SUSQI PROJECT REPORT
Triple bottom line: Benefits Of A Streamlined, Standardized Process To Resolve Patient Capacity Concerns

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Background

A typical acute care medical stay at the South Health Campus (SHC) in Calgary, Alberta, Canada involves admission, medical management, and may involve Allied Health consults for Social Work (SW) or Occupational Therapy (OT) as part of discharge planning. An average length of stay (LOS) at the South Health Campus in 2021-22(4) was 6.2 days.

A common barrier to discharge for our team involves concerns about a patient's decision-making capacity and consequently, their safety to return home. These concerns may be raised by family, or the healthcare team, based upon a patient's actions and behaviors in hospital. Patient capacity is evaluated by assessing the process used by the individual in making a decision and not the decision itself. When a patient's capacity is in question, Occupational Therapy and Social Work may be consulted to help physicians evaluate and address capacity concerns.

Preference (and best practice) is to resolve capacity concerns with informal assessments, education to patients and caregivers and risk mitigation efforts that may include provision of additional support, equipment, and care to allow a safe return home. These informal efforts to resolve capacity concerns can be initiated while the patient is still being medically managed. Should risk mitigation efforts be insufficient or rejected and a safety concern for the patient persists once they are medically cleared, then a formal pre-capacity assessment by OT and SW may be requested by the physician.

Formal pre-capacity assessment can only be completed on patients who are medically stable. A pre-capacity assessment involves a detailed assessment of a patient's current cognitive function as it pertains to their decision-making ability, their insight into the decisions they make, and a review of any indicators of cognitive decline over time by OT and SW. These findings are reported in a pre-capacity worksheet saved to our electronic medical record, EPIC-Connect Care.

A physician then reviews the patients pre capacity worksheet to help inform their capacity interview with the patient. The physician then decides as to whether the patient has, or lacks, the capacity to make decisions within several domains including healthcare, accommodation, legal or financial matters.

The results of a pre-capacity assessment can have significant implications to long term autonomy of the patient being assessed. For example, do they retain the right to make their medical and financial decisions or is someone (an agent or guardian) assigned to make decisions for them and can they return home.

Historically, communication between disciplines (Physicians, Social Work and Occupational Therapy) around how to resolve a capacity concern has been challenging. Challenges have included the following:
- Requests for pre-capacity assessments when patients were not medically stable or before informal assessments and risk mitigation efforts had been tried.
- Areas (domains) to be assessed were unclear, or inappropriate assessment tools were requested.
- Communication between physicians and OT/SW could become strained if the team failed to communicate effectively, resulting in discord among its members.

When a patient has been medically cleared, if they are unable to be discharged home they are referred to as ALC (Alternate Level of Care). **ALC time** is the time from being medically cleared until a patient is discharged. The Canadian Institute for Health Information (CIHI) estimates that 14.2% of hospital days at SHC were coded as ALC time in 2021-2022. (4)

*"ALC patients are those who no longer need acute care services but continue to occupy an acute care bed or use acute care resources while waiting to be discharged to a more appropriate care setting." (*6)

ALC time can be split into two segments:
1. **ALC Z-Code Time**
   "ALC Z-Coding is a system used to classify various reasons why a patient remains in acute care without acute care needs. This system is used across Canada to help healthcare organizations better understand the reason for extended ALC time" (6).
   ALC Z-Code time is time a patient spends in hospital while non-medical barriers to discharge are addressed. Z-Code days are counted from time a patient is medically cleared until a patient is waitlisted for an alternative disposition. If a patient's capacity concern extends into ALC time, they will be given a Z-Code.

   When patients have non-medical barriers, they remain idle, their journey toward an ultimate disposition location is stalled. Matching a patient to a disposition location cannot occur until all non-medical barriers are addressed.
2. **ALC Waitlisted Time**

The days a patient spends in hospital after they are medically cleared and waitlisted for a disposition location until discharge, is referred to as ALC Waitlist time.

ALC waitlisted time is not impacted by the acute care team as available bed space is dependent on other facilities.

An acute care bed at SHC is a limited, carbon intensive and expensive resource – generating 42.32 kgCO2e (equivalent to driving 163 km) and costing $1,460 per day (4). When a bed is occupied by a patient with an ALC Z-Code, that limited resource is not appropriately allocated. For patients whose Z-code relates to a capacity concern, improving the pre-capacity assessment process has the potential to reduce Z-code time bringing about a host of benefits:

- Smoother patient flow and reduced length of stay.
- Reduced negative emotional and physical impacts for patients and families because of reduced length of stay. (1,2).
- Improved staff communication and reduced stress and conflict within the team while working to resolve capacity concerns leading to improved patient care (8).
- Financial benefit in terms of freeing up a valuable acute care bed for a patient with acute care needs sooner.
- Environmental benefit by reallocating a carbon intensive acute care bed to a patient requiring that level of medical management.

The focus of this project is on improving the process to assess and resolve patient decision making concerns at the South Health Campus to improve patient flow and realize these benefits.

Specific Aims:

Our project aims to:
- Streamline and standardize the best practices for Physicians, Occupational Therapists and Social Workers for addressing capacity concerns into a new process.
- Improve multidisciplinary team communication to resolve patient capacity concerns sooner
- Reduce the need for formal pre-capacity assessments by accessing alternative informal assessments and resources.
- Reduce Z-code time for patients with capacity concerns, ultimately shortening length of stay for our patients.

