
- **Higher risk:** in patients with *rheumatic diseases*

Problem:

- Patients seen in Rheumatology offices are at an inherently higher risk of osteoporosis due to their comorbid medical conditions and medications

Aim Statement:

By June 2022, increase osteoporosis screening for female patients over 65 years at West Coast Rheumatology from 33% to 90%

Change Ideas:

- Flagging of patients
- Questionnaire implementation

Findings:

- Total screening improved 33% to 81%
- Screening at in person visits more effective (92%) than phone visits (70%)
- Successfully incorporated in another rheumatology practice (42% to 92% screened)

Conclusion/Next Steps:

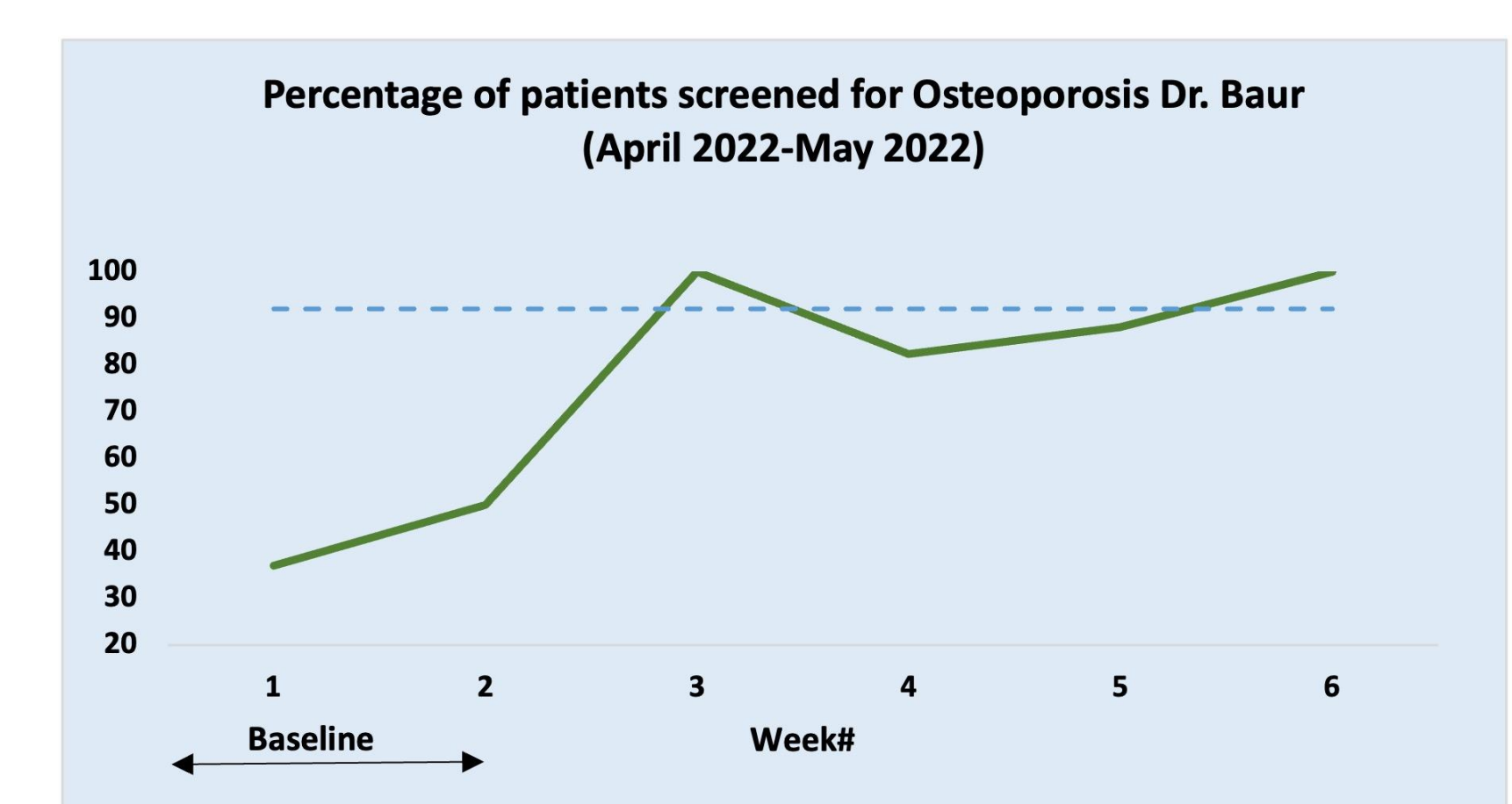
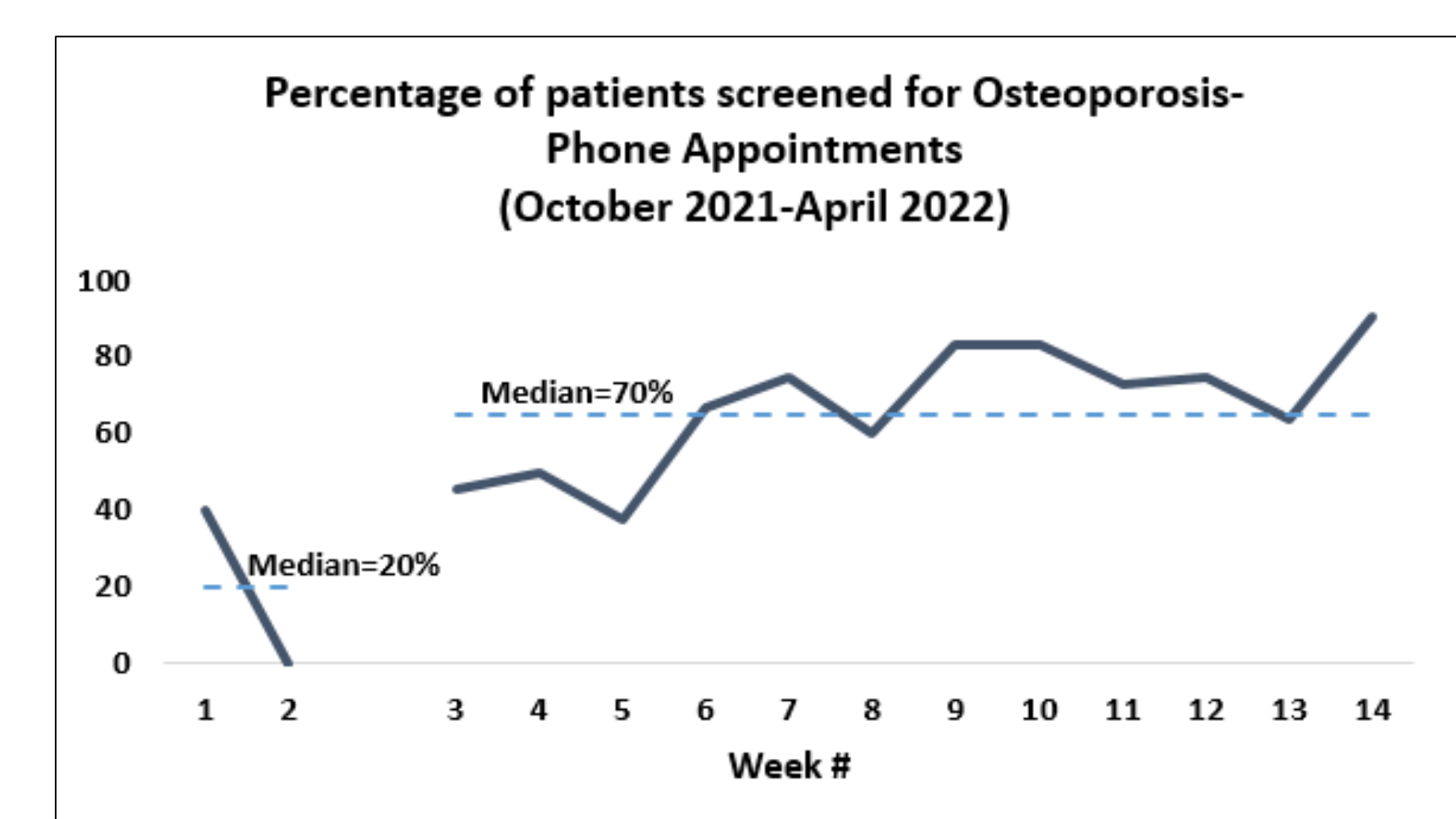
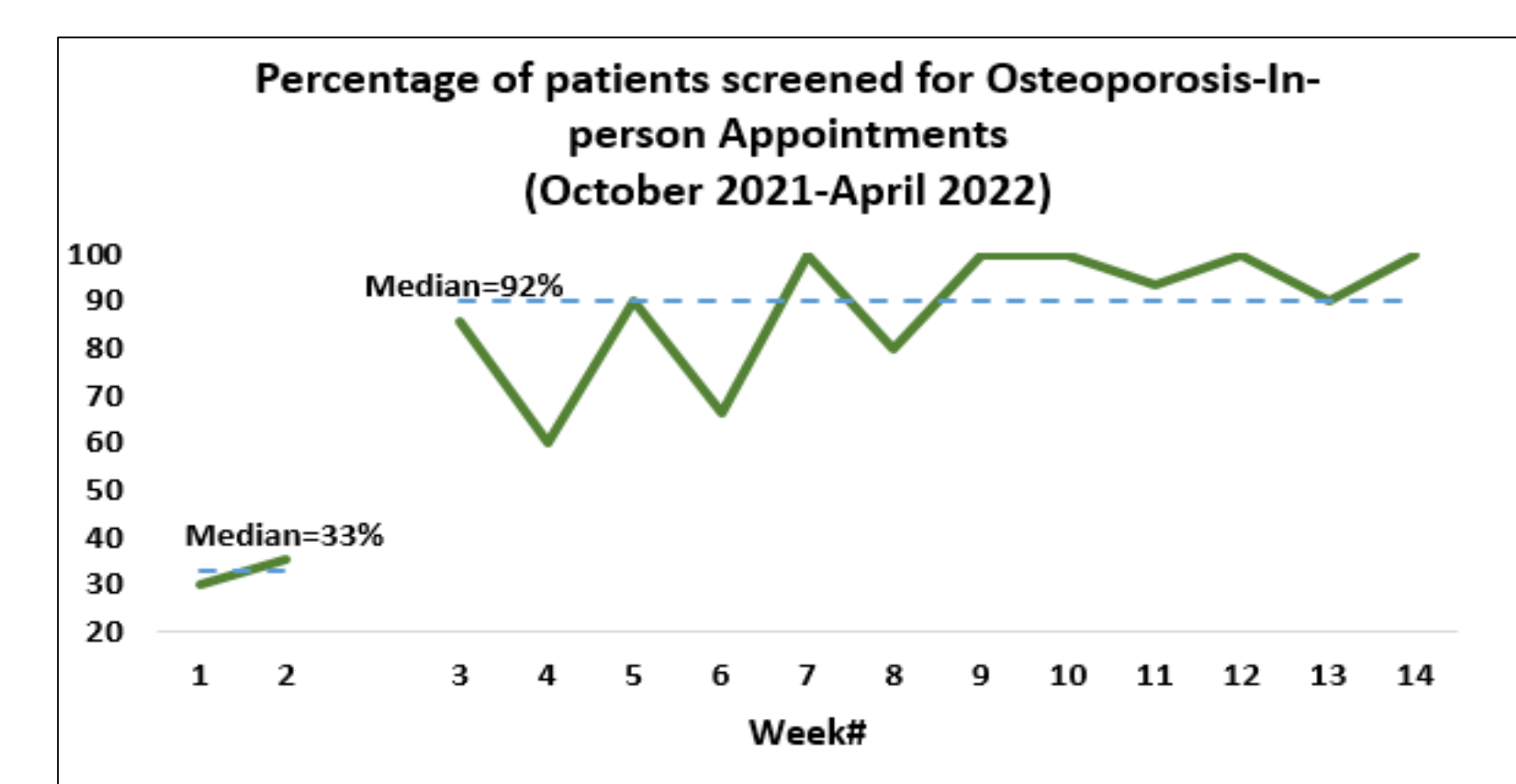
- Expansion into a family practice office with education
- Preliminary screening in family practice office increased from 17.3% to 22% of patients

PATIENT VOICE

“Never thought” of her bone health and was “surprised” to find out her fracture risk.

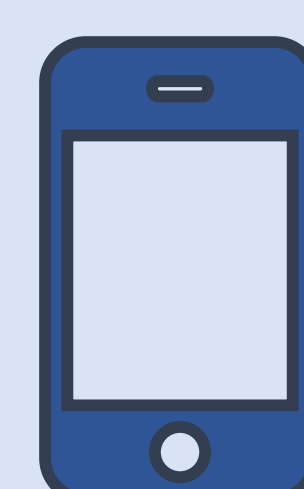
Feels proactive in starting therapy and has “many acquaintances that would have benefited” from screening.

Extra Tables & Figures



Project Team:

- Alison Kydd
- Nicole Baur
- Sarah Smith
- Lauren Edmonston
- Emily Steeves



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Please see our website for more details: sscbc.ca

PROJECT TEAM

Project Lead: Caroline Ferris

Project Participants:

- Olaf Niemetschek, AOT Coordinator
- Echo Kulpas, Manager
- Kelly Armstrong, Admin
- Clinical and Support staff at AOT

AIM STATEMENT

Reduce wait-times to access counseling at Addiction Outpatient Treatment (AOT) in Victoria to 30 days for 90% of patients within 6 months

PDSA CYCLE I



Small Test of Change
Implemented ~Dec 1
4 PCN counselors were
added to staff to do 1:1
counseling

FINDINGS

- Adding more counselors helped.
- Redefining group criteria did not help.
- Trying to direct more clients to group rather than 1:1 did not help as clients so complex a 1:1 was often needed just to triage them.

NEXT STEPS

AOT staff will continue to refine and implement referral and triage criteria.

- This will include definition of length of service so that clients can be discharged and new intakes accommodated.
- 1:1 sessions will be limited in number with transition to groups as quickly as possible.

BACKGROUND

Counseling is often helpful for clients experiencing problematic substance use, but demand is very high. Timely access to service is important, as clients need help “when they are ready” in order to succeed in substance reduction goals.

PATIENT VOICE

"I was in and out of Detox 12 times in 18 months. Finally I was offered counseling, and now I've been sober for 4 years. Counseling really helped me deal with the reasons I was drinking"

PROBLEM

Long wait-lists and long wait-times are a barrier to accessing services, with many folks lost to contact by the time staff try to reach them.

Wait-lists were up to 224 clients post-pandemic, with over 200 days until next appointment being the norm.

CHANGE IDEAS

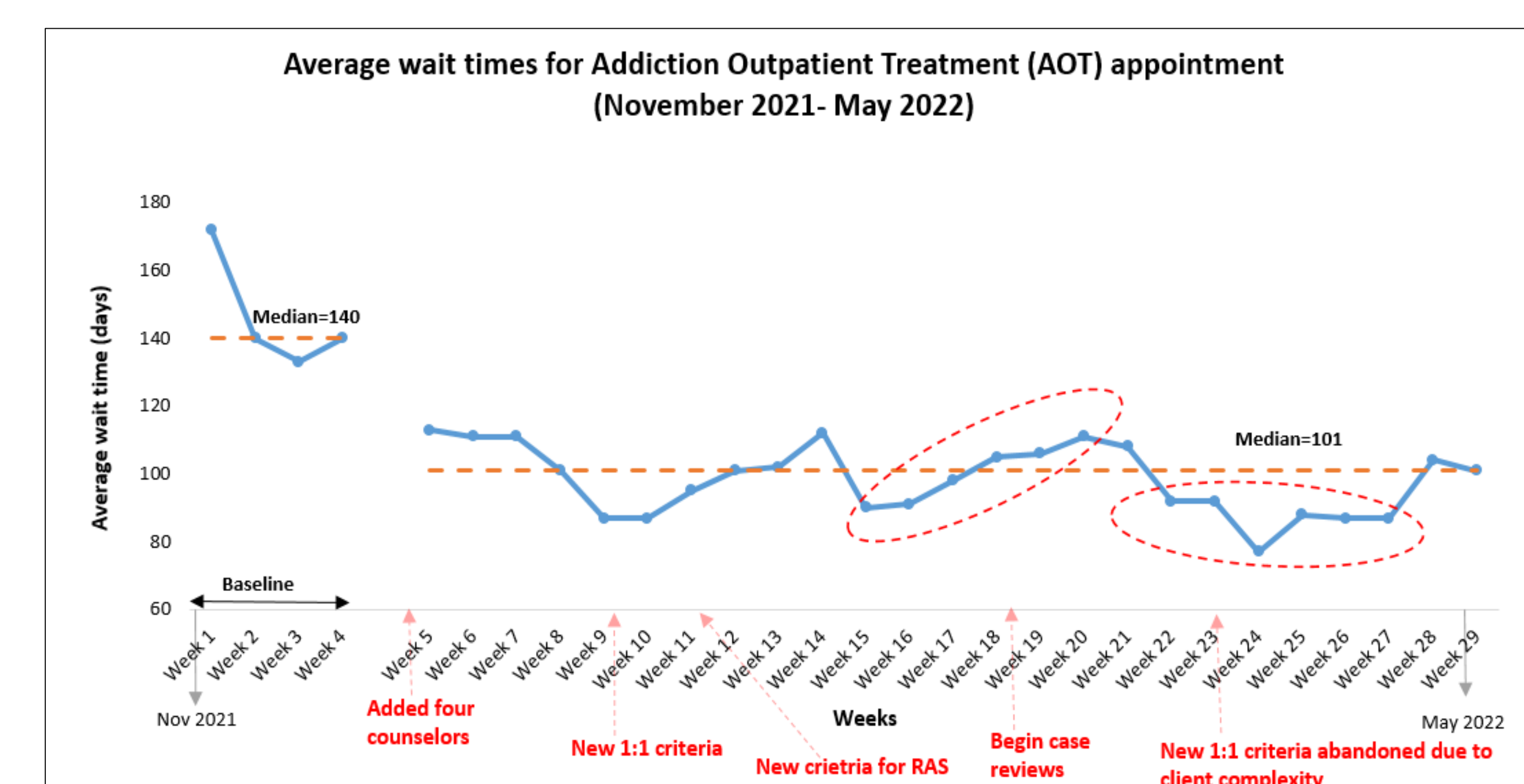
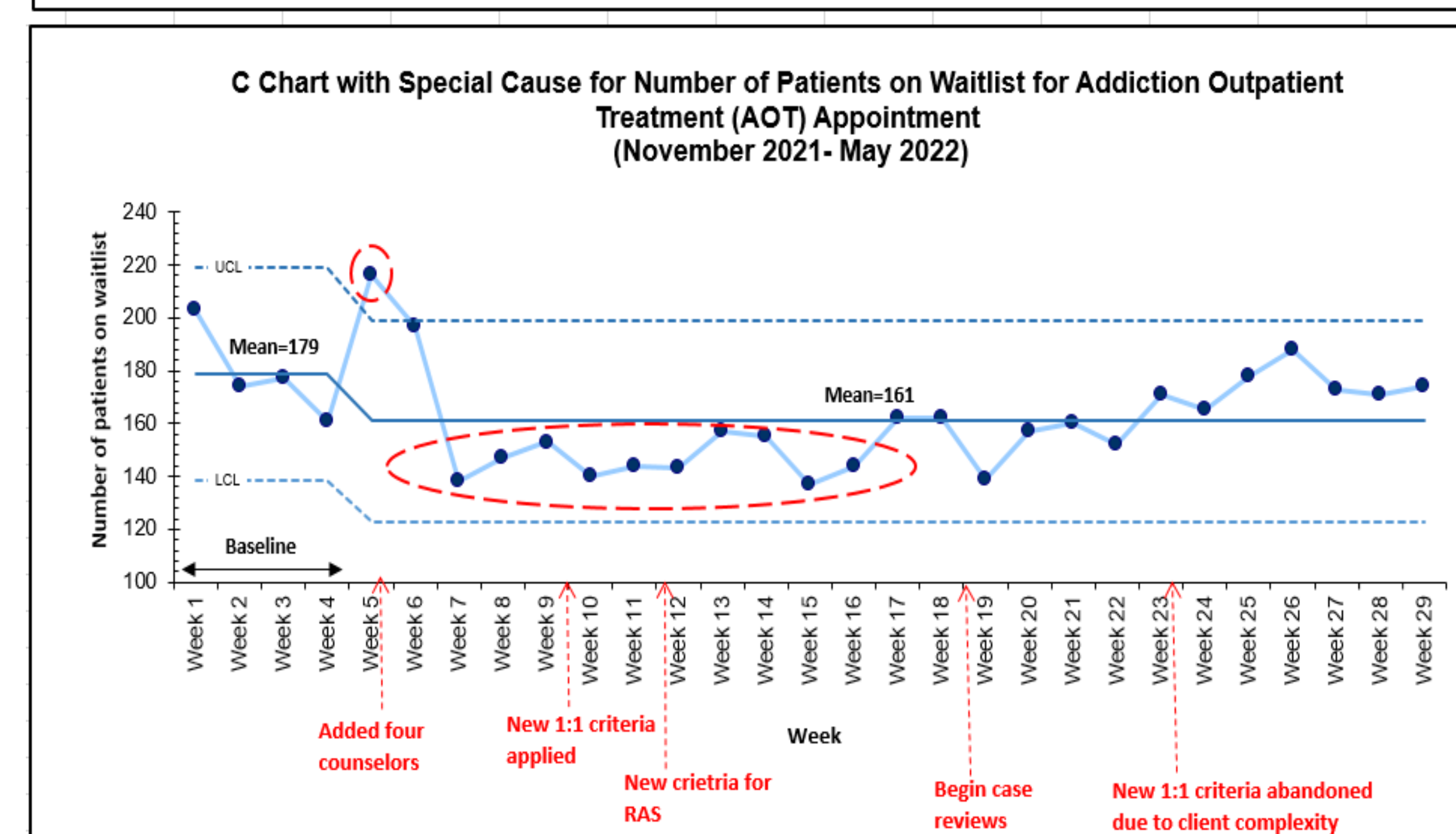
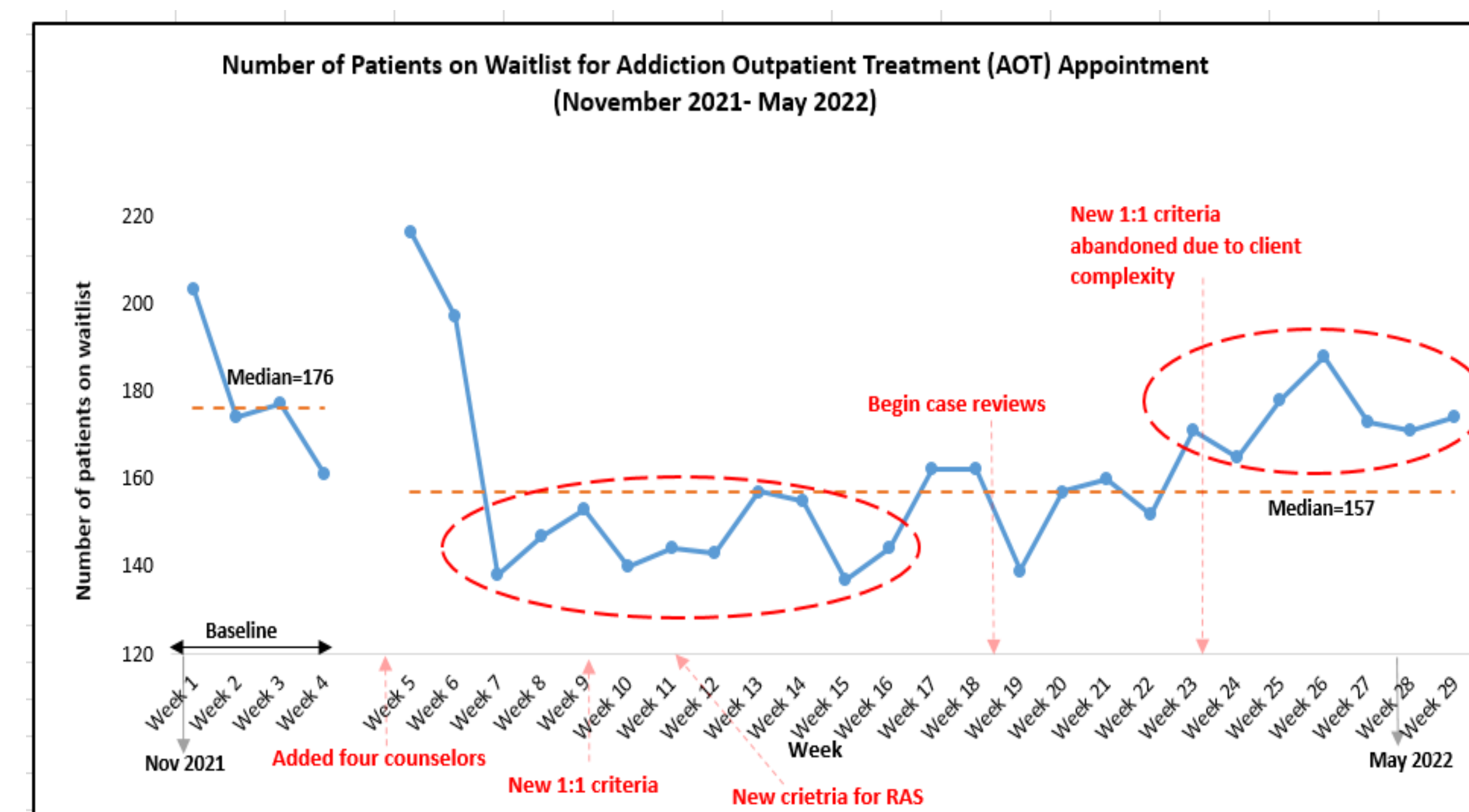
Changes identified that could achieve Aim