Methods:

Our team consists of key stakeholders: frontline Allied Health Social Workers (SWs) and Occupational Therapists (OTs), Allied Health Clinical Practice Leaders for OT and SW, the Allied Health Program Facilitator, Physicians were engaged via the Hospitalist Liaison Nurse and through consultation with the two Quality Improvement lead hospitalist Physicians. We also had significant help from our site Quality Improvement Consultant.

Current State Analysis ("Studying the System"):
Our project looked at the pre-capacity assessment process from early informal screening and functional assessments through to formal pre-capacity assessments. Background analysis of all capacity/decision

making patient concerns was conducted by searching EPIC-Connect Care for all OT and SW orders placed from Dec 2023 to February 2024. Any orders indicating cognitive concerns or capacity questions were reviewed in more detail.

- 581 SW orders were placed in that time, this filtered down to 58 instances where the focus was on capacity or a request around legal documents related to capacity.
- 886 OT orders were placed during this time span; upon review 75 cases were related to some form of cognitive or had a capacity related concern in the order.
- Consolidating OT and SW referrals, 23 patients were referred to both OT and SW to help resolve capacity concerns that impacted discharge planning
  - As EPIC-Connect Care does not have a specific "reason for consultation" for OT that reflects capacity or decision-making concerns, we expect that several additional capacity related patient cases were missed in our analysis.

The 23 cases we identified either involved formal pre-capacity assessments, or early team discussion and informal assessments that allowed a formal pre-capacity assessment to be avoided. This can be estimated to 8 patient capacity concerns that arise monthly on our medical units, or 96 cases annually.

Various paths to resolve the capacity concerns were identified in our chart reviews. Cases that tended to be resolved faster held common best practice features and were identified in about 50% of our sample.

Issues around capacity were resolved sooner when:

- Informal screening and risk mitigation strategies were initiated as a first step, earlier in patient care and communication between disciplines was ongoing.
- When formal pre-capacity assessment was required, the domains to assess were clearly defined and the patient was declared medically stable by the physician.

Comparing cases in our sample that applied best practices vs those that did not, patient care managed through optimal pre-capacity workflow showed:

- 11 fewer days with an ALC Z-code.
- 13 fewer overall days from Medically stable to Discharge (total ALC days).
- 8 fewer days as ALC waitlisted.

Our goal was to integrate these effective best practice strategies into a clear workflow to guide our physicians and therapists when managing patient capacity concerns, reducing the time our patients spend with Z-Code days and total ALC days compared to our baseline process patient data.

Process development:

Our team mapped out the current state for pre-capacity assessments. In a brainstorming session we applied barriers that commonly occurred in the process and flagged process steps that worked based on the experience of subject matter experts and chart review findings. (Appendix 1: Process map with markup)

Common barriers identified included:

- Poor early communication within the team.
- Failure to implement risk mitigation efforts before requesting a pre-capacity assessment.

- Requests for pre-capacity assessment while the patient was medically unstable.
- Requests for pre-capacity assessment when the domains to assess were unclear, therefore delaying the assessment.
- When the pre-capacity assessments were complete, physicians had difficulty locating the reports. This in turn delayed initiating formal capacity assessment.

This map was then used to develop our future state process map which was shared with Allied Health and medical staff. This allowed us to gather feedback which led to a final version of the process map along with a swim lane map of each discipline's key steps across the patient's admission journey (Appendix 2. Future state Process map and swim lane for key tasks of each discipline).

Key changes to the process:
- A New order for SW and OT when a formal pre-capacity assessment is requested.
- Standardized use of a smart phrase by physicians when placing a new pre-capacity assessment order to clearly indicate the patient is medically stable and which domains of decision-making capacity to assess.
- Developed a process for OT and SW to flag pre-capacity assessment reports within the chart and how to communicate results of the pre-capacity assessment to physicians via electronic messaging. This is done within our electronic medical record system.
- Developed a workflow/decision tree identifying clear alternatives to formal pre-capacity assessments. This facilitated timely and early communication and assessment between the team throughout the course of care.
- Education to physicians, OT's and SW's regarding the importance of ongoing and regular communication to guide them through the pre-capacity assessments process.

Staff Education:
- Collaborating with physician leads, a decision tree to guide decision making for physicians managing capacity concerns was created and extensively revised.
  - Appendix 3: pre-capacity decision making tree
- Our nurse liaison provided "in the moment" training to physicians.
- Formal group teaching for physicians was stalled due to summer staffing flux and is planned for September 2024.
- Teaching aids for Social Work and Occupational Therapy to guide process steps were developed and revised over multiple PDSA cycles (example in Appendix 4 however specific step by step instructions were also provided).
- "In the moment" training to OT and SW staff was provided along with discipline specific training in small groups and informal Q&A sessions were held as well.
- Desktop quick reference cards of key steps were provided to all SW & OT.
- Training started May 2024 and is ongoing.

Data capture for analysis:
- Inclusion criteria were established:
  - Chart review indicated a patient capacity/decision making concern.
  - Both OT and SW had orders placed to help resolve the decision-making concern.

- A shared patient list in our EPIC-Connect Care program was created where our staff could add patients with the pre-capacity processes underway for ease of tracking.
- An Excel spreadsheet was created to capture key metrics of patients that moved through the pre-capacity process (formal and informal).
- A customized report to pull data from EPIC-Connect Care was generated to help pull data into our Excel tracker.

Implementation:
- Initial "soft" roll out occurred May 27, 2024.
- Guided by PDSA #1 (May 27-June 28) learnings were applied adjust our teaching resources and delivery methods for PDSA #2.
- PDSA #2 ran from June 28-July 24. Again, we took learnings from this cycle to adjust our resources and teaching and initiated PDSA #3.
- PDSA #3 initiated July 24th and is ongoing.
    - Appendix 5: Pre-Capacity green team competition PDSA #1
    - Appendix 6: pre-Capacity green team competition PDSA #2
    - Appendix 7: pre-Capacity green team competition PDSA #3

System monitoring:
Monitoring for effectiveness of the standardized process included:
- Tracking of all patients who moved through pre-capacity steps, monitoring process compliance measures as described below
- Check-ins with our Allied health staff, and Hospitalist Liaison Nurse and provision of additional in person training as needed.

Measurement:
*Patient Outcome Metrics***:**
Our goal was to reduce overall length of stay by reducing the time our patients spend with ALC Z-codes.

Primary measure:
ALC Z-Code days:
- Measured the length of time from when the initial ALC order is placed until the ALC code is changed to waitlisted (the point where all ALC Z-Codes have been resolved).
- This information is drawn from an EPIC-Connect Care report.

Total ALC days = time from initiation of ALC order until patient is discharged from South Health Campus.
- The information is drawn from an EPIC-Connect Care report.
- The true measure of success is if we can facilitate earlier discharge for our patients once they are medically cleared. This is reflected by total ALC days.

Process Compliance Measures:
- Chart review of cases meeting inclusion criteria reviewed for the following:
  - Informal or formal pre-capacity process to resolve.
  - Pre-capacity ordered before or after the patient was medically stable.
  - New OT and SW order was placed when pre-capacity assessment was requested. (Y/N)
  - Was the smart phrase used in new pre-capacity order. (Y/N)
    - Smart phrase defines domains to assess and verifies the patient is medically stable.
  - The pre-capacity worksheet was tagged to make it easy for the physicians to find the report. (Y/N)

Environmental sustainability:
Bed days saved via the improved process will be converted to CO2e.
- The emission factor used in this project was developed using an emission factor from a US study (3) for an inpatient bed day. As per the US study an inpatient bed day generates 45.5 kgCO2e. Energy, water and waste factors from the study (25.5 kgCO2e) were replaced by the known SHC specific factors for energy, natural gas, water and waste (22.02 kgCO2e).
- An SHC emission factor of 42.32kgCO2e per inpatient bed day will be used to estimate the impact of the carbon footprint of our initiative.
- For illustration purposes this CO2e will also be reflected as an automobile driving distance.

Total CO2e savings have been translated into the equivalent of kilometers driven using an emission factor of 0.259 kgCO2e/km for an average passenger vehicle from the Canadian vehicles database. (7)

Economic sustainability:
Bed Days saved through the new process will be reflected as a savings using the Canadian Institute of Health Information (CIHI) bed cost estimates.
- A medically stable patient awaiting disposition decisions and discharge while occupying an acute care bed at South Health Campus (an ALC patient) costs $1,460/day based on CIHI data. (4)

The actual bed cost of an ALC bed at SHC is less than this but for the purposes of this report and the green team we are using the CIHI estimated bed cost references.

Social sustainability:
Social sustainability for patients and families will be indirectly measured by change in ALC Z-code days and total ALC days. Smoother progression towards an ultimate disposition location and shortened length of stay can offer significant social value to patients and families in terms of reduced distress and reduced risk of negative consequences associated with extended hospital stays. Multiple studies have reviewed the negative physical and cognitive impacts of extended hospital stay on patient wellness. (1,2,9)

Staff satisfaction with the process will be measured using a RedCap survey collecting input from Allied Health staff and Physicians involved in addressing patient capacity concerns.
Appendix 8: RedCap AH Green Team Implementation survey

Results:

Patient outcomes:

As of August 12, our team had flagged 21 cases for possible inclusion in our project.

16 cases met inclusion criteria. Comparing our project results to our baseline data the following information was found:
- Average ALC Z-Code days for all cases was reduced by 2.8 days.
  - This was the time the patient had non-medical barriers to discharge.
- Average of total ALC days reduced by 1.4 days.
  - This was the time from the patient being medically cleared to discharge.
- Patient capacity concerns were resolved using informal methods in 75% of cases in our project cohort compared to 43% of cases in our baseline sample.
- When informal methods were used to resolve capacity concerns:
  - Average ALC Z-Code days reduced by 5.2 days
  - Average total ALC days reduced by 2.8 days
- For patients progressing to full pre-capacity assessment:
  - ALC Z-Code days for our cohort increased an averaged 7.8 days
  - Average total ALC days increased by 3.8 days

Process compliance:
- 75% of pre-capacity assessments had a new OT and SW order placed when the physician determined a pre-capacity assessment was required.
- Use of the Smartphrase in the pre-capacity orders improved to 75% (3 of 4 cases) from baseline of 31%.
  - In the fourth pre-capacity case verification the patient was medically cleared and domains to assess were clearly included in the chart notes the day the pre-capacity assessment was informally requested (no order and no Smartphrase, but good communication).
- Pre-capacity worksheets were tagged by OT/SW 50% of the time.