- Redefine eligibility for group vs 1:1 counseling
- Increase size and numbers of groups to reflect pre-pandemic levels
- Hire more counseling staff

DATA ANALYSIS

Description of data collection:

- Data for all referrals are collected weekly and include number of new referrals, number referred awaiting contact, number of days to first appointment
- Admin staff collect and chart the data



Balancing measure: ongoing high number of referrals to service

CONCLUSION

This project did not lend itself really well to weekly PDSA cycles given the large numbers of staff and the need to achieve consensus before implementation.

- Barriers to achieving goal are related to high demand for service, likely related to effects of 2 year pandemic on people's substance use habits and mental health
- High complexity of clients was also a factor
- It is possible that adding more staff will be the only way to reduce wait-lists and wait-times for this service

PROJECT TEAM

Project Lead: Dr. D. Horvat

Project Participants:

- Dr. S. Cleave
- Dr. R. Mason
- Dr. E. Wiley
- Val Nielsen
- Sarah Crawford-Bohl

AIM STATEMENT

By June 2022, use data regarding unattached patients who are frequent users of the Westshore Urgent Primary Care Clinic (WUPCC) to better understand their health issues and to inform options for improving their care.

CHANGE IDEAS

1. Use Cerner generated data to identify top users of WUPCC;
2. Work with other physicians, Island Health and PCN staff to identify patient characteristics to capture;
3. Review charts of identified patients and document characteristics in a purpose-built spreadsheet, and
4. Work with other physicians, allied health professionals, IHealth, South Island Division of Family Practice, & Primary Care Network (PCN) as well as Transitions in Care staff to use aggregated patient information to identify opportunities to improve patient care.

Number of patients in each tier of visit frequency:

10 or less – 3347
11-20 – 62
21-30 – 8
30 or more – 4

Number with more than 10 visits in 2021 - 74

CONCLUSIONS

Data can be used to better understand the health needs of patients who access episodic care. An improved understanding of the health needs of high frequency users of episodic care can lead to the identification of options which are likely to improve their care experience and improve efficiency of their care. Options to improve care of these patients include:

1. Attachment to longitudinal care services that are willing to accept patients with specific characteristics.
2. For patients with no service to attach to or who are attached but still using episodic care frequently, creating care plans for them that would, ideally:
 - a. Include a summary of the patient's health issues;

BACKGROUND

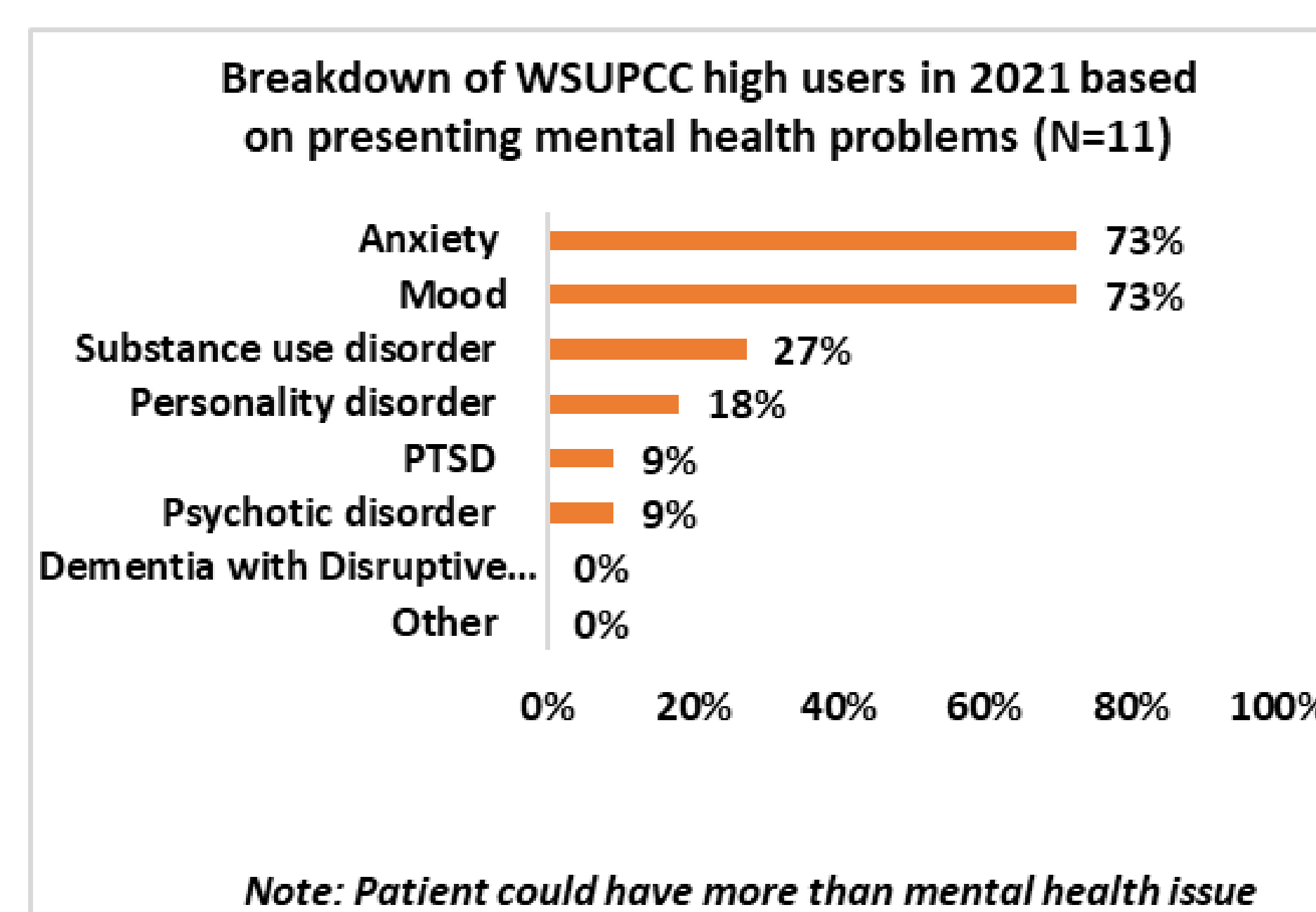
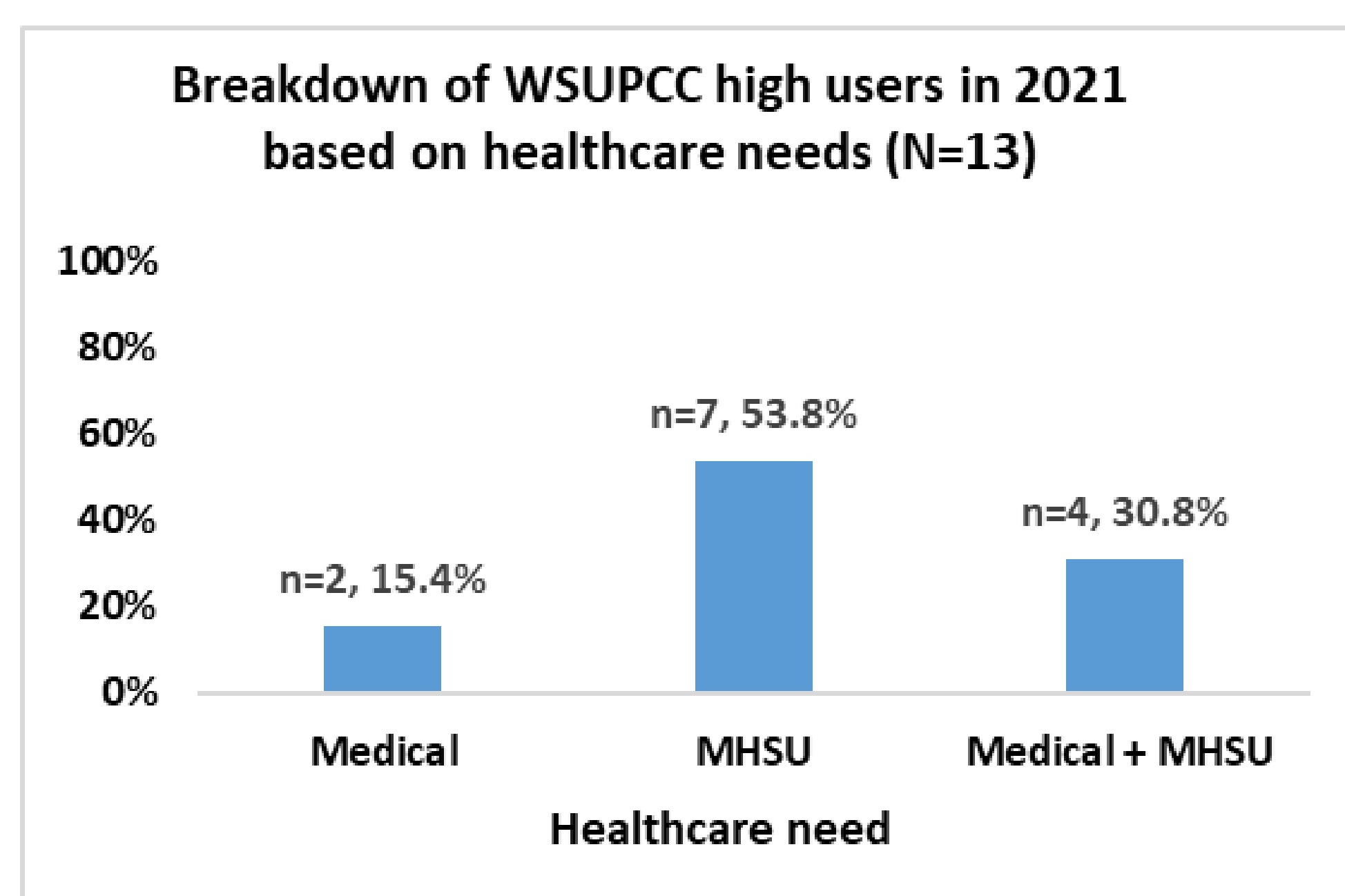
- Patients who are attached to a primary care provider and receive proactive, relationship based, longitudinal care have better health outcomes, better experience of health services and their care is less costly (Starfield, Hollander)
- The Westshore UPCC was established in 2018 to provide episodic care to patients who do not need the service of an emergency department
- Increasingly the service is seeing complex patients who are not attached and have only other episodic care services to seek care from.

1. Starfield B, Shi L, Macinko J. Contribution of Primary Care to Health Systems and Health. *Milbank Q.* 2005;83(3):457-502.
2. Hollander, M.J., [Increasing Value for Money in the Canadian Healthcare System: New Findings on the Contribution of Primary Care Services](#)



Patients waiting to receive care at the Westshore Urgent Primary Care Clinic – on a quiet day.

FINDINGS



PROBLEM

Reliance on episodic care, particularly for complex patients, leads to:

- Inferior patient experience – difficulty accessing service, long waits, frequently retelling their stories
- Inefficiency – providers must sift through significant amounts of material in order to address the patients presenting, and often, other health concerns that have not been identified by the patient



PDSA CYCLES

Discussions with Island Health operational and IHealth, Shared Care, South Island Division of Family Practice & Primary Care Network leadership as well as community & ER physicians and allied health professionals informed:

- Creation of a spreadsheet to capture characteristics of high frequency users, and
- Identification of opportunities for improving their care.

These informal PDSA cycles led to considerable refinement in the project

Cerner data was used to identify the top users of MD services at the WUPCC in 2021

- The top 15 patients were reviewed
- The thirteen patients who were not attached were reviewed and their characteristics captured in the spreadsheet..

DATA ANALYSIS

Two of the top 15 users were attached to a Primary Care Provider (PCP)

Select characteristics of Unattached High Frequency WUPCC Users:

- 84.6% had mental health and/or substance use disorders, 73% of whom had anxiety and/or mood related diagnoses
- 4 had chronic pain, 2 regularly used opioids
- 3 had hypertension
- Age range – 25-69
- 69% identified as female

NEXT STEPS

Circulate findings to:

1. The WUPCC physician group;
2. Island Health site and area leadership as well as South Island Division of Family Practice & PCN leadership.

Options for further next steps include:

1. Regular review and characterization of the health needs of high frequency users of the WUPCC – starting with those with over 10 visits in a year;
2. Actively place patients with services where there is a match/capacity;
3. Refer those who cannot be placed using the high priority referral form;
4. While waiting for attachment – continue work with site physicians, leadership & allied health professionals, ER physicians, the IHealth team and other services who have done similar work to create and use care plans.
5. If a high frequency user is attached already and if they consent, reach out to their PCP to see if an improved plan of care can be created.

Improving the Timeliness of CSF Results for Patients in the Emergency Department at Victoria General Hospital

Dr. Gina Gill (Project Lead), Dr. Michael Chen, Nicholas Wilson, Tim Hotchin, Sandra McLeod, Dr. Paul Colella, Kamla Gage, Dr. Shruti Kaushik

BACKGROUND & PROBLEM

- Baseline practice of ordering laboratory tests for CSF analysis in the ED is non-standardized (Image 1).
- Ordering physicians, ED nurses, clerical and lab staff have consistently identified this as a significant source of cognitive burden and inefficiency.
- Current state analysis highlighted huge variation in turnaround time (TAT) for CSF cell count results (baseline 41-294 minutes)
- This variation ultimately impacts physician decision making, thereby deleteriously impacting patient care.