Please see Appendix 9: Data summary for AH GT Capacity project, for full details

Our pilot results show an average reduction in total ALC days of 1.4 days for all cases. This means that patients were discharged from SHC 1.4 days sooner compared to our baseline data.

Environmental sustainability:

- Converting average bed day savings to a CO2 equivalent we estimate our new process and expedited discharge resulted in a CO2e savings of 948 kgCO2e through this pilot project.
  - 16 patients x 1.4 days x 42.32 CO2e factor
- This is equivalent to the carbon generated driving 3,660kms.
  - 948 kg CO2e saved/0.259 kgCO2e/km

On an annual basis, considering our estimate of 96 patients with a capacity concern those savings would extrapolate to:
- 5,688 kgCO2e saved.

- For context, if we convert that annual CO2e savings into "kilometers driving" the kgCO2e savings would equate to (not) driving 22,000 kms.
    - That is the CO2 equivalent of driving from Calgary, AB to Santiago, Chile, South America and back.

Economic Sustainability:

We estimate the financial savings achieved over the span of our pilot project to be $32,704 dollars in reallocated bed costs (using the CIHI cost estimates for SHC).
- 16 patients x 1.4 days x $1460/ pt bed day

On an annual basis extrapolating these savings to 96 cases would provide a savings of $196,224 of reallocated beds to acute care patients.

*Social sustainability***:**

Patients and families

An average Z-Code Day reduction of 2.8 days was found across project cohort patients.
- This means that with the new process, patients and families had certainty on where they were going to transfer almost 3 days sooner.

Average total ALC days was reduced by 1.4 days.
- This means patients in our pilot cohort on average discharged 1.4 days faster. This allowed patients to settle into their new residences sooner, resume normal routine and activities outside of the acute care environment. This reduces length of stay and may reduce risk of hospital acquired comorbidities and illnesses.

Staff

Our project demonstrated 75% of capacity concerns were resolved using informal methods, as compared to 47% in our baseline data. This is highly indicative of improved communication between the teams, leading to fewer inappropriate requests for formal pre-capacity assessment.

Qualitative assessment of our initiative will occur in the fall of 2024. Our staff will be surveyed on their experiences working within the new capacity resolution process.

Discussion:

Summary:

South Health Campus stands on 4 foundational pillars that guide how we provide patient care ensuring we focus on: patient and family centered care, wellness of staff and patients, innovation and collaborative practice. The allied health green team project focused on refining the existing process for resolving patient capacity concerns. By mapping out the original process and engaging all stakeholders we developed a new improved patient capacity process. We clarified and standardized key steps for each discipline and how they would proceed in the capacity workflow. The process developed is sustainable and provides measurable benefits to our patients, touching on all four of the SHC foundational pillars.

We recognized that this process improvement project, involving Social Work, Occupational Therapy and Physicians would require complex communication and be difficult to fully implement in the context of a 10-week green team competition. However, the potential benefit in terms of process improvement and

education around alternative ways to deliver sustainable quality improvement was worthy of the effort. We are very happy with our preliminary results and the future benefits that this process improvement will realize.

Measurement learnings:
Success of our process improvement is measured by resolving capacity concerns sooner, which will lead to fewer ALC Z-Code days, ultimately fewer total ALC days, and earlier discharge.

To determine ALC times for this project our team manually tracked patients that might meet inclusion criteria, conducted chart reviews to confirm inclusion and assess if process steps were followed. ALC days were determined from Connect Care reports run on individual patients from the cohort. This methodology is too labor intensive to be sustained, and likely missed patients that could have been included in our cohort.

The long-term solution to track patients moving through the capacity concern process will require an automated approach. A solution would be to build an EPIC-Connect Care report to find patients with both an OT and SW orders related to capacity concerns. The report would provide ALC Z-code and total ALC days. Currently, there is not an OT "reason for consult" option that covers capacity or decision-making concerns within EPIC-Connect Care. Addition of a capacity concern option to the OT reason for consult list would be required for the new report to work. The new ALC patient tracking report once built would provide a simple system to monitor process stability moving forward.

Implementation learnings:
Our project was ambitious to fit within the 10-week competition window of the green team. As evident by our project going through 3 PDSA cycles to this point, this process improvement was complex. The collaboration required to put together a revised process, then developing the teaching resources, and teaching delivery met unforeseen barriers that complicated full implementation. We would counsel future Green Teams to consider the tight timeframes of the competition when looking at potentially complex projects.

The physicians were very supportive and engaged in building the process improvements, however their work schedule, which typically sees them on service for 7 days then off service for 7 days caused some delay in communicating and moving resource development forward. This resulted in an implementation divergence as our Allied Health team was trained and ready to implement the new process steps but physicians had not yet received the resources and teaching to optimize implementation within the competition timeframes.

The PDSA cycles that this project generated have allowed us to systematically develop and improve the teaching aids, key steps and implementation analysis that will serve other sites should they wish to implement a similar capacity concern resolution process. We would advise other sites looking to implement this process or apply elements of our changes to plan for sufficient time to facilitate full interdisciplinary collaboration prior to implementation.

Results interpretation:
The Initial focus goal of the project was to reduce ALC Z-Code days to expedite patients being waitlisted for alternate dispositions. As waitlist times are variable based upon the type of facility a patient requires upon discharge and the time of year, we were not expecting a significant change in total ALC days as we moved from winter baseline data to spring-summer project data.

As we analyzed the initial data, the reduction of 1.4 total ALC days on average for our project cohort was very exciting. Spring and summer is a time when supported living beds traditionally do not open up as often slowing ALC patient movement. Seeing a reduction in length of stay after patients were medically cleared suggests an even more significant reduction in ALC days may occur during fall and winter when ALC beds open up more often.

Patient outcomes

The use of informal methods to resolve capacity concerns 75% of the time in project data vs 47% in baseline sample, is supportive of improved communication between physicians, OT's and SW's. With improved communication between the interdisciplinary team, clarity around what the patient capacity concerns were, what was needed in that moment to address the concern and exploration of risk mitigation measures to support patients without needing capacity assessment occurred more often, leading to fewer formal pre-capacity assessment requests. Improved collaboration within the healthcare team leads to improved patient care and reduced length of stay (8), and our results support these findings.

Capacity concerns requiring formal pre-capacity assessment had a longer average ALC Z-code and total ALC days in our cohort. This does not suggest that our new process is slower, but rather supports our chart review findings that a large portion of capacity concerns in the past were progressing directly to pre-capacity assessment, rather than exploring informal resolution strategies.

Triple bottom Line:

SHC is one of 16 Acute care hospitals in Alberta, all of which have patient capacity concerns that occur and impact patient flow. The potential gains of an improved and standardized capacity resolution process as developed at SHC could easily be extended to other sites with potential for similar or greater benefits.

Economic impact

The economic impact of this project is theoretical. The extrapolated savings over the course of one year of $196,000 is used for illustration purposes as that bed does not remain vacant. When an ALC patient is discharged that bed is immediately occupied by a patient with acute care needs, often waiting for a bed in the emergency department (ED). The savings is a reallocation of a limited resource (the bed) to a patient in need of that level of care and constitutes a significant reduction in waste from a QI perspective.

Not accounted for in this savings estimate, is the additional economic benefit that improved patient flow offers to both the ALC patient and the new acute care patient. In both cases they benefit from reduced risk of secondary illness and comorbidity. For the ALC patient they transfer to a residence that will provide a supportive stimulating environment and for the acute care patient they gain access to earlier therapies and treatment that may be limited in the ED.

Environmental impact

The environmental impact of Allied Health in acute care comes down to our ability to help reduce length of stay. Focusing on ALC Z-Code days creates a theoretical environmental impact, as once ALC waitlisted a patient would leave hospital, in an environment where sufficient supportive living beds were immediately available for all of our patients. The ALC coding system was in fact developed to help identify where the pinch

points in the patient care system occur. By getting a patient through the ALC Z-code barriers and waitlisted we achieve this theoretical savings of time and identify the pinch point as relating to limited placement beds. The reduction in total ALC days is a real savings of time in hospital for the ALC patient. Similarly to how we interpret the economic benefits of this process improvement, the vacated bed is quickly filled, but now the carbon intensive acute care bed has been allocated to a patient needing that level of care.

Social impact

Patients and family:

This project measures social benefit to patients by shortened length of stay. Improved patient flow towards an ultimate disposition location and shortened length of stay can offer significant social value to patients and families in terms of reduced distress and reduced risk of negative sequelae associated with extended hospital stays (1,2,8). These benefits extend beyond the ALC patient, the patient waiting in ED now moves up to the acute care bed, a patient waiting to be seen now has a bed in ED for earlier assessment. As a result, earlier care is provided, and these patients and their families will then experience reduced stress and reduced risks of delayed care.

As this process change is very much behind the scenes, patients are not aware of the changes applied, nor would they have prior experience to compare to. As a result, the primary social benefits of this process were measured quantitatively in terms of a reduction in ALC Z-code days and total ALC days. A next step in this process would be to collaborate with our Patient and Family Centered Care (PFCC) committee on ways to evaluate the impact of an improved patient flow experience qualitatively for patients and families who move through a capacity concern at SHC.

Staff:

Staff comments on this project:

"I wanted to share why this project has been so meaningful to me as a practitioner and clinical lead. As a Green Team initiative, by improving/standardizing the complicated pre-capacity assessment process, this project looks at the human aspect by providing savings in time for all disciplines involved and improves patient care as a whole."

Improved communication within the interdisciplinary team was the key focus of this project. Better communication should reduce stress and conflict that can occur while clarifying what and how capacity concerns can be resolved across all disciplines. Our quantitative measures support this as occurring; we have seen an increased frequency of capacity resolution through informal methods.

Our next step is to validate these measurements with qualitative data. We will survey our staff in the fall of 2024 to gather feedback on the new process, satisfaction with the changes, and gather ideas to further improve the process. While we intended to conduct this survey in early August, in time for inclusion within this report, the delays in fully training physicians, combined with a need for more staff to see a patient and apply the revised process required us to delay administration of the survey.

Both physicians and allied health staff frequently work at multiple sites across the zone. A standardized process to manage patient capacity concerns would lead to improved patient care; currently each site in Calgary has a different process to resolve patient capacity concerns.