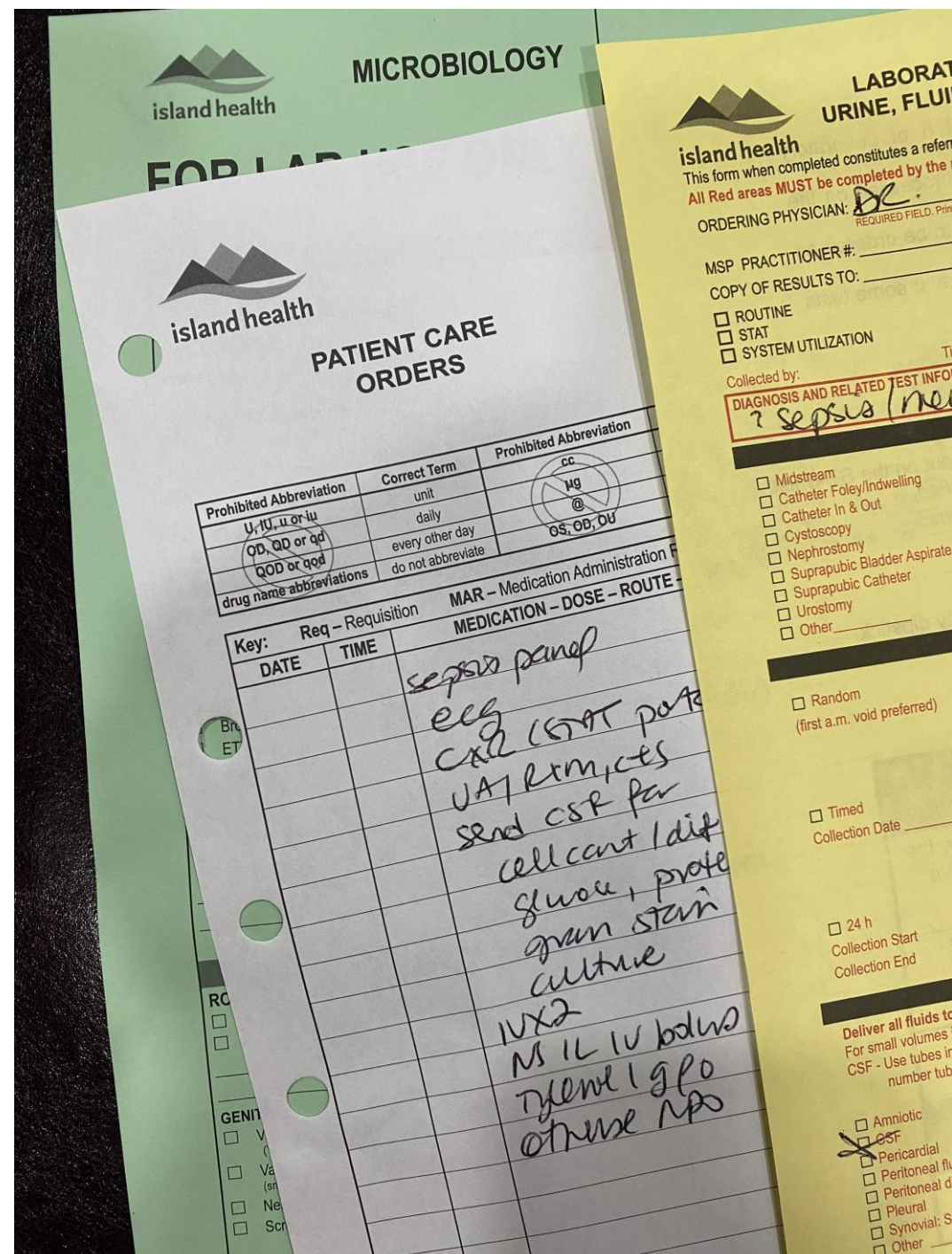
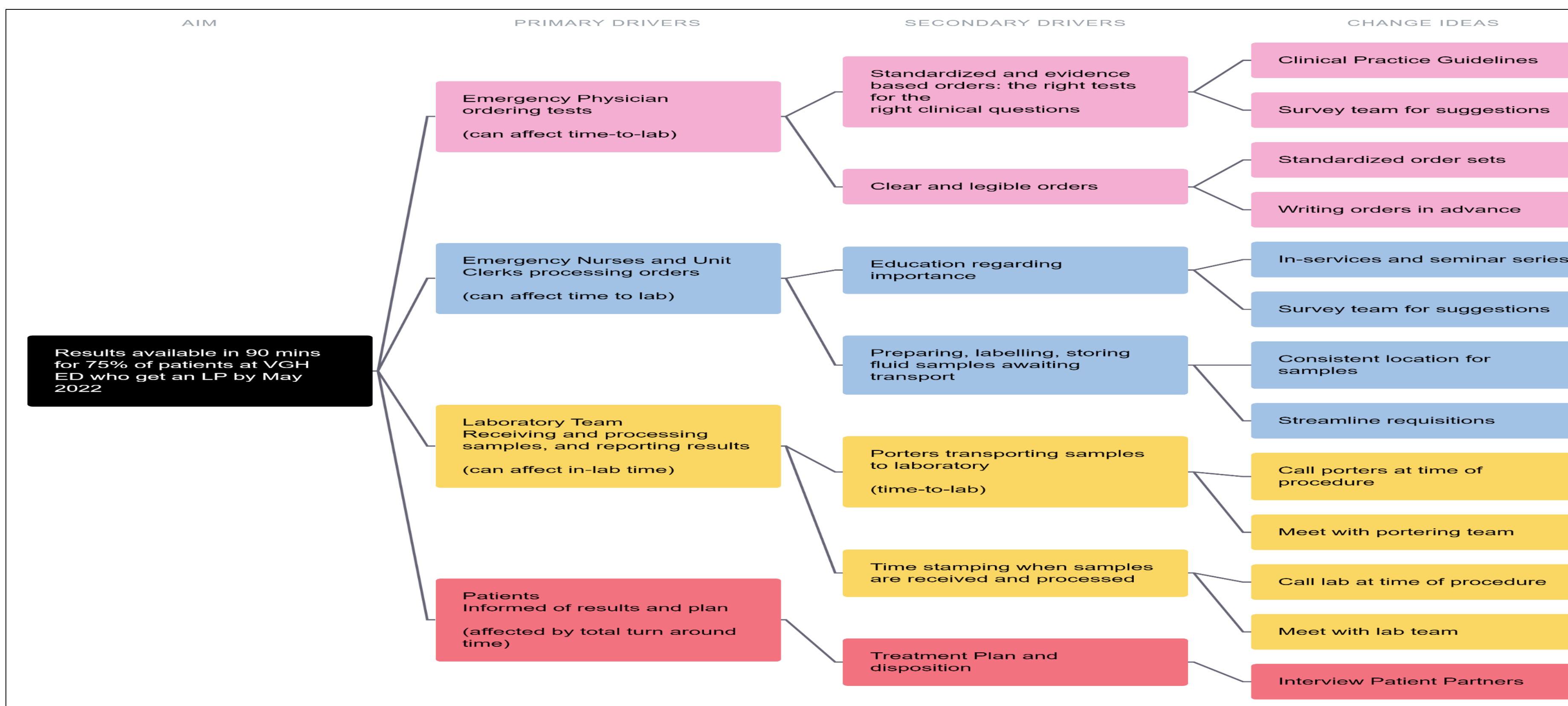


Image 1: Example of baseline process of handwritten physician orders and accompanying requisitions

DRIVER DIAGRAM



DATA ANALYSIS

- Between October 2021 - May 2022, all 49 CSF samples sent from VGH ED were reviewed and 47 included in data analysis. One was excluded as it was a neurosurgical shunt tap sent for CSF analysis, rather than a lumbar puncture, and another for being an extreme outlier.
- Of the LPs performed, 34/47 (72%) were to rule out infection, 10/47 (21%) to rule out subarachnoid hemorrhage, and 3/47 (6%) were for other indications (Graph 1).
- Assessment for xanthochromia was intended in the lab for 40/47 (85%) cases, and reported in 35 (5 had insufficient CSF quantity). In 30/40 of these cases, no clear clinical indication was found.
- Quantitative xanthochromia was never resulted in clinically meaningful timeframe (Graph 2, 6)
- Time to lab is a smaller portion of turnaround time than had been anticipated, contrary to what was earlier hypothesized. In-lab time was found to be considerably variable (Graph 2).

METHOD

- Quality Improvement science model was used to identify project aim and corresponding family of measures
- Key ideas of change were identified in collaboration with project team and stakeholders
- Multiple Plan-Do-Study-Act (PDSA) cycles were run to test ideas of change
- Data was collected and analyzed monthly to track changes and plan successive PDSAs
- Data for lab turnaround time was obtained from Island Health Enterprise Data Warehouse, and chart reviews were conducted to identify reason for lumbar puncture (LP)
- Physician/Staff feedback was collected using checkbox survey
- No direct patient intervention was conducted, and project was approved by Island Health ethics committee
- Data was analyzed using MS Excel statistical tool

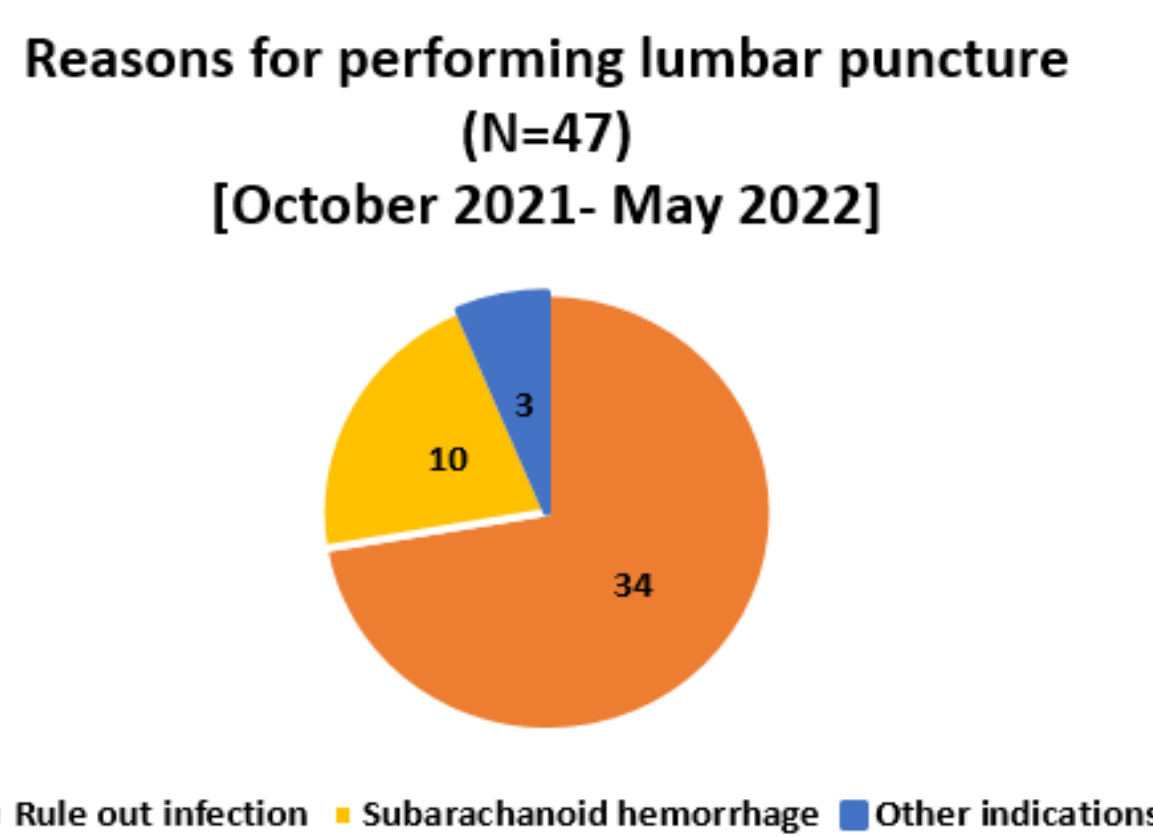
PDSA CYCLES

PDSA1: Engaging unit clerks
- time tracking

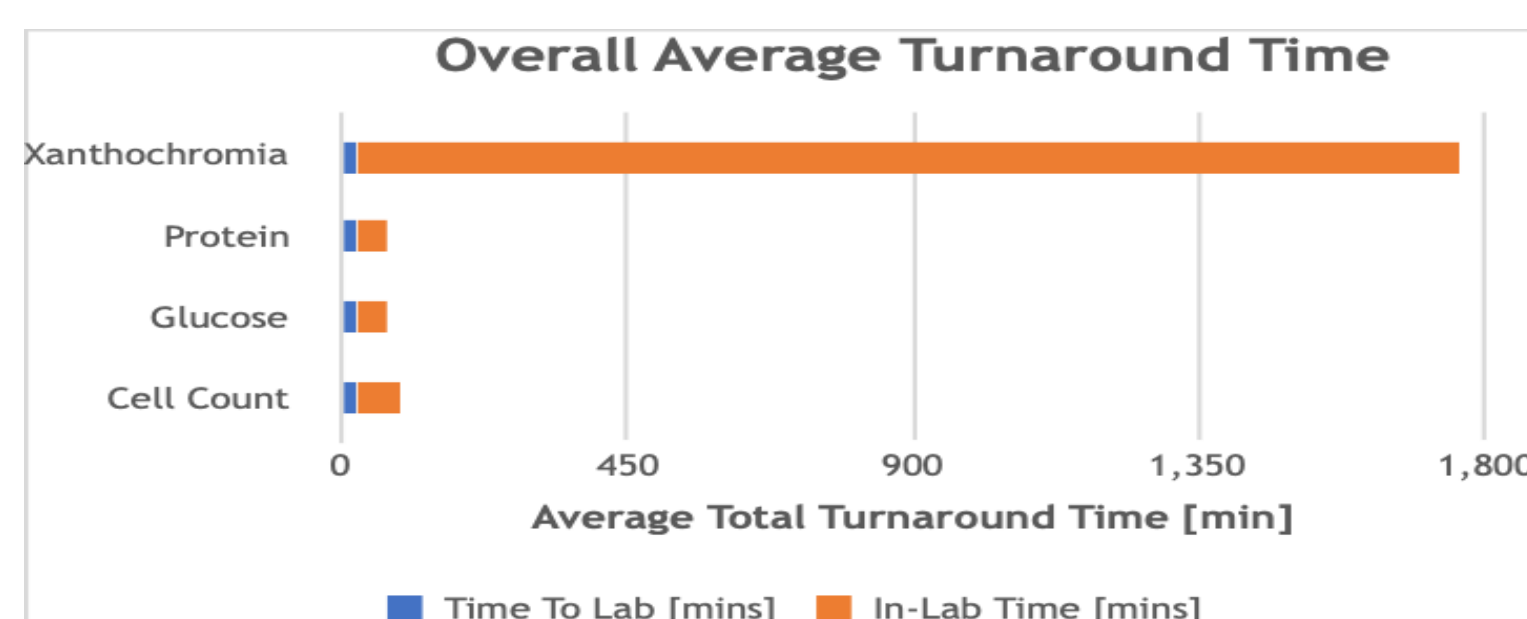
PDSA 2: Engaging nurses
- education series

PDSA 3: Engaging physicians
- standardized protocol and order sets

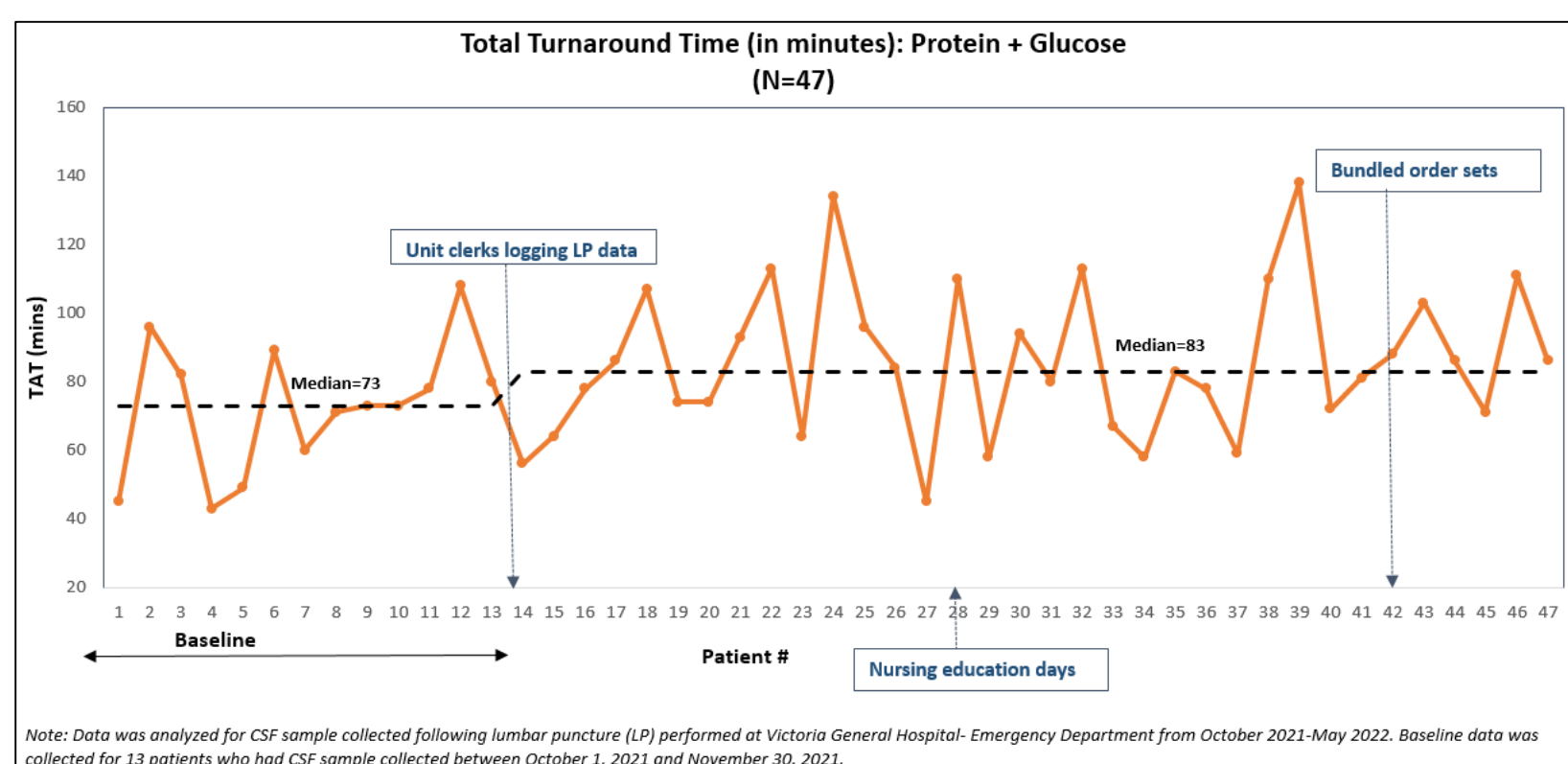
Graph 1: Reasons for lumbar puncture (LP) in ED



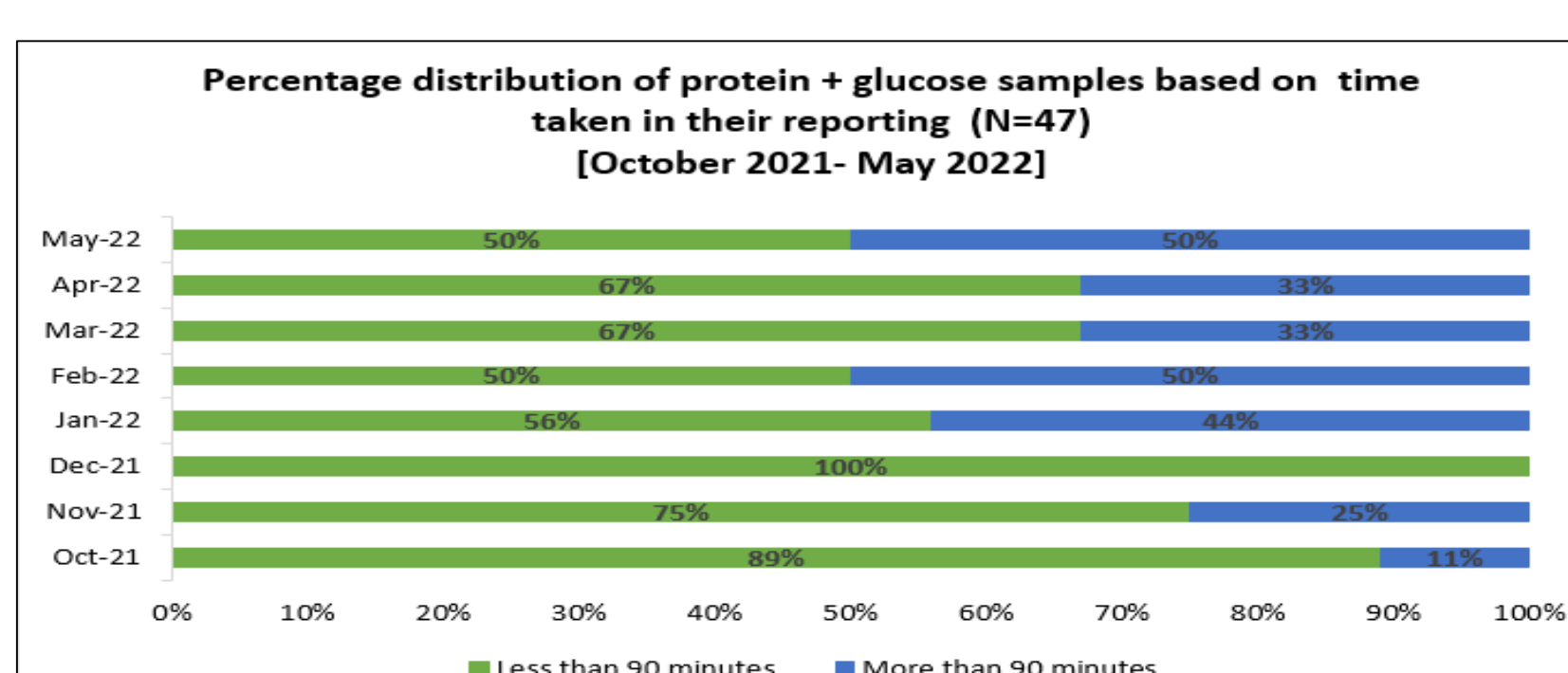
Graph 2: Total turnaround Time (TAT) reflects time to lab and in-lab time; TAT for quantitative xanthochromia is never available in real time to make decisions for ED patients.



Graph 5: Total turnaround time (TAT) for CSF protein+ glucose



Graph 8: Percentage distribution of glucose + protein reporting time



AIM STATEMENT

To have cerebrospinal fluid (CSF) results available to clinician within 90 minutes of lumbar puncture for 75% of samples obtained in the Victoria General Hospital (VGH) Emergency Department (ED) by May 2022.

MEASURES OF CHANGE

Outcome Measure:

Percent of CSF results that are available to the clinician within 90 minutes of LP being performed.