Conclusions:

The work we have done on the Green Team project has created an improved process that will help our teams work through the complexities of resolving patient capacity concerns. First exploring screening methods and risk mitigation strategies to address the concerns and then, if necessary, moving on to formal pre-capacity assessment. This process improvement has helped stakeholders involved in resolving patient capacity concerns communicate better and improve patient care, showing positive outcomes across the triple bottom line. These process improvements have potential to support other sites through shared learnings and potential adoption of our process.

Patient flow and resolving ALC Z-Codes is a high priority across the province, projects that look to improve a site's ability to resolve non-medical barriers and facilitate discharges sooner have never been more important. This project work has created a system to improve our ability to resolve or avoid ALC Z-codes related to capacity concerns. Our project also creates a foundation of work and learnings to support changes to Epic-Connect Care that may better allow for capacity concern tracking.

Success of this project was driven by strong engagement from our physician group along with our occupational therapists and social workers. PDSA cycles allowed us to implement, then adjust our resources and education to support our team as we rolled out the new process. While EPIC-Connect Care does not yet offer optimal systems to capture our data, existing reports did make data extraction easier than might have been the case in our previous EMR.

Within the 10 weeks of the competition the complexity of developing a new process then teaching the new process to physicians and allied health staff for a synchronized roll out was significant. We ended up with a soft rollout, followed by more training and gradual uptake in process use. Future endeavors of this scale would benefit from longer timelines and a better developed change management plan to ensure all stakeholders were at the same stages of readiness prior to roll out.

The revised process for resolving patient capacity concerns at SHC has been adopted as our standard workflow. It will be part of ongoing new allied health staff orientation. Physician training in a group setting is planned for September 2024 and the QI leads for the physicians have already implemented the capacity concern decision tree as part of their normal workflow.

Next steps for this project will be to ensure that our staff are fully versed in application of the process. We will explore upgrades to EPIC-Connect Care to better consolidate capacity concern documentation and provide better methods for metrics tracking. Our clinical leads will continue to work with the zone capacity working groups, sharing our process improvements and learnings in hopes of seeing our work help other sites improve their patient capacity processes, while building support for upgrades to EPIC-Connect Care. Results of this project will be shared across the site, and the SHC Site Quality Council, Calgary Zone Quality Council and zone allied health quality improvement councils will be approached for potential sharing or results

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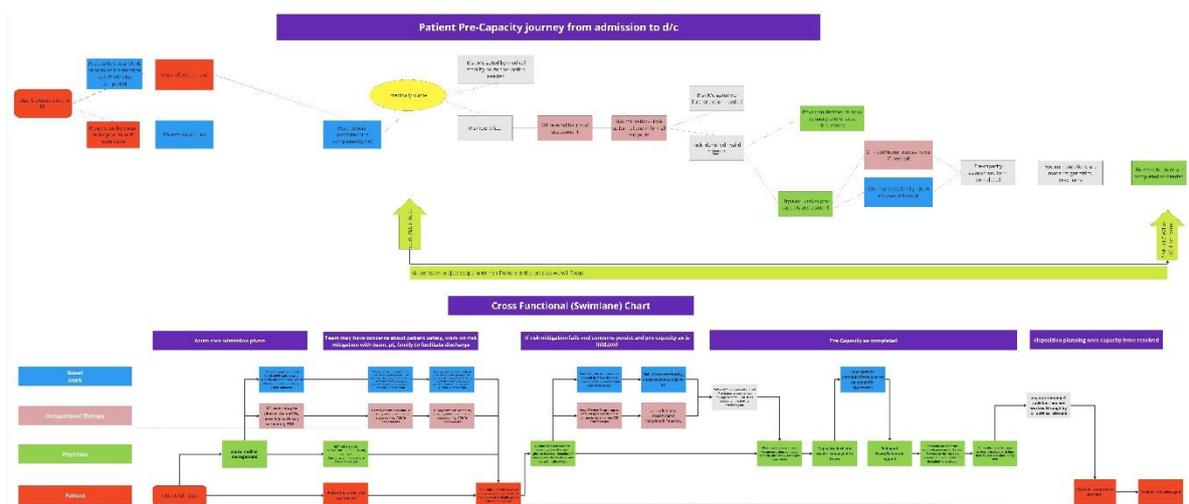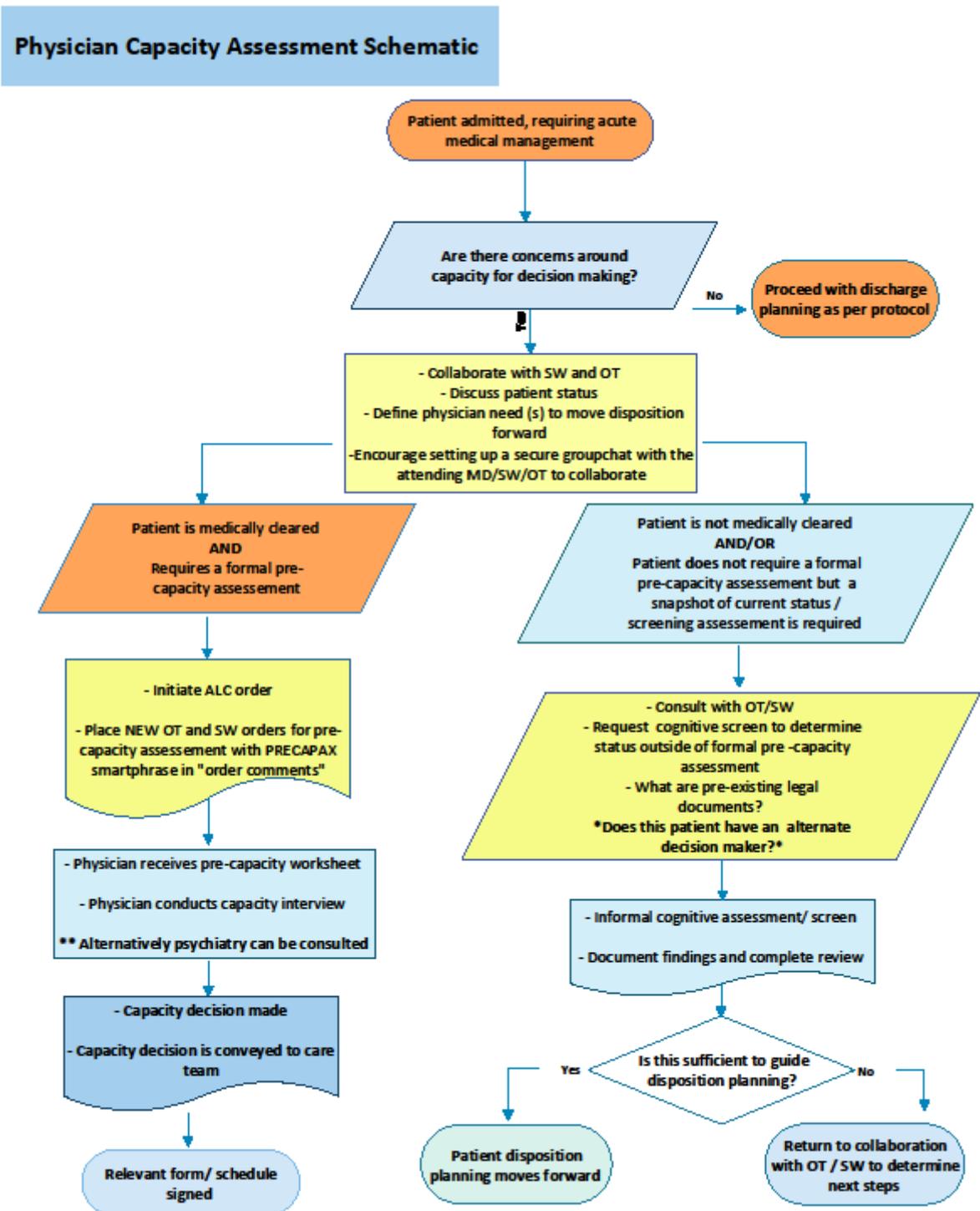
Appendices