Process Measures:

- Turn-around time (TAT) for CSF cell count
- TAT for CSF protein and glucose
- TAT for CSF quantitative xanthochromia
- Time to lab (baseline range 9-54 minutes)

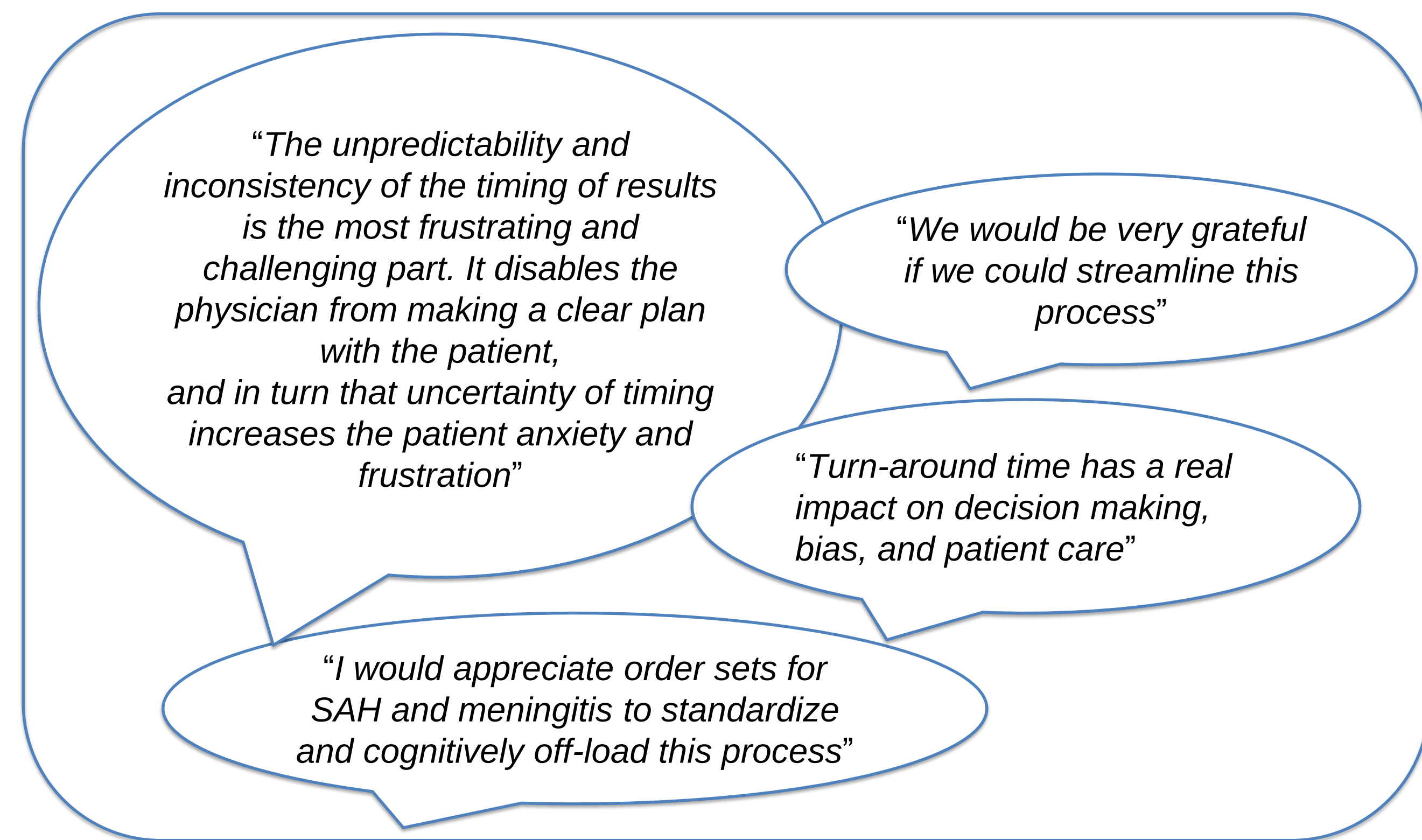
Balancing Measures: (Intended at project inception)

Provider satisfaction pre/post implementation of order set

DATA ANALYSIS

Qualitative analysis of physician feedback highlighted themes of dissatisfaction with current ordering processes (Box 1).

Box 1: Physician feedback on lab ordering processes



CONCLUSIONS/NEXT STEPS

- This project was limited by time, and newly developed order sets that were created could not be approved during project timeline, requiring the ongoing use of paper requisitions throughout the project duration. Timely review and implementation of evidence-based order sets could reduce barriers to meaningful change.
- We will continue collaborating with interdisciplinary teams on updating and improving the draft order sets (Image 2).
- During the course of this project, we also discovered unnecessary lab testing (30/40 tests) for qualitative Xanthochromia. We believe consistency in ordering (ordered bundled sets) will potentially reduce this, which also opens scope for future PQI work.
- Although beyond the scope of this project, optimizing TAT might reduce time to disposition and potentially length of stay (LOS) for patients who have negative tests.
- Finally, we believe our work has laid foundation for positive spread of streamlining ED ordering, which can potentially be tested for samples of other body fluids beyond CSF.

Image 2: Draft form of proposed clinical order set for ED LPs, created with interdisciplinary input from neurology, neurosurgery, internal medicine, laboratory medicine, medical microbiology, and emergency medicine; credit: Ms. Sandra McLeod

Weekly Rapid Access Clinics Improve Access to Care for Women with Urgent Gynecologic Problems

- It is acceptable to patients
- Improves office management of capacity

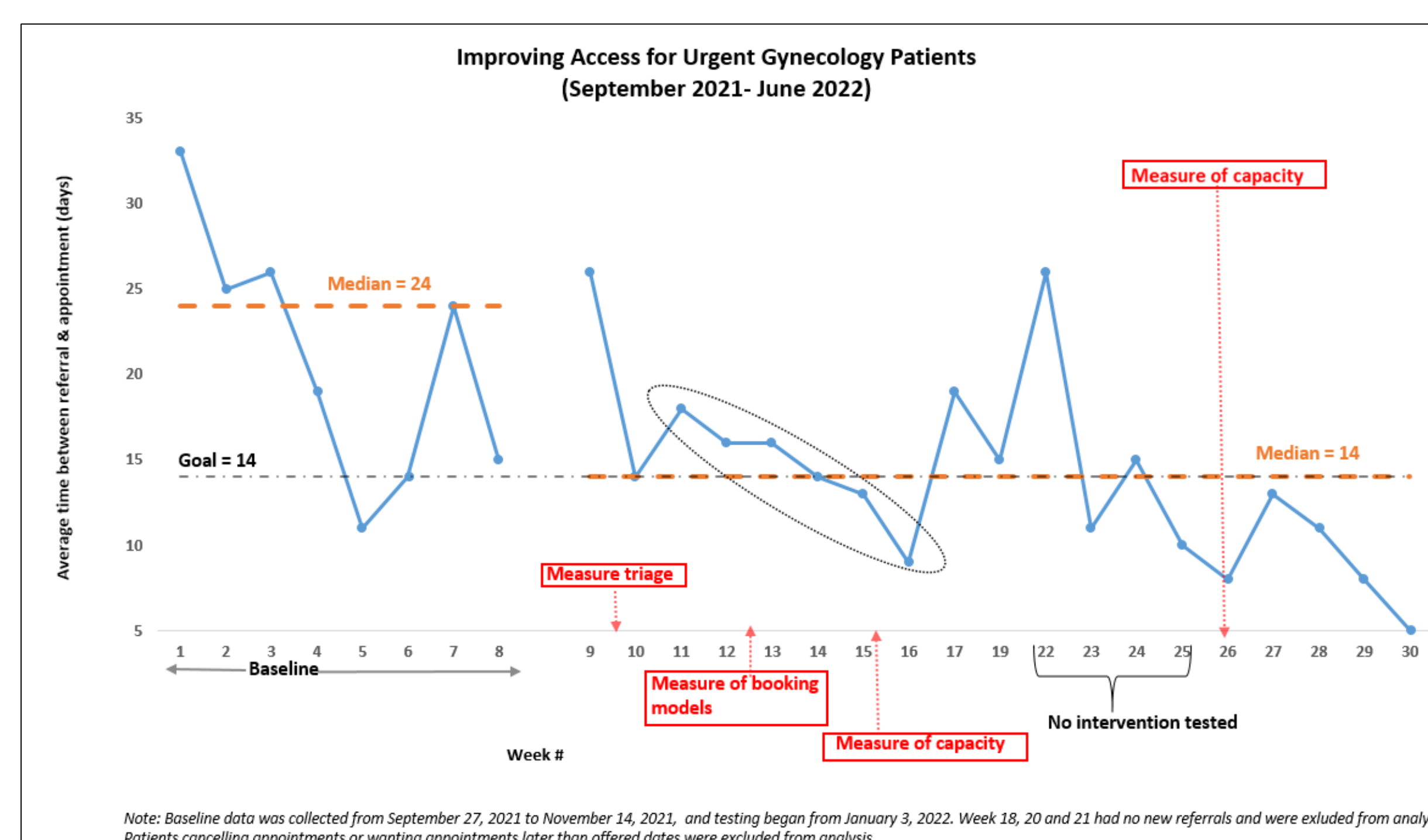
Improving Access to Care for Women with Urgent Gynecology Problems

Background: Access to care in outpatient offices is becoming increasingly challenging due to long wait times.

Problem: Patients with urgent gynecology problems are waiting too long for assessment

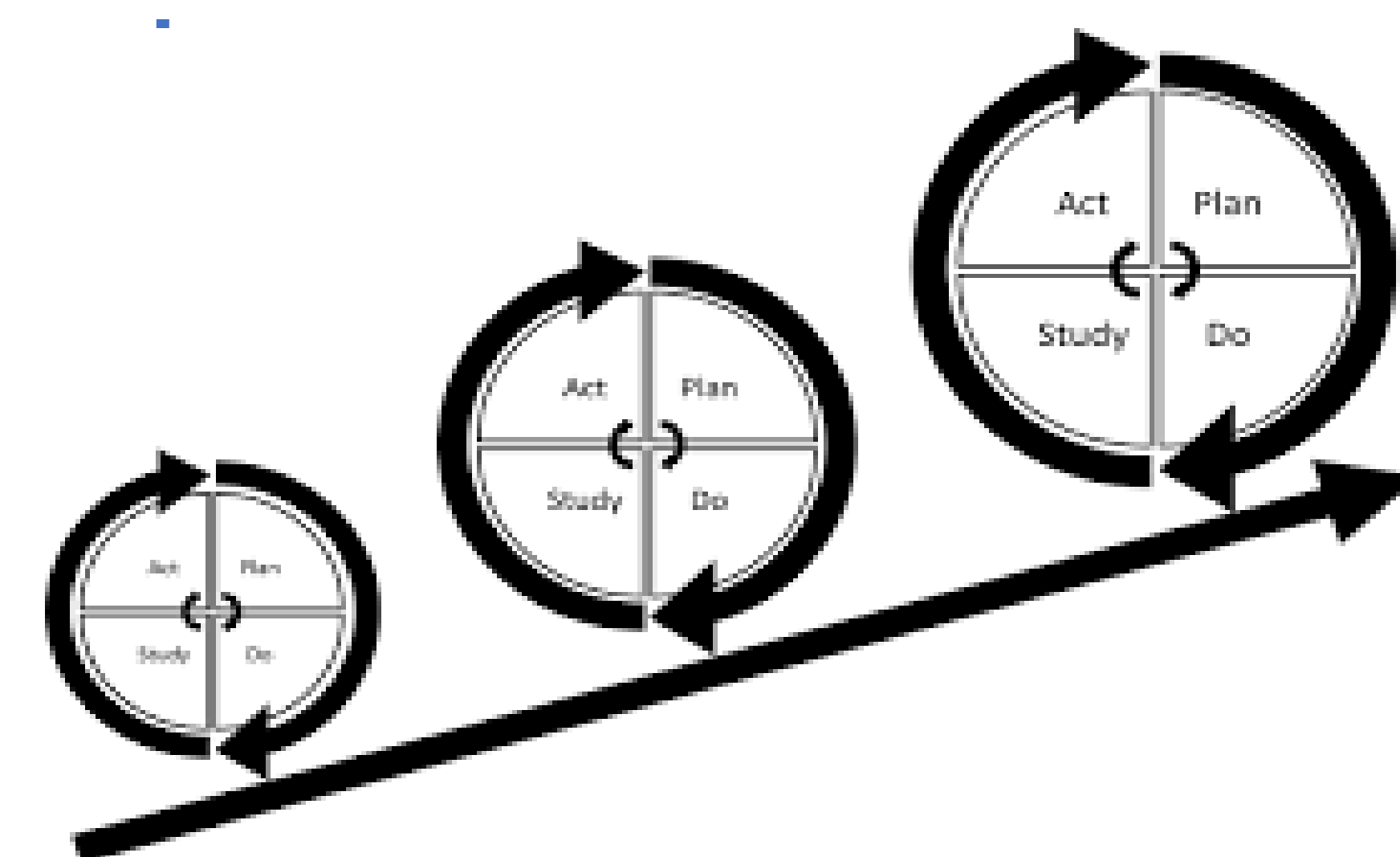
Aim Statement: To decrease time from triage to consultation from 30 days to 14 days in 90% of women with urgent gynecology issues over 6 months

Findings:



Conclusion/next steps:

A rapid access clinic allows for timely assessment of patients. We look to introduce a weekly Rapid Access Clinic to include patients seen through the South Island Emergency Departments

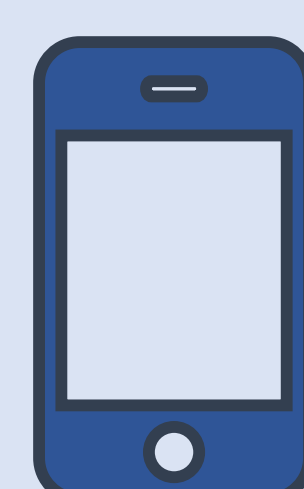


Change Ideas:

1. Triage frequency
2. Booking Model
3. Office Capacity

Project Team:

- Dr. Harold Hunt
- Dr. Kim MacDonald
- Dr. Kellie Whitehill
- Ms. Gwen Fletcher
- Ms. Linda Fung



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PROJECT TEAM

Project Lead: Dr Jeff Kerrie

Project Participants:

- Leta Martin (PSLS Coordinator)
- Jordan Heal (FLEX student)
- Dr Alan Buckley (QI advisor)
- Dr Ali Walzak (GIM rep)
- Dr Colin Riddler (Hospitalist rep)

AIM STATEMENT

Increase the number of physician reported safety events by hospitalists/internists (as percentage of total physician reported events per month at RJH) in the PSLS system at Royal Jubilee Hospital by 25% by August 2022.

PDSA CYCLES



Increasing awareness for MDs

- Email with project context
- Addition of an easy to access direct link in their EMR
- Email reminders prior to education sessions
- Education sessions x2

BACKGROUND

- Patient Safety & Learning System(PSLS) is a mechanism for all health care workers to report safety events that could lead to harm, or have harmed, those in care
- Physicians (MDs) have a unique viewpoint on patient care, and their contribution to the safety system is imperative
- Despite this, MDs are difficult to engage; our early survey found clear reasons for not using PSLS
- The provincial PSLS system is onerous to use and is to be revamped in coming months – our hope was to compliment that change through engagement in the “why” and “how”

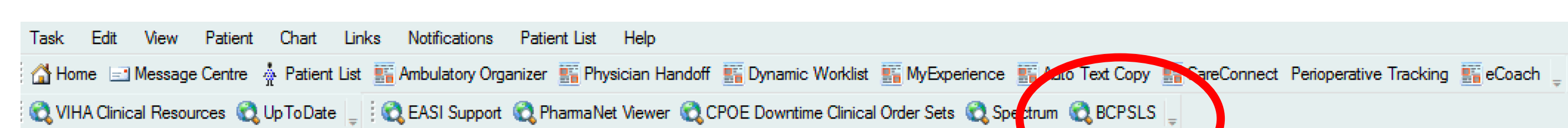


Fig. 1 – screenshot of EMR button going directly to the PSLS reporting page

When have you last submitted a PSLS event?

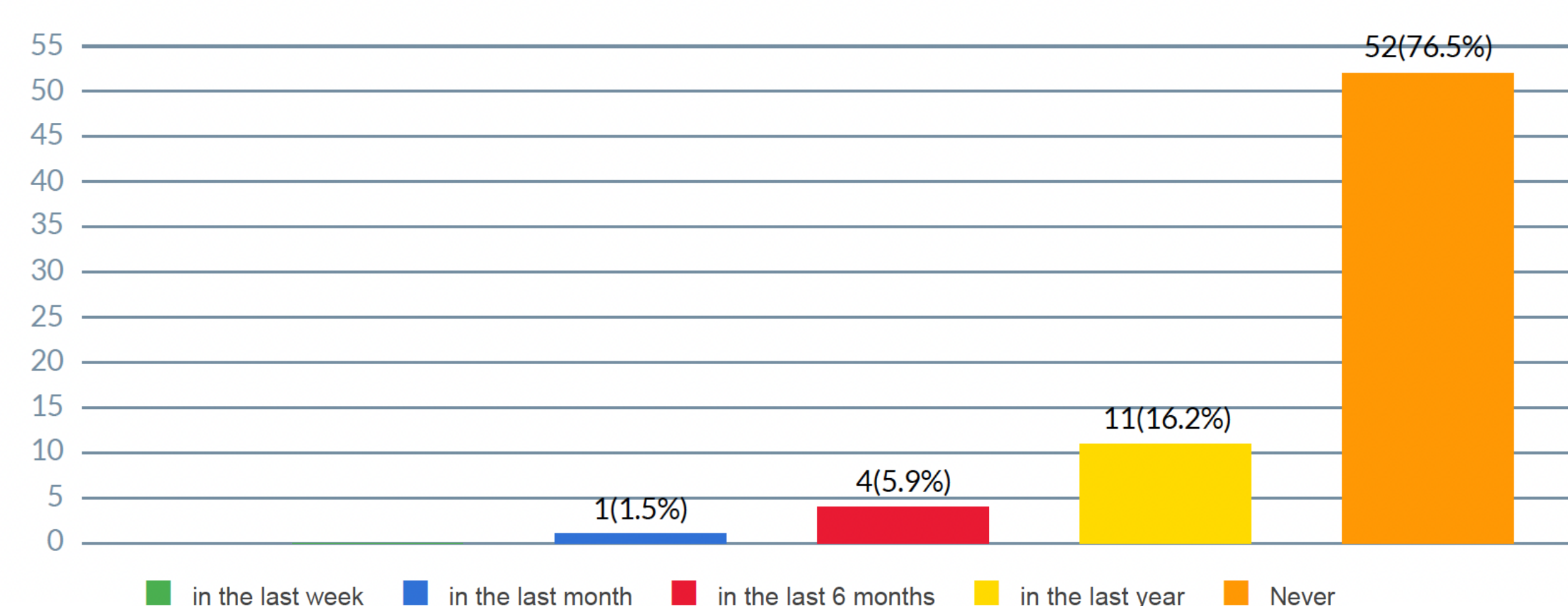


Fig. 2 – History of PSLS reporting by target group demonstrating low PSLS reporting rate with most MDs having **never** reported

What are the biggest barriers to you reporting via the PSLS system? CHOOSE UP TO 3.

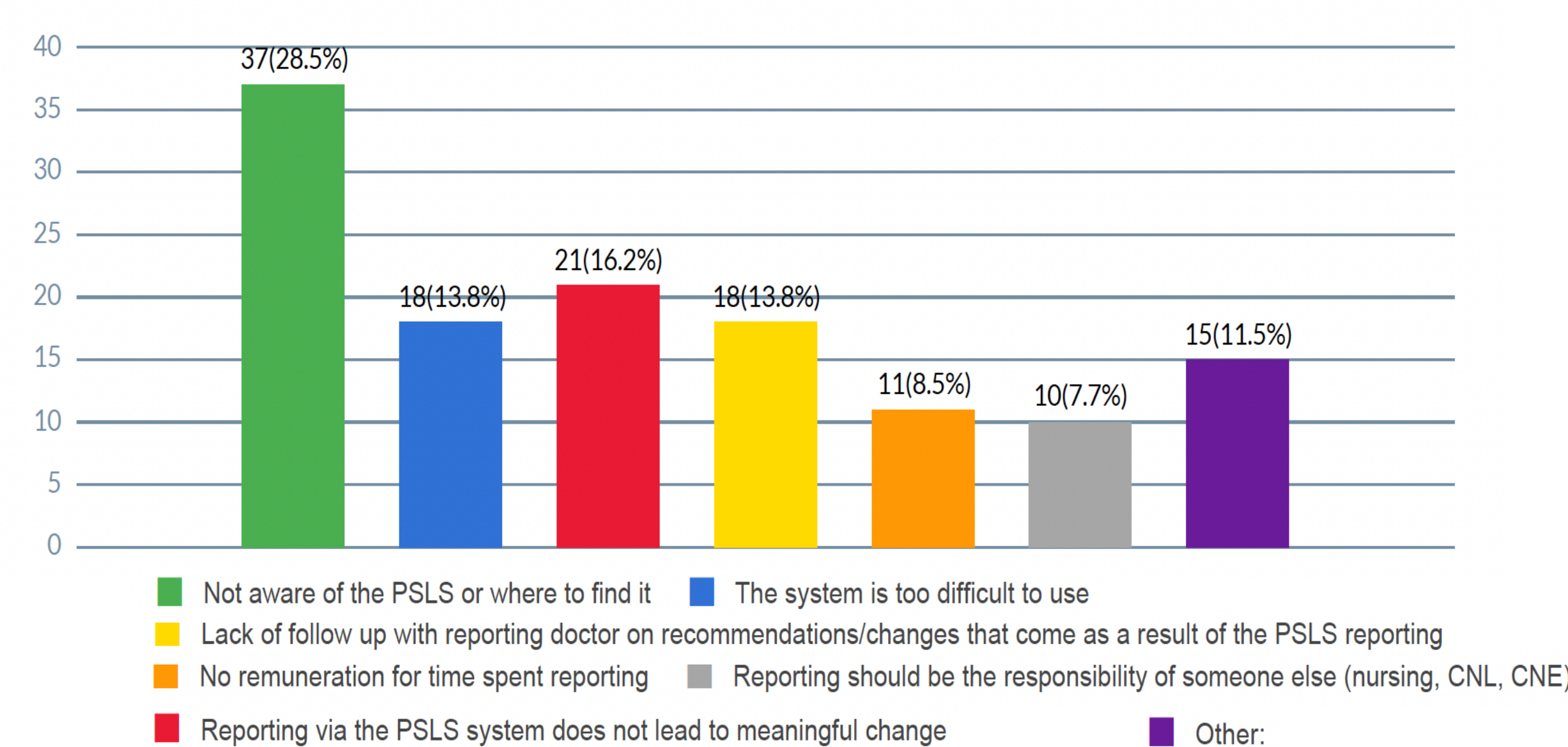


Fig. 3– Survey (66% response rate) to determine why target MD group was not reporting PSLS events

FINDINGS

- We were able to increase the percentage of reporting physicians from our subgroup with our brief interventions over the course of 3 months (Fig. 4)
- Attempts to further Physician engagement is necessary but even more difficult in the post COVID era
- Using the “Why” and “How” methods are more likely to lead to lasting change based on internal drivers
- Engage and educate change ideas hampered by technology and physician burnout

- Most MDs (76%) in our target group had never reported a safety event despite approx. 30,000 reported annually in IH
- We did increase percentage of MD reports by our target group by over 25% in the few months since starting our PDSA cycles though it has plateaued quickly
- Since interventions there has only been one month where our target group has not had a PSLS report submitted

PROBLEM

- Doctors viewpoint/voice is missing currently (.485% PSLS reports from doctors in Island Health, .47 RJH)
- Leads to missing important events that could be used to learn and change the system
- Leads to increased physician disengagement in the safety culture

CHANGE IDEAS

Early survey on barriers to use of PSLS by doctors found 4 categories. We chose to focus on those related to:

- Awareness/Motivation to Report – educate on Why reporting is important, increase awareness of the system
- Ease of access to PSLS system – provide a direct button in the EMR (Fig 1)
- Ease of use of the system – educate on minimal fields needing to be filled out in the form

DATA ANALYSIS

- Initial survey to determine rarity and reasons for lack of PSLS reporting by MDs (Fig. 2, Fig. 3)
- Project scoped to include general internists and hospitalists as target group
- Collected # of PSLS reports by all RJH doctors and our subgroups (many thanks to Leta Martin for collecting/analyzing data!)
- Examined total # of reported events by MDs, as well as ratio between subgroup and total MD reports

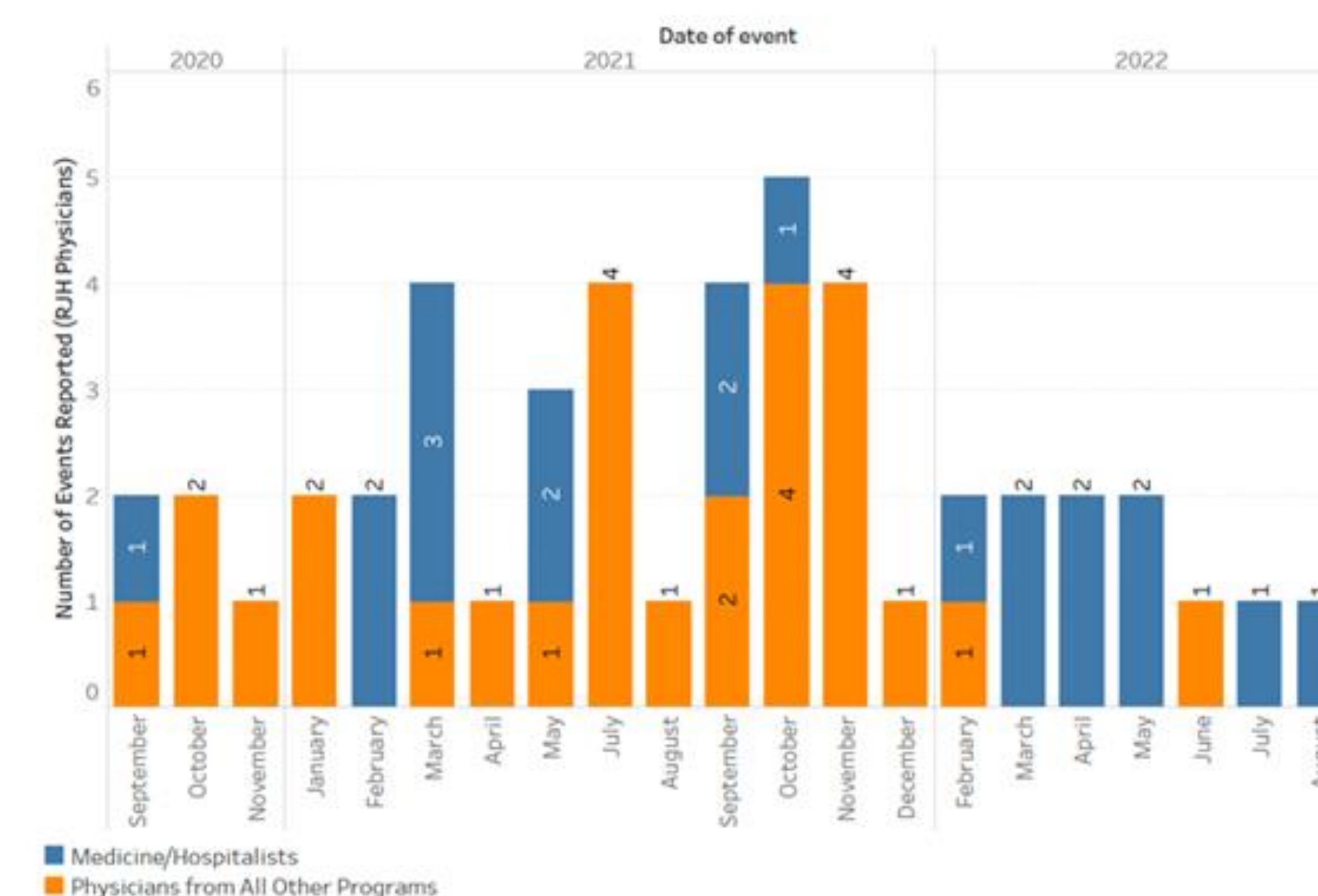


Fig. 4. Total MD PSLS reports over two years separated by our target group and all other MD groups

NEXT STEPS

- Continue to educate/increase awareness to physicians on need for reporting
- Once new system released by the province we will publicize heavily
- work with other HA's on how to increase spread

Completing the Puzzle

Improve Addiction Medicine Consult Service Referral at Campbell River Hospital

PROJECT TEAM

Project Lead: **Dr Jessica Flear**

Project Participants:

- **Dr Erika Kellerhals**, AMCS physician lead
- **Dr George Halse**, AMCS physician
- **Lindsay Pratt**, AMCS nurse clinician
- **Sabina Acheson**, Manager Acute MHSU Services North Island
- **Dr Dieter De Bruin**, Family Physician, CRH Chief of Medical Staff
- **Owen Trepanier**, Flex Student with UBC Medical Program

BACKGROUND

The Campbell River Hospital Addiction Medicine Consult Service (AMCS) provides inpatient care to patients who are experiencing substance use. In Campbell River, a team-based approach is employed with services provided by peer support workers, a nurse clinician and an addiction medicine physician. Inpatient consults provide a vital opportunity to allow patients to get started on pharmacotherapy for substance use disorders and become connected to important community resources. Patient engagement with AMCS services while hospitalized has been shown to provide several benefits including higher substance abstinence rates, less readmissions and greater engagement in outpatient treatment after discharge.

PROBLEM

- 50% of referrals to Addiction Medicine Consult Service (AMCS) are incomplete, lacking in essential information required to properly triage patients, which can lead to delays in patient consultation by up to 24 hours
- Potential harm to patients due to decreased time for stabilization onto pharmacotherapy in hospital
- Decreased time for patient engagement & rapport building with AMCS team.

AIM STATEMENT

To increase by 40%, the percentage of referrals to the Campbell River Hospital (CRH) Addiction Medicine Consult Service (AMCS) containing the minimum required information by May 2022.

CHANGE IDEAS

Primary Drivers were to look at improving referral pathways, accessibility to AMCS physicians and awareness of the program:

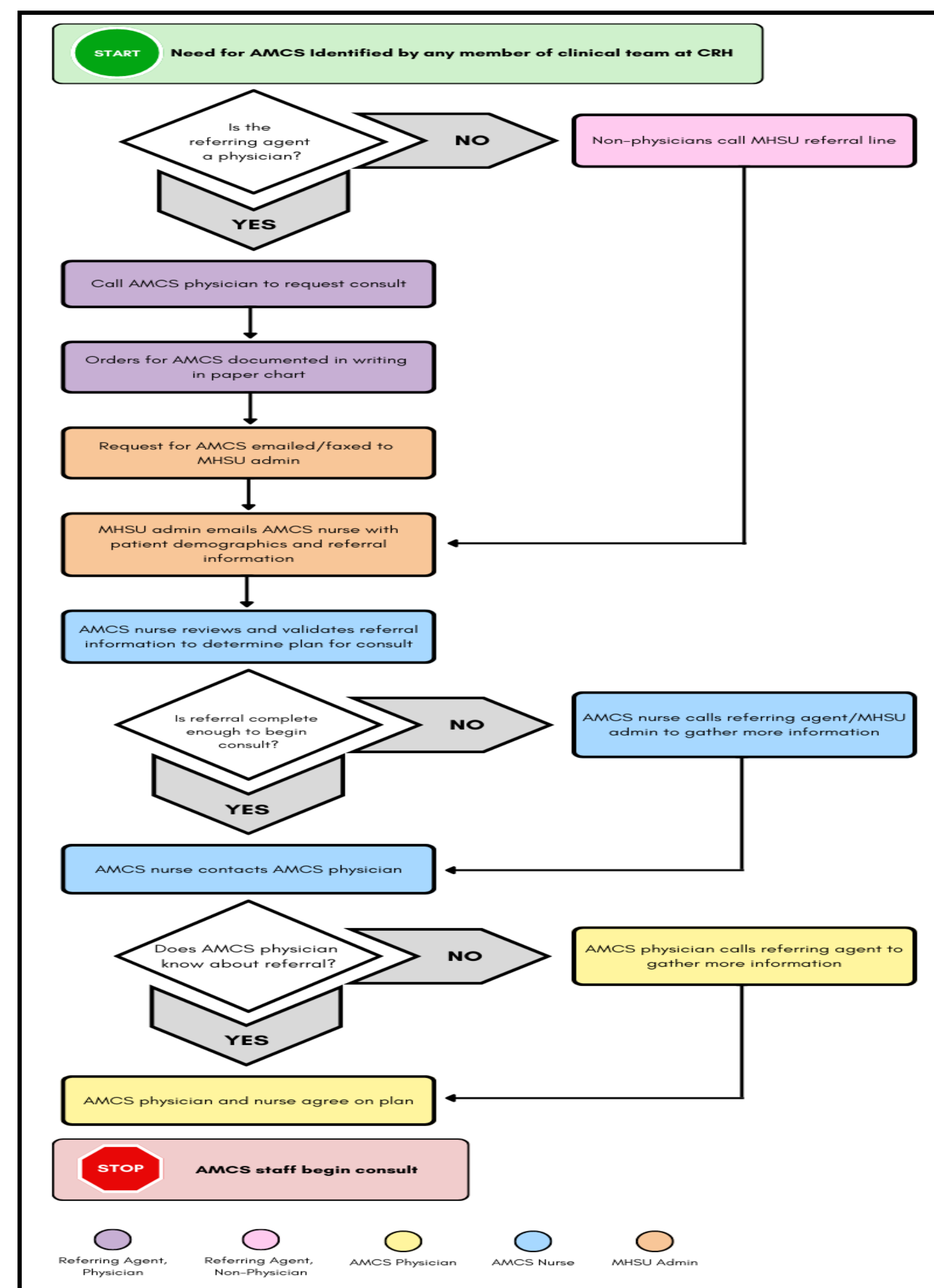
- Education: Present at rounds and department meetings
- Physician access: Update on-call directory message with contact information
- Visibility: Informational posters and cheat sheets
- Referral form with required information clearly outlined

"I am now much more confident that if another physician needs me to see a patient, they know to call me directly."

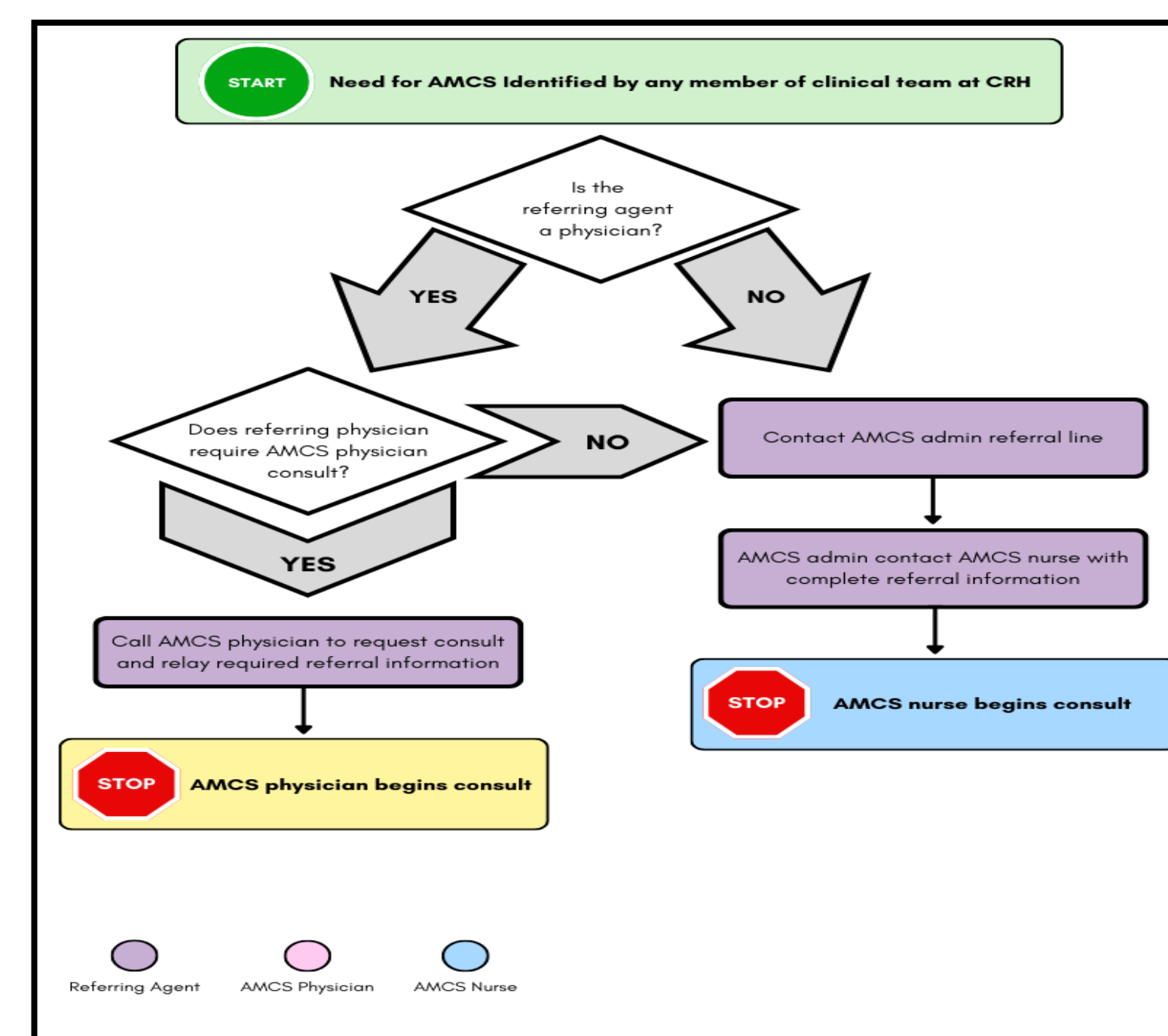
- Dr. Erika Kellerhals, AMCS consultant

PROCESS MAPPING

CURRENT STATE Referral Process for AMCS at North Island Hospital: CRH



DESIRED OUTCOME Referral Process for AMCS at North Island Hospital: CRH



PDSA CYCLES

Small Tests of Change

- Informal presentation at family medicine dept. meeting.
- Email to referring physicians with minimum requirements for AMCS referral
- Poster stating referral requirements, call structure and contact information for nurse and physician

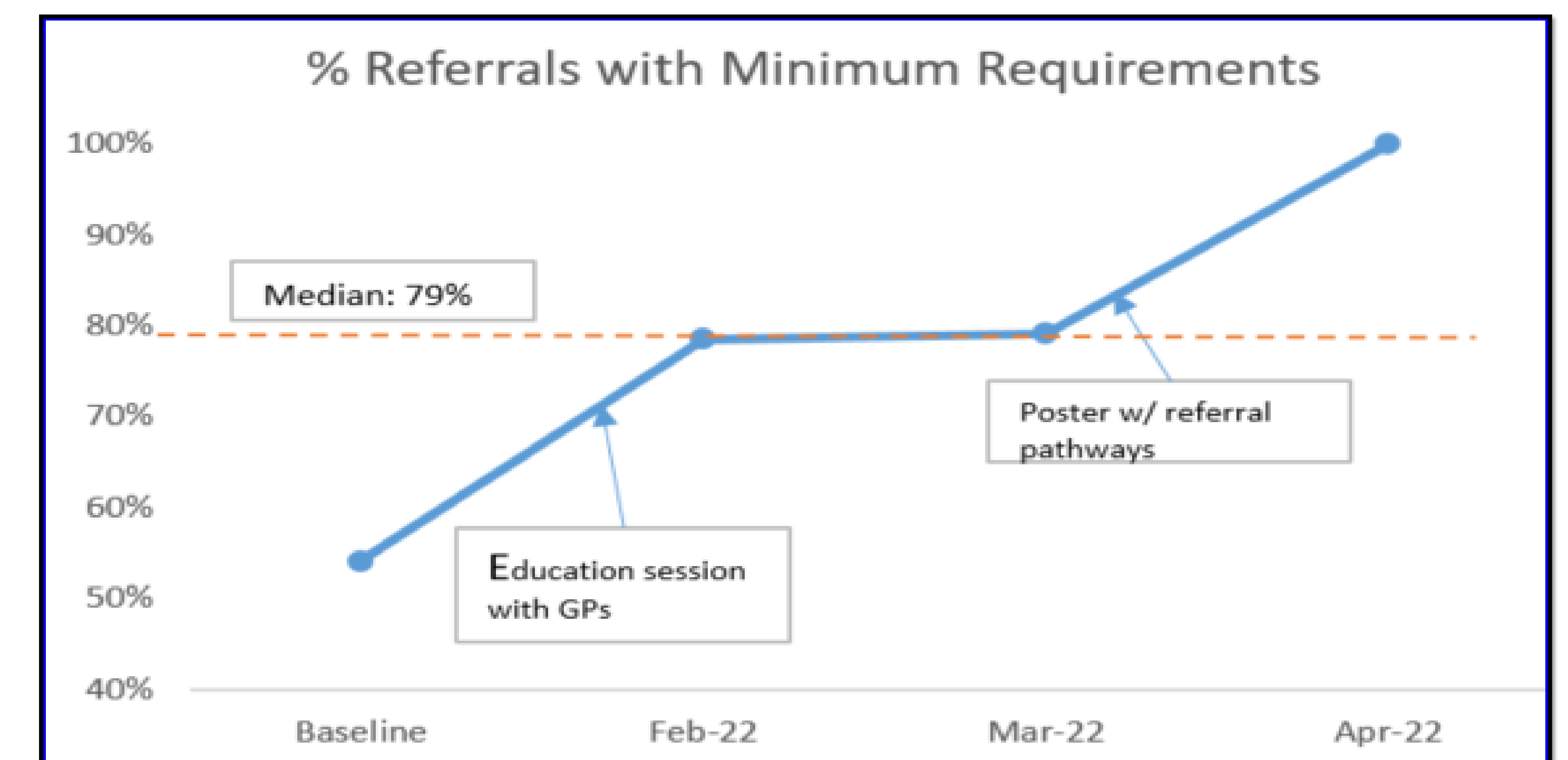


DATA ANALYSIS

- Data was collected on secure spreadsheet by AMCS nurse
- Identified presence or absence of minimum requirements for referral to be considered "complete": clinical question, substance of choice, urgency of referral and whether the referral was to be seen by AMCS physician or nurse clinician

FINDINGS

- Referring physicians initially expressed confusion about correct referral processes
- We saw an increase in complete referrals when an informational poster with referral pathways was tested
- Physicians and nurses view AMCS as valuable service at CRH
- Direct MD to MD referral appreciated by AMCS consultants



CONCLUSIONS

- AMCS is a highly valued service at CRH
- Initial data suggests improvement in complete referrals after educating referring physicians about AMCS referral process
- AMCS providers notice that while MRP physician referrals have improved, referrals coming from ED are often lacking in important details
- Our team was unable to test all change ideas, as I was required to wrap-up the project early for personal reasons. This team is highly motivated to continue to learn about the impact of this service and work toward improvement in patient care.