1. Process Map with markup
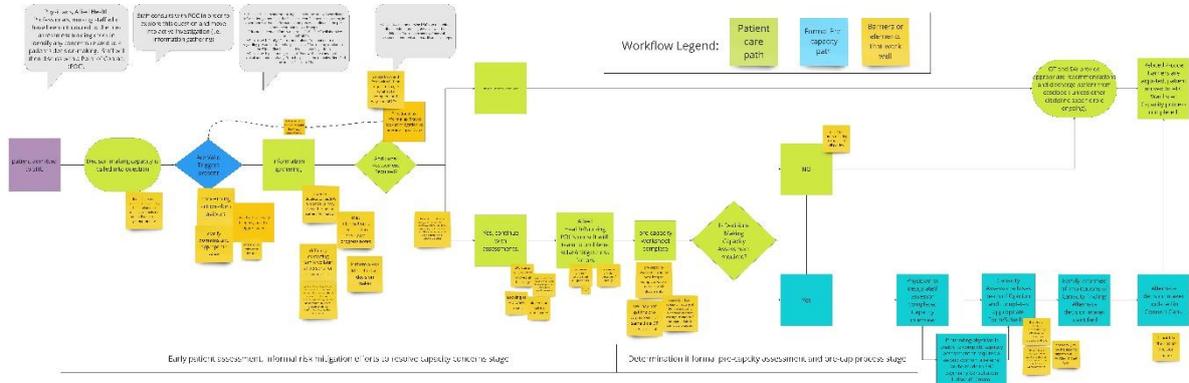
2. Future state process map and swim lane for key tasks of each discipline

3. Pre-capacity decision making tree

Physician Capacity Assessment Schematic

Patient admitted, requiring acute medical management

Are there concerns around capacity for decision making?

No → Proceed with discharge planning as per protocol

- Collaborate with SW and OT
- Discuss patient status
- Define physician need (s) to move disposition forward
-Encourage setting up a secure groupchat with the attending MD/SW/OT to collaborate

Patient is medically cleared
AND
Requires a formal pre-capacity assessment

Patient is not medically cleared
AND/OR
Patient does not require a formal pre-capacity assessment but a snapshot of current status / screening assessement is required

- Initiate ALC order

- Place NEW OT and SW orders for pre-capacity assessment with PRECAPAX smartphrase in "order comments"

- Consult with OT/SW
- Request cognitive screen to determine status outside of formal pre-capacity assessment
- What are pre-existing legal documents?
Does this patient have an alternate decision maker?

- Physician receives pre-capacity worksheet

- Physician conducts capacity interview

** Alternatively psychiatry can be consulted

- Informal cognitive assessment/ screen

- Document findings and complete review

- Capacity decision made

- Capacity decision is conveyed to care team

Is this sufficient to guide disposition planning?