NEXT STEPS

1. Expand education efforts to Emergency Medicine providers to further clarify referral process.
2. Gather physician satisfaction information. Improving consulting physician experience may provide information useful in recruiting to this service.
3. Obtain patient voice regarding experience with AMCS team and preferences around information shared in initial referral.
4. Test change idea of standardized referral form.
5. Continue periodic education of all providers through department meeting attendance to update about AMCS service.

Reducing Length of Admission for Internal Medicine Patients on 5N at Royal Jubilee Hospital

PROJECT TEAM

Project Lead: Dr. Laura Fraser, Internal Medicine

Project Participants:

- Taylor Sidhu, FLEX Medical Student
- Cara Webb, Clinical Nurse Leader 5N
- Sarah Fraser, Chief Internal Medicine Resident
- Dr. Kari-Jean McKenzie, Victoria CTU Lead
- David Tom, Pharmacist

AIM STATEMENT

To decrease the patient average length of admission by one hour from 170.2 hours for Internal Medicine patients on 5 North at Royal Jubilee Hospital by June 2022.

PDSA CYCLES



PDSA 1: Team Huddle

- 1a-1d: Cycles to achieve increased attendance at huddle: staff and resident reminder strategies

PDSA 2: Patient Checklist added to huddle

FINDINGS

- Average length of stay values were highly variable week-to-week and showed no clear changes after cycle interventions
- Reminders targeted to senior residents resulted in sustained high occurrence (70%+ attendance) of Team Huddles
- CNLs reported improvements in their daily workflow by having consolidated discharge-specific discussions

CONCLUSIONS

This project aimed to reduce patient admission times by introducing discharge planning meetings guided by checklists for each CTU team at RJH.

- These interventions did not result in any trends in average length of stay during the data collection timeframe.
- It remains unclear at the moment if the huddle or checklist truly impacted discharge efficiency, or simply if using weekly average length of stay as an outcome may require longer intervals of data to see trends due to the wide range in values.

However, this project had the important outcome of **sustained implementation of a new daily meeting in CTU staff workflow.**

- Staff reported the huddle allowed healthcare disciplines to work collaboratively regarding discharge planning, and the huddle resulted in less reliance for CNLs to serve as intermediary communicators.
- The barrier of staff buy-in was addressed by multiple sub-cycle reminder interventions.
- We learned that senior residents had the best compliance for performing huddles, and reminders targeted at seniors were effective in sustaining the huddle practice.
- We also surveyed the literature to create a discharge checklist for RJH CTU that can be used in further interventions and medical education.

BACKGROUND

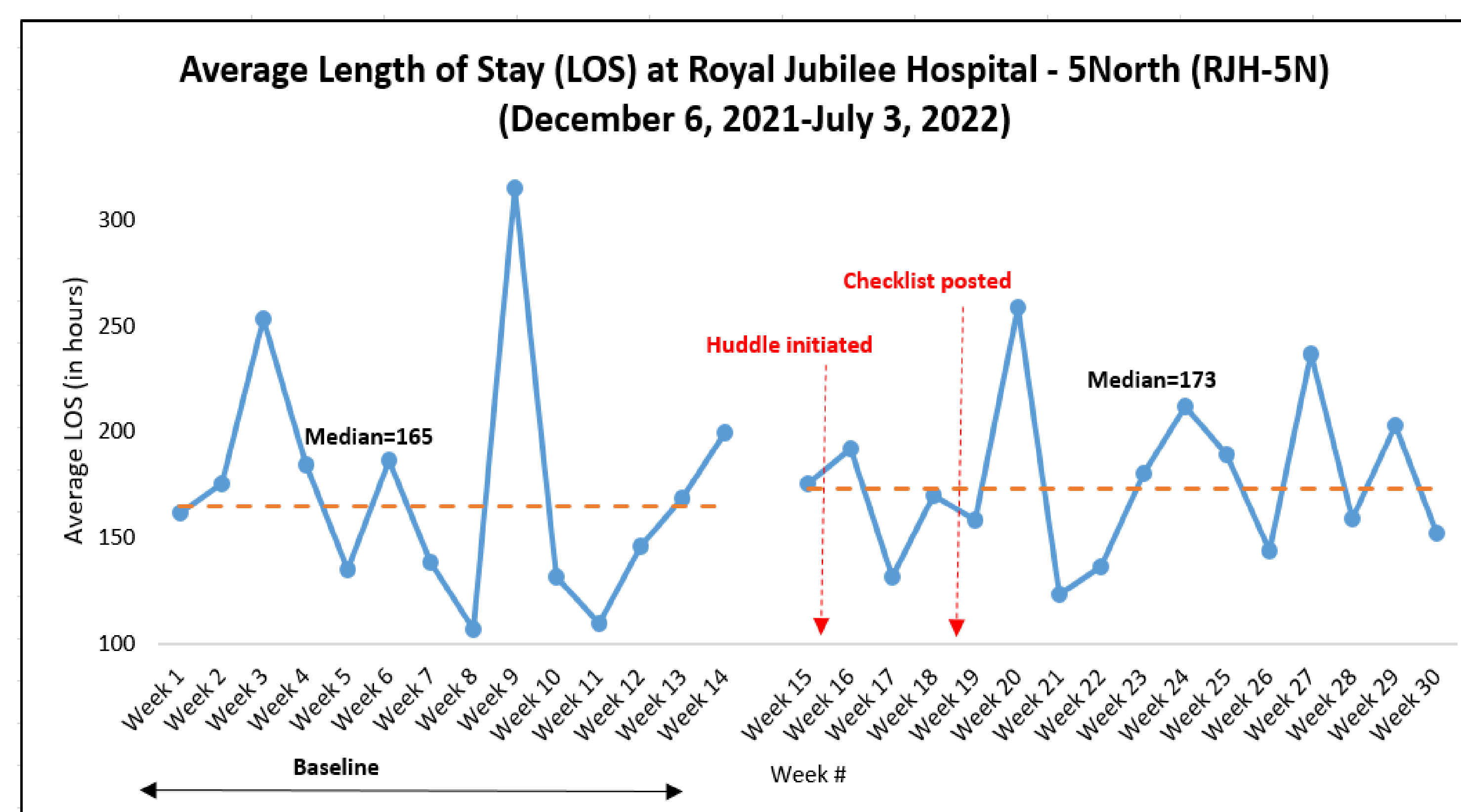
The Internal Medicine department at Royal Jubilee Hospital (RJH) consists of three Clinical Teaching Unit (CTU) teams. Each CTU team involves medical students and residents and is led by a staff physician. The team cares for a list of admitted patients with multiple complex medical issues and often functional and social barriers to discharge.

Once a patient is medically cleared, prevention of discharge home in a timely fashion affects overall hospital and critical care capacity. Patients whose discharges are delayed have an increased risk of iatrogenic complications and adverse events leading to morbidity and potential further hospitalization.

DATA ANALYSIS

Data collected included:

- Length of admission for each patient discharged during the intervention on 5 North (5N)
- Attendance of Clinical Nurse Leaders (CNLs) and CTU physicians or CTU senior residents at each huddle
 - Weekly huddle occurrence: Number of huddles that actually took place out of 15 possible huddles each week (3 teams, 5 days)



I. Weekly average length of hospital admission for patients on 5N at RJH.

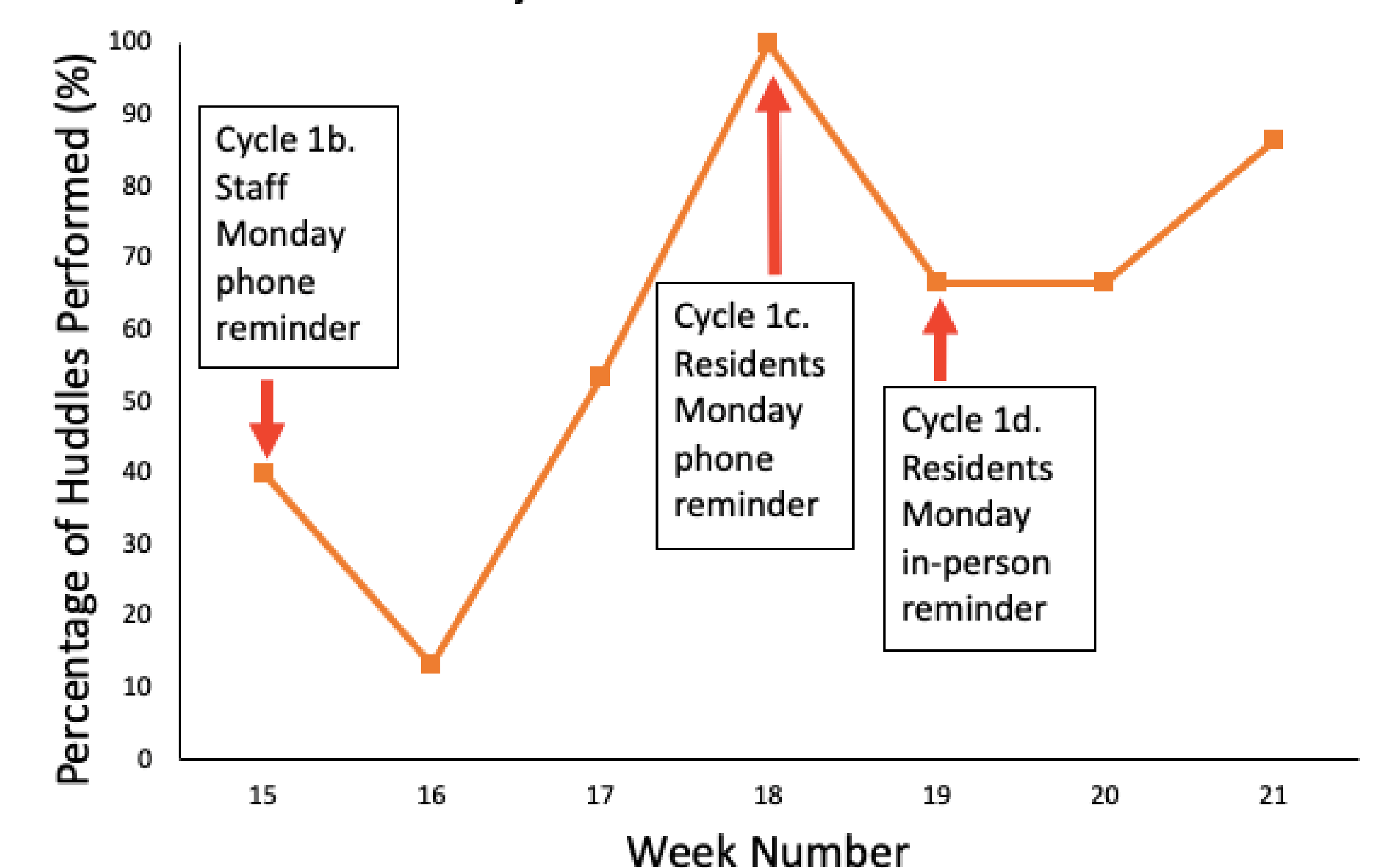
PROBLEM

Patient hospital length of stay is closely monitored at Royal Jubilee Hospital. However, often the patient discharge is delayed by non-medical barriers that are often preventable if addressed in advance of medical clearance.

CHANGE IDEAS

- Implement daily interprofessional team huddles to discuss discharge planning
- Give telephone and in-person reminders to staff and residents to attend discharge huddles
- Provide a discharge checklist to guide discussion during the team huddle
 - Checklist synthesized from literature and health authority resources, covering:
 - ☐ Patient Identification
 - ☐ Clinical care
 - ☐ Medication reconciliation
 - ☐ Home care, OT/PT
 - ☐ Follow-up scheduling
 - ☐ Patient/caregiver education

Weekly Huddle Occurrence



2. Weekly percentage of huddles performed (the number of huddles performed out of a target 15 of meetings/week).

NEXT STEPS

- Expanding discharge huddles to include other professions: OT, PT, pharmacy
- Formal staff satisfaction surveys on discharge huddles and multidisciplinary communication
- Implementing discharge checklists in patient charts/EMR
- Student teaching on discharge planning using the checklist



Presenter: Dr. Paul Harris

Team: Nicky, Tami, Rachel

Background:

Most patients on OAT (opioid agonist therapy) are unlikely to die of an overdose if they remain on an opioid substitute such as buprenorphine. It has been shown that patients who stay on their OAT for at least 30 days will likely remain on it for longer.

Problem:

For a number of reasons adherence to treatment is a major challenge to patients when first initiating Opioid Agonist Therapy (OAT)

Aim Statement:

To increase patient adherence to Opioid Agonist Therapy (OAT) at initiation to at least 30 days by June 2022 at Phoenix Transformations.

Change Ideas:

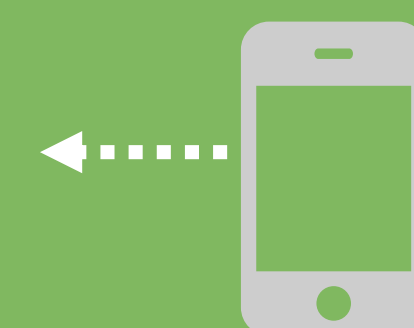
- Doing a wellness check by phone daily
- Adding a support person to admission interview prior to initiating OAT
- Follow up appointment

New OAT (Opioid Agonist Therapy) patients stay on medication longer if they have a support person at time of enrolment



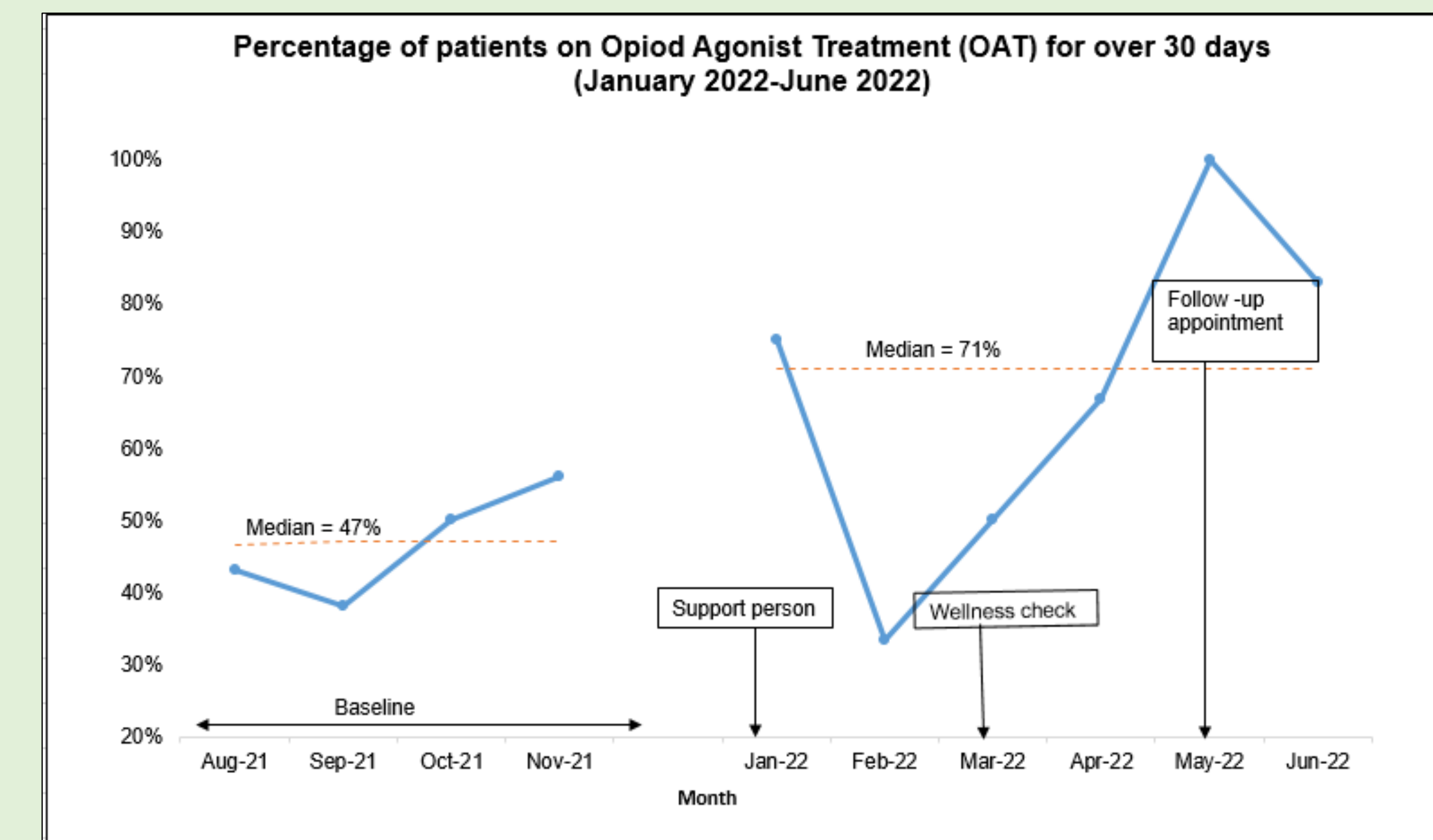
"I would be lost without the help. I probably would not be doing this (OAT) if it wasn't for my support person. I need their help and support in order for me to get through this, without her it wouldn't happen"

Patient's voice



Take a picture to download the full paper

RESULTS



PDSA Results:

- There was a 30% improvement in treatment adherence when a support person was added to the intake interview
- There was additional improvement when a wellness check was added

Conclusion and Next Steps:

- When added support is part of enrolling patients to OAT there is significant increased uptake in adherence
- This will hopefully reduce the risk of overdose for these patients
- We will adopt these changes and continue to look at data to ensure sustainability



The PQI Initiative provides training and support to physicians, through technical resources and expertise, to lead quality improvement (QI) projects, which build QI capacity. This investment increases physician involvement in quality improvement and enhances the delivery of patient care. Please see our website for more details: sscbc.ca

Reducing Coercive Care in Emergency Psychiatry at Cowichan District Hospital

PROJECT TEAM

Project Lead: Dr. Rachel Grimminck, FRCPC, DABPN, CGP

Project Participants:

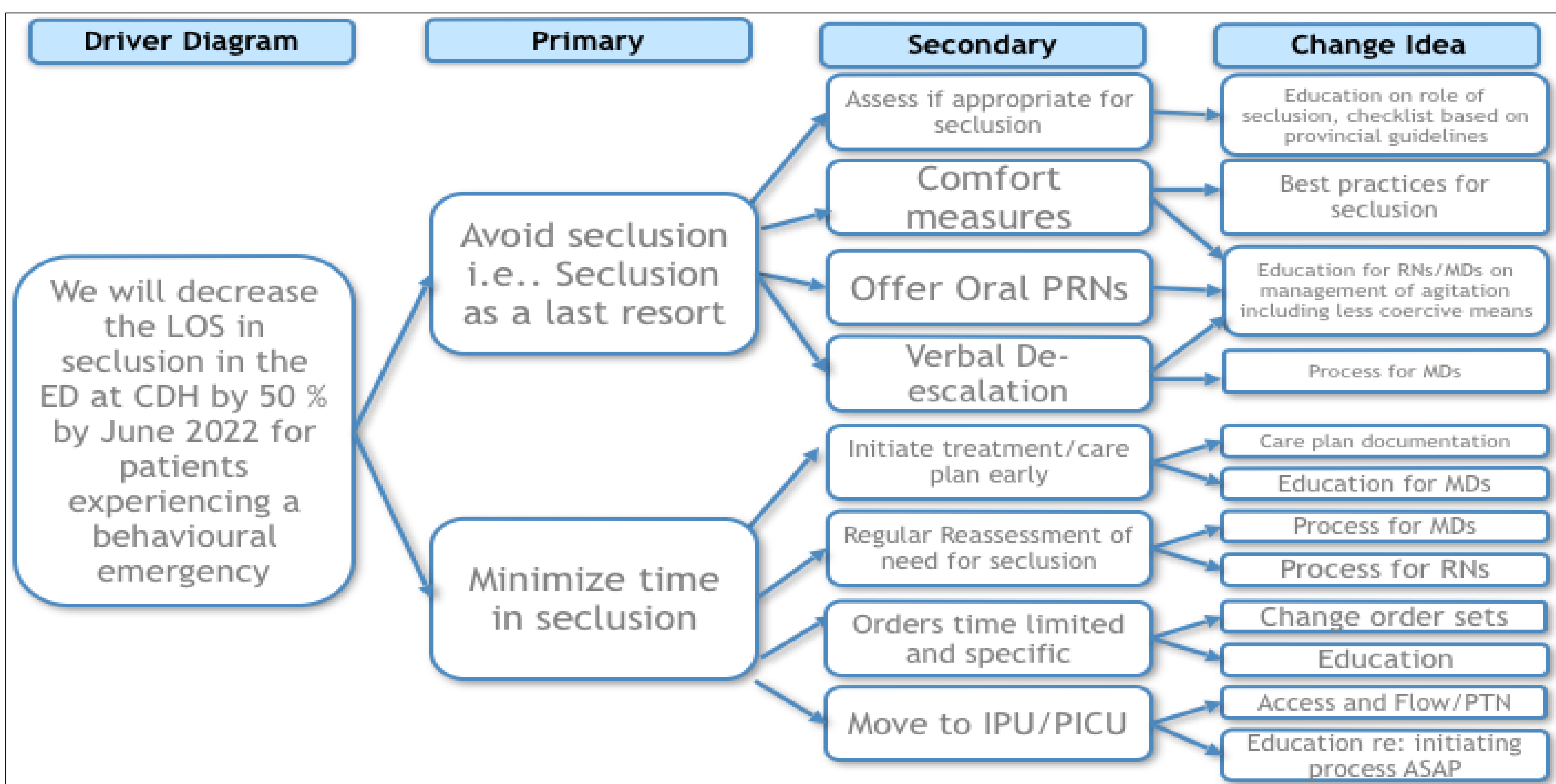
- Brenda Aguiar QI Manager, CDH
- Samantha Chande ED Manager, CDH
- Angela Dupuis ER Crisis Response Team (CRT)
- Terra Lee ED CNE
- Kathryn Dale Interim MHSU Manager
- Sasha Dallaire ED CNL
- Dr. Isabel Rimmer ED MD Leadership
- Three Patient Partners!

AIM STATEMENT

Decrease the length of stay (LOS) in seclusion in the Emergency Department (ED) at Cowichan District Hospital (CDH) 50 % by June 2022 for patients experiencing behavioral emergencies

PDSA CYCLES

- PDSA 1: Checklist Development
- PDSA 2: Checklist Feedback
- PDSA 3: Checklist Implementation



BARRIERS

- Interpersonal Stigma (low desire for change) and structural stigma (organizational)
- Severe human resource constraints and staff turnover made it difficult to educate and orient staff consistently to the project and impacted data collection as staff were appropriately focused on higher priority issues related to clinical care
- Complex, hard to capture change including stigma reduction, attitude change
- Lack of comprehensive regional standardization around seclusion practices/processes, which would support front line staff to deliver high quality care
- Provider burnout and empathy fatigue

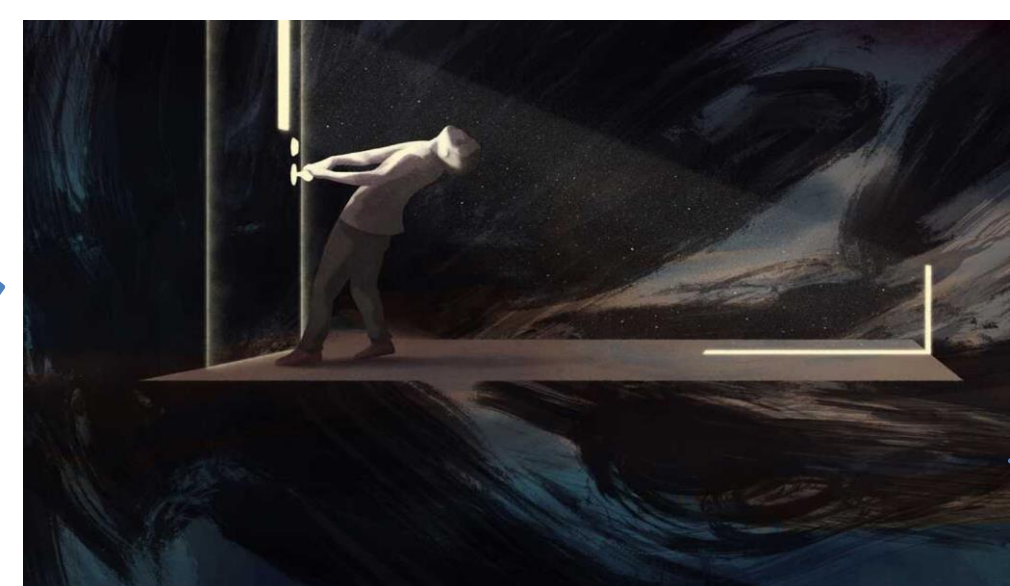
BACKGROUND

CDH ED/MHSU committee identified gaps between current practice and provincial Seclusion Guidelines for BC (2014) including safe practices for the use of seclusion and specific recommendations about patient rights.

PATIENT VOICES: EXPERIENCES OF SECLUSION

"You feel like you're not worthy of other people actually caring. You feel...abandoned, ... shuffled off, tucked away, left to your own devices and without any sense of time...nobody tells you anything"

"What has helped me luckily the last time, way, way more is that people engaged with me. They weren't leaving me to my own devices" - Patient Partner



"You're not human, you're not considered"

"Having more patience with people, and if care providers are calm and receptive, then it could help a patient calm down and be in a better place to communicate" - Patient Partner

*"Showering? There is no showering in seclusion"
"I can't remember at all that I ever have gotten food in emergency"*

PROBLEM

In the last three years, 74 Patient Safety and Learning System (PSLS) events have been filed indicating harm related to the use of seclusion of Mental Health and Substance Use (MHSU) patients in the CDH ED. Prolonged seclusion is dehumanizing, traumatic and unsafe care for psychiatric patients.

CHANGE IDEAS

Changes identified that could achieve the aim were based on Root Cause Analysis, Swim Lane Map and Patient Partners

- Nursing checklist
- Physician checklist
- Tracking time in seclusion

TEAM REFLECTIONS

- "As a team member, this project highlighted ways to reduce time in seclusion for patients held in the ED. The project created tools that helped clinicians look at alternatives to seclusion as well as what to consider when ordering seclusion which positively impacted our patients."
- "We started improving care with small changes, which is leading our health care team on a journey of change to improve our care"
- "We are striving to decrease care that may be triggering or traumatic into supportive and empathetic"
- "Our goal is to improve patient experience by fostering an environment that is supportive and safe"
- "The project created much awareness to the ED team. Awareness and tools, such as the checklists, directed and prompted care, resulting in decreased or appropriate use of seclusion"
- "Hearing the patient partners experience was humbling as is fuel to create a supportive care environment"

Before Seclusion	During Seclusion	After Seclusion
☐ Verbal de-escalation (pg. 2)	☐ Explain to the patient why seclusion is required and document patient understanding of explanation	☐ Debrief patient
☐ Offer to meet needs (food, blanket)	☐ Complete Second Form 4 and ensure Form 5 accurately represents treatment (GP or Psych)	☐ Debrief staff (if needed after an adverse outcome)
☐ Offer oral medications	☐ Explain Rights under the MHA (can be MD or RN) - must be documented	☐ Ensure precipitants of seclusion addressed
☐ Offer a time out/decreased stimulation	☐ Use PRN medications early to help treat agitation early and reduce time in seclusion ☐ Best practice is to order vitals q 15 min x 4 after chemical restraints for agitation from psychiatric causes	
☐ Ensure meets criteria for involuntary status under the MHA	☐ Start treatment (ie. an antipsychotic) if indicated in the ED ☐ Re-initiate home medications (in case of non-adherence)	
☐ Complete Form 4 and Form 5	☐ Consult CRT and/or psychiatry as required	
☐ Ensure orders for seclusion are time limited and specific	☐ Ensure orders for seclusion are time limited and specific. ie. "Seclusion PRN x 24 hours if patient is placing self/others/property at risk, then reassess"	
	☐ Initiate transfer to PICU/HLOC via PTN if indicated (psych, can be GP)	
	☐ Ensure there is a face to face evaluation by MRP every 24 hours while the patient is in seclusion (GPs are MRPs, Psych consultants)	

* As per Ministry of Health Secure Rooms and Seclusion Standards and Guidelines 2014
Please turn over the page for Agitation Algorithm and Verbal De-Escalation Quick Tips

KNOWLEDGE SHARING

- Cowichan Quality Council (May 2022)
- Emergency Nurses Association of BC presentation September 2022
- BCPSQC 2021/2022 Patient Voices Network (PVN) Annual Report - Sept 2022!
- Quality Forum 2023

- Cowichan ER Podcast
take a photo to listen



Criteria Led Discharge Cowichan District Hospital



PROJECT TEAM

Project Lead: Dr. Trevor Tsang

Project Participants:

- Brenda Aguiar – Quality Improvement Manager
- Austin Reid – Clinical Nurse Lead
- Lorraine Dobson – Clinical Nurse Educator
- Nina Padgen – Floor Manager
- Graham Blackburn – Family Practice Dpt. Lead
- Maki Ikemura – Cowichan Medical Director

AIM STATEMENT

By June 2022, we aim to have 50% of patient charts on CDH Medical Floor 2E actively utilizing the Criteria Led Discharge (CLD) form by the Most Responsible Physician (MRP).

PDSA CYCLES

Small Tests of Change Amidst a Big Change

Please refer to the labeled arrows in Result Diagram 1a
CLD FORM "GOES LIVE" Feb 22, 2022 on CDH floor 2E
Continual change cycle - Dr. Trevor Tsang introduces form
to GPs during rounding on impromptu basis

PDSA Cycle	Change Implemented
1	Team Meeting/education involving all Hospital Allied Care Team Leads. CNL educates floor nurses
2	CNL educates Nurses during Structured Team Report in morning for dayshift nurses. Clinical Nurse Educator implements educational poster in nursing meeting room.
3	CNL educates Nurses during Structured Team report in morning for dayshift nurses in a less confrontational approach. Specific language is chosen to encourage participation.
4	Dr. Trevor Tsang delivers verbal presentation of CLD Form to GPs at an inpatient department meeting and provided encouragement towards participation.
5	CNL reminds dayshift nurses involved in discharge to complete Part C of CLD Form. Clinical Nurse Educator implements poster in nursing meeting room to educate and encourage completion of Part C of CLD Form at discharge of patients.
6	Hospital department-wide email communication sent to remind relevant participants of progress of project and encourage participation.

DATA ANALYSIS

Population: Inpatients admitted on CDH Floor 2E and their respective MRP General Practitioner

Weekly chart audits performed to gather compliance data on active usage and completion of CLD form

Data analysis performed by utilizing excel software spreadsheets

KEY FINDINGS

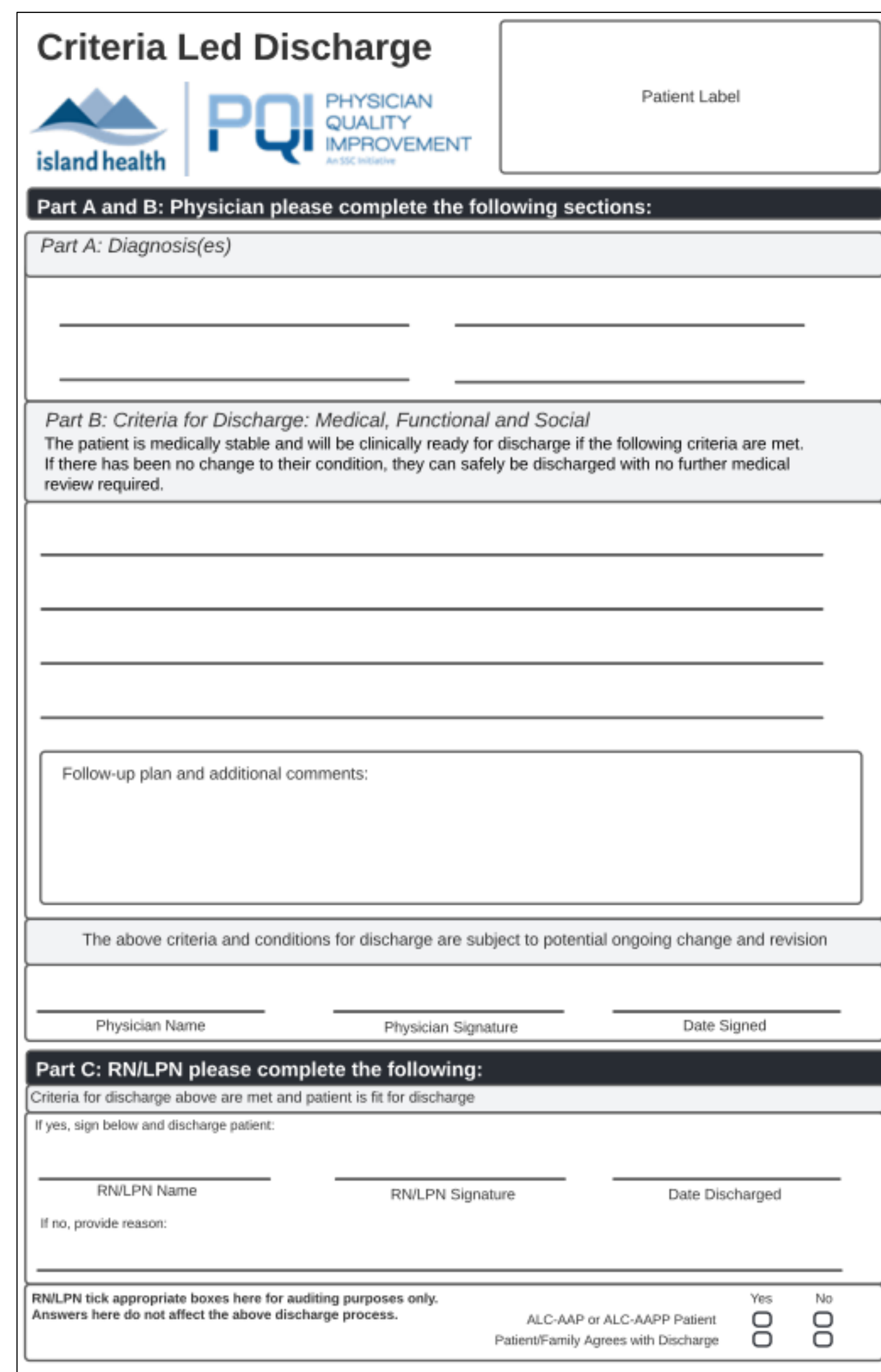
1. Direct and personable communication to physicians appears to result in the most significant improvement and sustained usage of the CLD Form
2. With the implementation of the PDSA cycles, there was a gradual upward shift towards improved uptake of the CLD Form
3. Near the latter part of the project, there appears a positive trend in uptake of the CLD Form by physicians
4. Significant challenges remain in engaging nursing staff to participate in CLD Form usage and completion at patient discharge
5. Significant challenges remain in ensuring Unit Clerks comply with ensuring correct and timely placement of the CLD Form in charts. (CLD Form missing/misplaced on average 13% of the time)

BACKGROUND

Patient bed capacity and management at the Cowichan District Hospital (CDH) has been challenged with an outdated hospital, servicing an ever growing population. Efficient bed utilization becomes paramount in balancing patient admissions and discharges all while maintaining a satisfactory level of care that preserves safe and effective outcomes for our patients.

Improving discharge planning within the allied health care team has been demonstrated to improve discharge efficiency. It is known that effective discharge planning involves active communication between the physician lead and the allied care team early in a patient's hospital admission and continues throughout the patient stay. By improving discharge rates, patient bed spaces can be more readily available to accommodate new admissions and therefore improve flow of patients being transferred to the ward from the emergency department, from other hospitals and from the operating room for those requiring extended post-operative recovery.

Bed availability is one of the major bottlenecks in patient flow in our hospital that must be addressed to answer the continual and growing demand for the healthcare of our patient population. Discharge planning is one area of quality improvement critical in addressing the problem.



Criteria Led Discharge
island health | PQI PHYSICIAN QUALITY IMPROVEMENT
An SSC Initiative

Part A and B: Physician please complete the following sections:

Part A: Diagnosis(es)

Part B: Criteria for Discharge: Medical, Functional and Social
The patient is medically stable and will be clinically ready for discharge if the following criteria are met. If there has been no change to their condition, they can safely be discharged with no further medical review required.

Follow-up plan and additional comments:

The above criteria and conditions for discharge are subject to potential ongoing change and revision

Physician Name: _____ Physician Signature: _____ Date Signed: _____

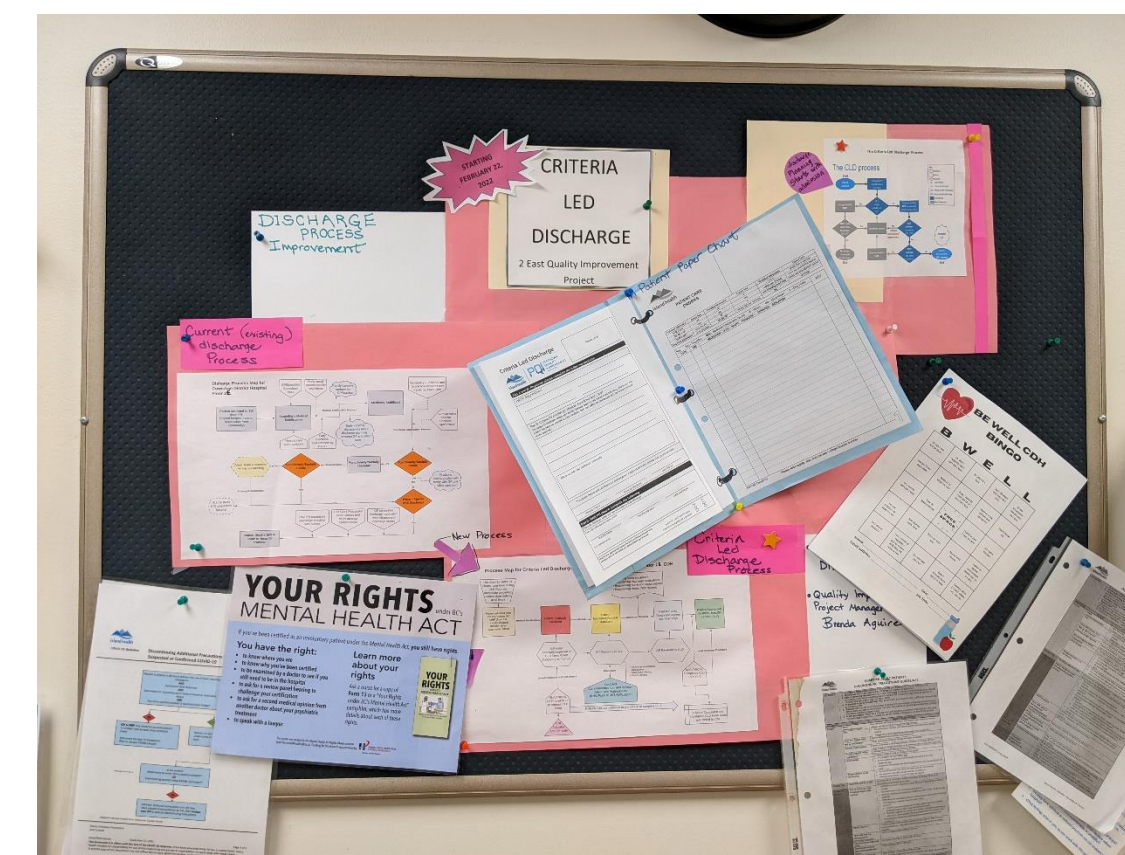
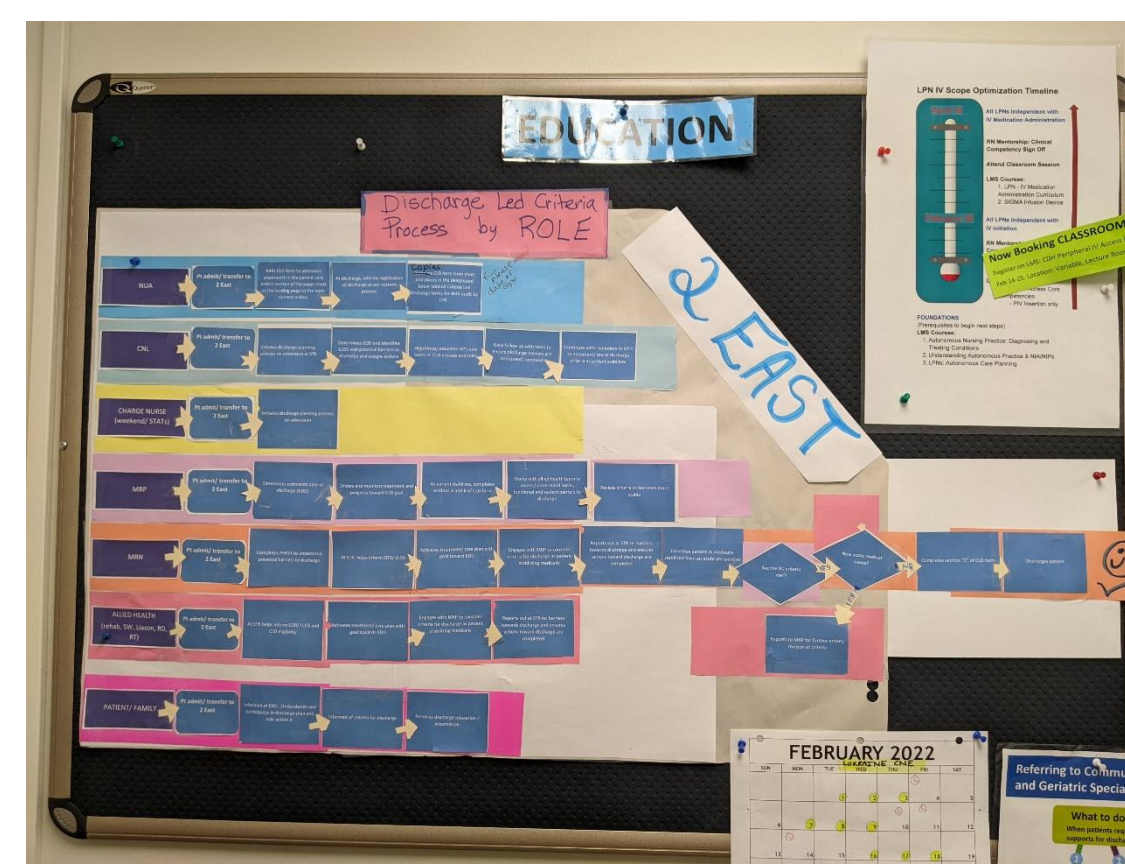
Part C: RN/LPN please complete the following:
Criteria for discharge above are met and patient is fit for discharge
If yes, sign below and discharge patient:

RN/LPN Name: _____ RN/LPN Signature: _____ Date Discharged: _____

If no, provide reason: _____

RN/LPN tick appropriate boxes here for auditing purposes only. Answers here do not affect the above discharge process.

ALC-AHP or ALC-AHP Patient Patient/Party Agrees with Discharge: Yes ☐ No ☐



PROBLEM

Hospital discharge rates for CDH Floor 2 South on weekends are disproportionately lower than weekdays

- Chart indicates 2021 average discharges for CDH Floor 2W
- Average discharges on 2E 1.6 weekday vs 0.3 weekend (2022)

	CDH Floor 2W	Avg Weekday D/Cs	Avg Weekend D/Cs
2019		1.6	0.7
2020		2.0	1.0
2021		2.3	1.5

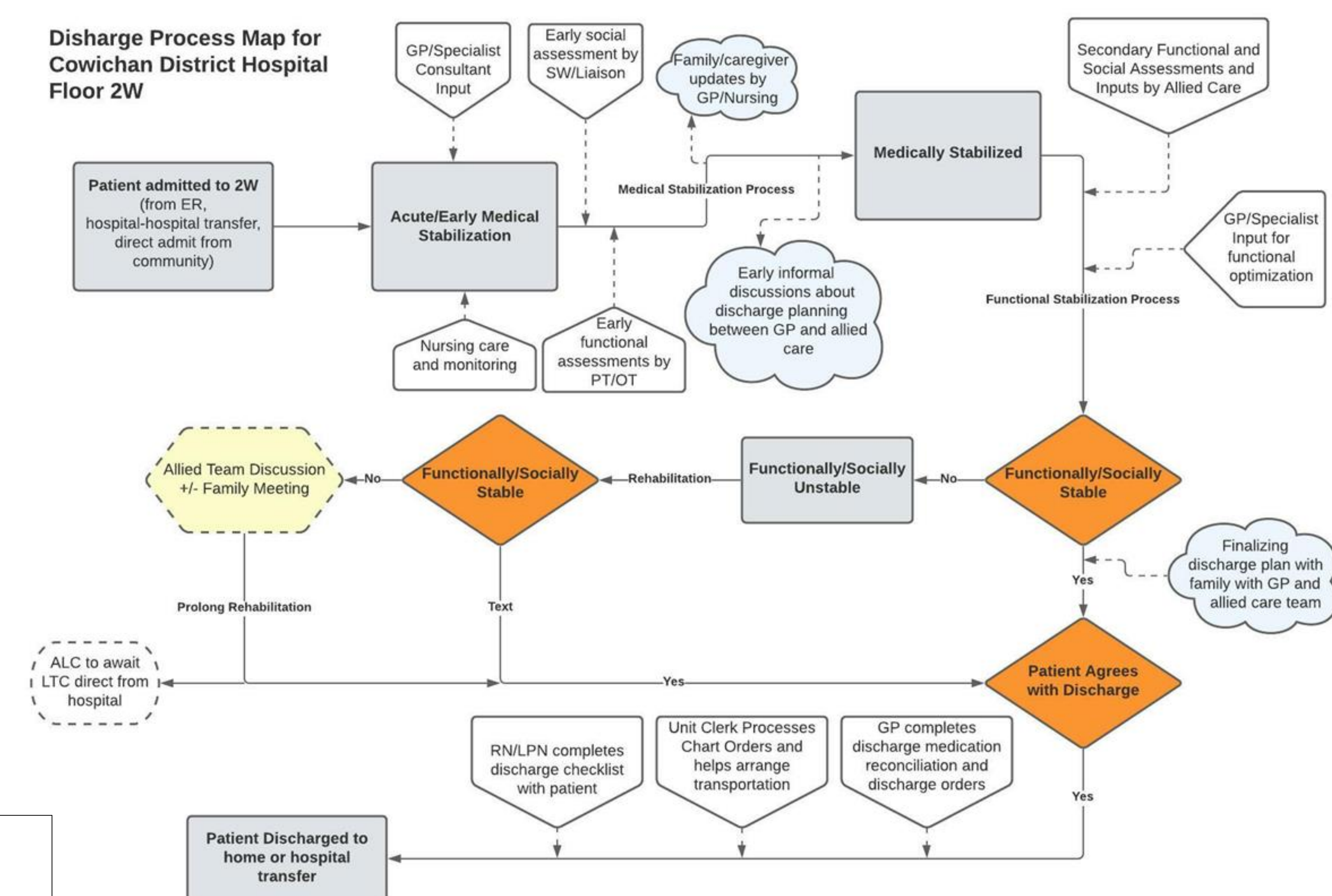
Lack of bed movement on weekends creates recurring bed management challenges on Mondays and creates high level of stress for CSO per subjective accounts

Currently there is a lack of a physical or virtual space to support centralized and closed loop communication regarding discharge planning for inpatients.

Patients experience unnecessarily prolonged length of stays due to several variable and fixed factors that impede timely discharge [Avg LOS 2W CDH: 10.1 (2019), 8.1 (2020), 6.3 (2021)]

Inefficient discharge of inpatients results not only in unnecessary costs to the health care system but also compromises patient outcomes.

CHANGE IDEAS



CONCLUSION

- Criteria Led Discharge has potential to become an important platform for early discharge planning guided by the physician.
- Electronic platform for discharge planning may allow for more intuitive process and allied care input/engagement

NEXT STEPS

- Looking at potential for integration with IHealth electronic clinical documentation at CDH which is currently being implemented

Improving Medical Microbiology Turn-Around Times for Deep Cultures

PROJECT TEAM

Project Lead: Dr. Victor Yuen, Medical Microbiologist

Project Participants:

- Dr. Pamela Kibsey, Medical Microbiologist
- Dr. John Galbraith, Medical Microbiologist
- Balbir Jaswal, Technical Coordinator
- Derek Miller, Data Scientist

AIM STATEMENT

We will decrease the average turn-around-times for microbiology deep cultures by 25% by the end of June 2022 for patients at Island Health.

CHANGE IDEA

Key change is to reduce the number of deep cultures that automatically undergo extended incubation. Previously all samples with high neutrophil count were incubated for 10 days, even though the neutrophil numbers were artificially overestimated by centrifugation.

FINDINGS

Comparing weekly median InLab to OrderComplete TAT 4.5 months before and after the change, we found that:

- Body fluids TAT went from 90 hours to 89 hours
- Operative tissues TAT went from 94 hours to 95 hours
- Deep swabs TAT increased from 80 hours to 88 hours

Week-to-week variability in TAT appeared to have decreased after the change.

CONCLUSION

Automated laboratory time stamp data allows detailed timely analysis of outcome and process measures for the QI approach, even though we did not see the improvement in TAT we had aimed for. We learned in this project that wide day-to-day fluctuations made short-term effects difficult to observe. Instrument failures had an unexpected negative impact to TATs.

BACKGROUND

Turn-around time (TAT) is a major indicator for evaluating the quality and performance of a clinical laboratory. When we aggregated time stamp data from the Island Health Cerner information system and the BD Kiestra total laboratory automation instrument, we noticed that the average TAT for workup of microbiologic cultures for body fluids, operative tissues, and deep swabs had been increasing since 2017.

PDSA CYCLE



Test of Change

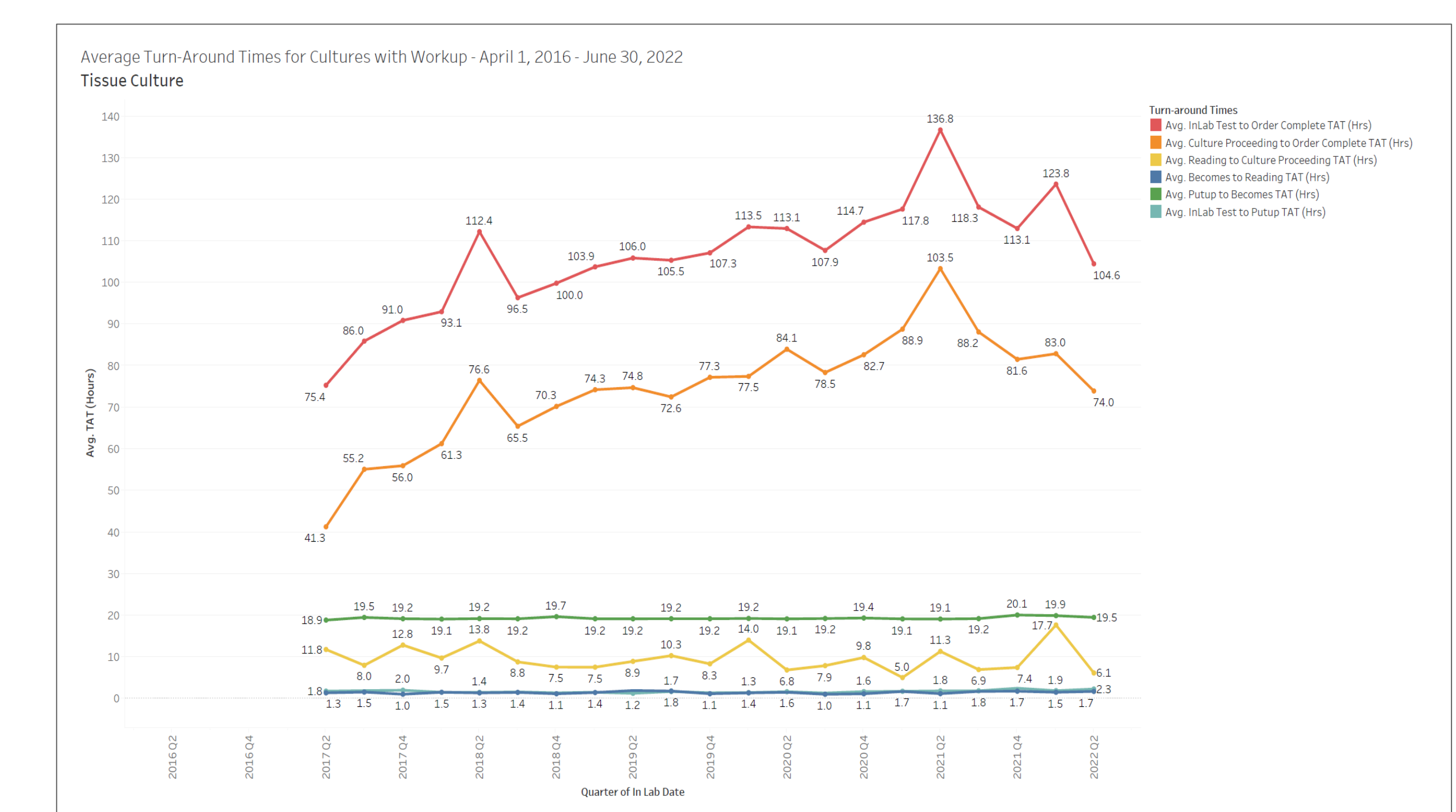
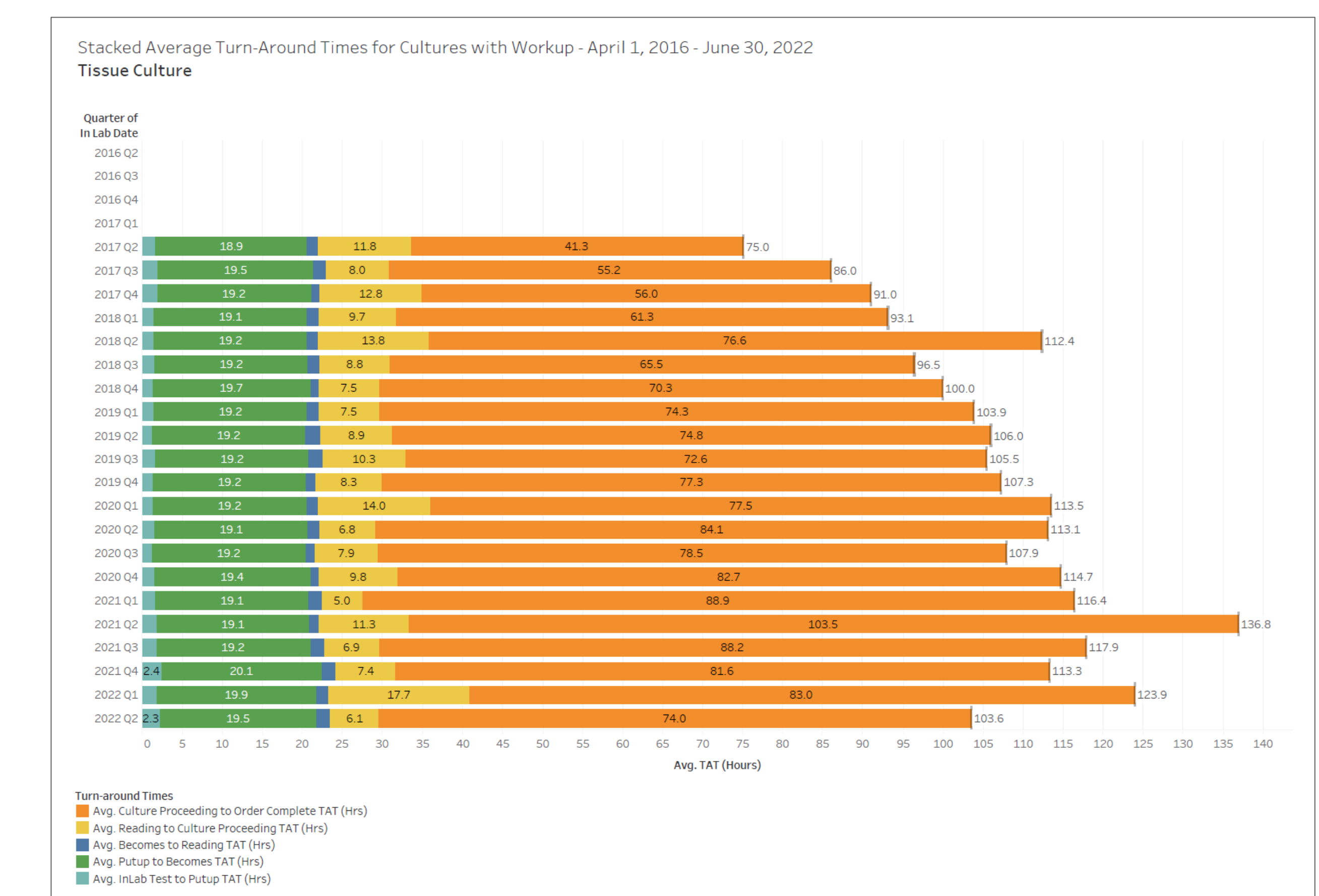
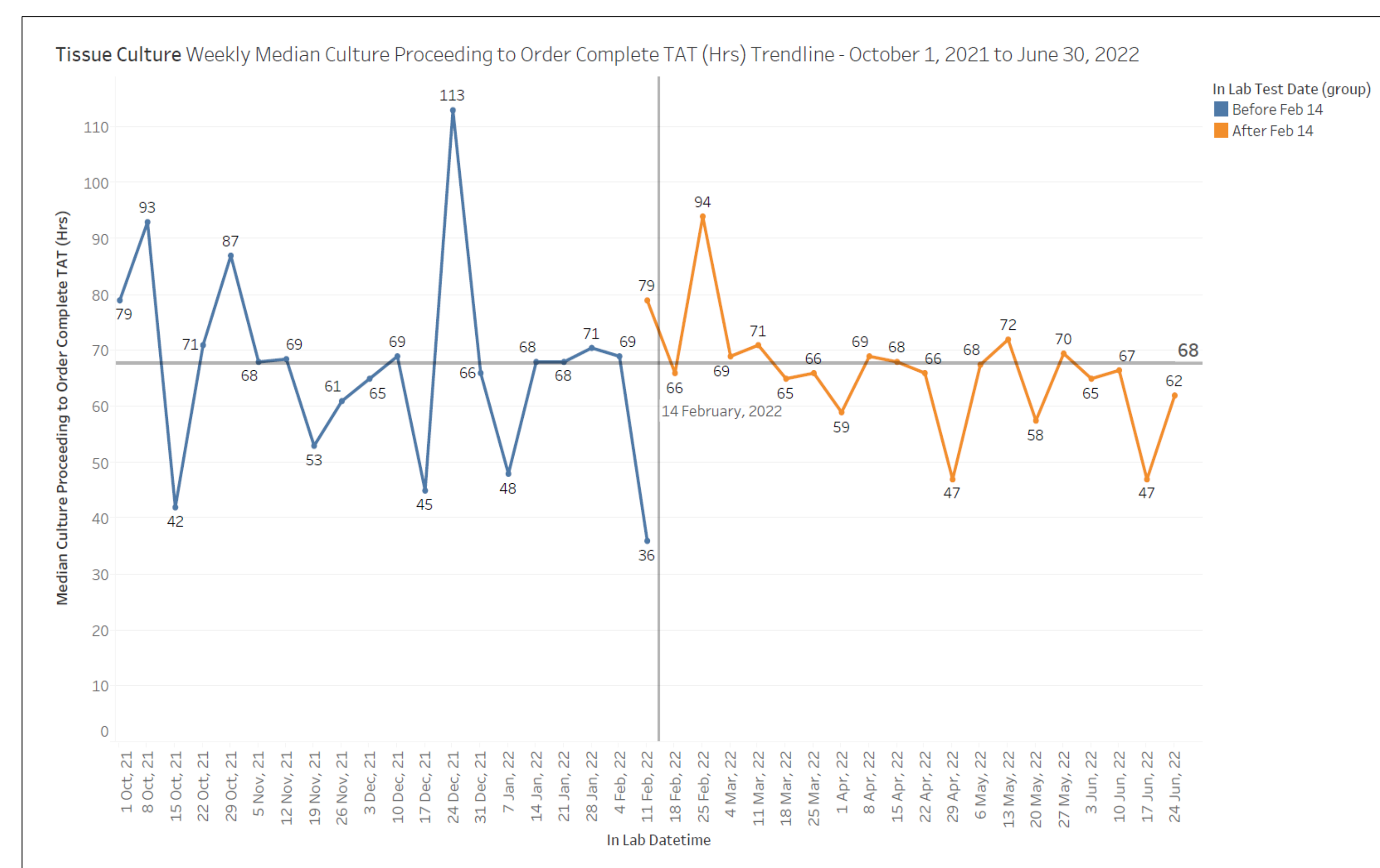
The RJH Microbiology technologists' Standard Operating Procedure manual for the deeps bench was revised and released on 14 Feb 2022 with the intention of minimizing repetitive non-value added work in the lab.

PROBLEM

The average TAT for microbiologic cultures for body fluids, operative tissues, and deep swabs had been increasing since 2017, from 78 hours to 104 hours. TAT is a major indicator for evaluating the quality and performance of a clinical laboratory with implications for patient outcomes such as duration of antimicrobials, length of stay, and drug adverse effects.

DATA ANALYSIS

Cerner timestamps (InLab and OrderComplete) and Kiestra timestamps (PutUp, Becomes, Reading, and CultureProceeding) were collected for all cultured body fluids, operative tissues, and deep swabs from all Island Health sites. Means and medians for the elapsed periods between these timestamps were calculated in Tableau.



NEXT STEPS

We will disseminate results to bench technologists, colleagues, leadership, and stakeholders. Going forward we will continue develop other change ideas for deep cultures and other culture types and test them using the QI approach.