Yes → Patient disposition planning moves forward

No → Return to collaboration with OT / SW to determine next steps

Relevant form/ schedule signed

4. **OT and SW pre-capacity**

SHC Allied Health

Occupational Therapy and Social Work
Consults for Pre-Capacity Assessment

Allied Health's Green Team competition project:

This Green Team project looks to improve the pre-capacity (pre-cap) assessment process. We looked at all the SHC capacity concern cases from December through February of 2024 to see what worked and what did not work. We found that in 50% of cases when capacity concerns were raised, if early communication across the team occurred and when formal pre-capacity assessment was required, the patient was medically stable and the domains to assess were clearly defined significant savings in time to resolve the capacity concern were realized. In the 50% of optimized cases, **proper and clear team communication often avoided the need for formal pre-capacity assessment.**

- Patients in our sample whose capacity concern was addressed by optimized processes demonstrated
    - 14 fewer ALC Days, or days in hospital once medically cleared.
        - total ALC days optimized process 14 vs 28 when optimal practices not followed.
    - 11 fewer days sitting medically cleared but not able to be placed or waitlisted due to non-medical barriers (days with an ALC-Z Code).
        - 8.6 days for optimized process patients vs 20 days for non-optimized process patients
    - Average LOS after being ALC waitlisted to discharge was also reduced to 6.9 days for optimized process patients from 15 days in non-optimized process patients.

What we are going to do:

By looking at the key actions that led to more efficient communication, clarity and ultimately faster resolution of a patient's capacity concerns and what tended to delay resolution of capacity concerns, our team developed an improved process patient capacity concern process. The process mapped out how and when to initiate early discussion and risk mitigation strategies along with the specific steps required by MD, OT and SW when formal pre-capacity assessments were required.

We now want to put that process into action. OT and SW and and will continue to receive learning resources, group and 1:1 teaching as cases arise to help implement the new process. Nancy and the rest of the Green Team will provide just in time teaching and in September group teaching to the hospitalist group on the new process and key steps.

We will run the pilot project to mid-August then compile our results as part of the green team competition. But that is not the end, this is the beginning of an ongoing effort to improve the pre-capacity process at SHC. We will continue to collect data and use the results of this project to refine our process, refine the teaching aids and guide requests for upgrades to connect care. The Green team Pre-Capacity project is the starting point of a larger ongoing effort to improve how capacity concerns at SHC are managed.

SHC Allied Health – May '24
Created by ST, TS, & SS, updated August '24

SHC Allied Health

Occupational Therapy and Social Work
Consults for Pre-Capacity Assessment

What will the benefits of this project be?

By standardizing the Pre-Capacity Assessment process with early and clear communication, defined orders and consistent process steps, we aim to increase the effective application of the pre-cap process from 50% to 90%.

Reducing Z-Code days associated with a patient capacity concern frequently requires OT and SW involvement (especially if formal pre-capacity assessment is required), by improving our process and communication we can impact the number of Z-Code Days and overall length of stay for our patients by avoiding the need for formal pre-capacity assessment or by optimally conducting a formal pre-capacity assessment.

Our December '23 to Feb'24 data sample tells us that we see at least 8 pre-capacity patients monthly (96+ cases a year), in our sample 50% of cases were addressed with the best practice actions that we have integrated into our new process. If we increased application of these best practices to 90% of cases by implementation of our new capacity process, we could impact approximately 38 additional patients annually. If each of those patients had reduced ALC Z-Code days and moved to the ALC waitlist 11 days sooner and subsequently discharged 8 days sooner, the potential impact would be:

- >300 bed days saved though earlier discharge
- ~12,800 kilograms (about 28,000 lbs) of CO_2 waste saved (equivalent to 3300km driving saved)
- $430,000 in bed costs redirected to acute care patients in need (Using CIHI bed cost estimates for SHC)

Every "Bed Day" allied health helps save adds up!

We acknowledge:
- *Our sample population to generate this data was small (3 months and 24 cases) but it also likely missed cases as we only looked at Units 58, 66 and 68.*
- *D/C time from ALC waitlist date is variable depending upon the availability of beds and this can have seasonal variation and cannot be impacted by this project.*
- *The LOS savings realized by this initiative may not be as large as our sample data suggests but getting a patient to the ALC waitlist by reducing ALC Z-Code days, does expedite discharge.*

SHC Allied Health – May '24
Created by ST, TS, & SS, updated August '24

5. Pre-Capacity green team competition PDSA# 1

Alberta Health Services

Plan, Do, Study, Act (PDSA) Worksheet

Project Title: South Health Campus Pre-Capacity assessment process improvement: Green Team competition

PDSA Cycle No.: 1   **Start Date:** May 27, 2024   **End Date:** June 28, 2024??

Aim/Objective: Through streamlined communication and standardized processes we will improve pre-capacity assessment times. Improved process will reduce time patients spend medically stable but with active barriers related to discharge with reduced time spent at SHC once medically stable, freeing up beds for patients with active acute care needs.

Describe the Test of Change (ToC)	Who (responsible)	When (completion date)	Where (location)
Implement standardized pre-capacity workflow with clearly defined roles for physicians, OT and SW to ensure optimal communication and efficient completion of each role in the pre-capacity process. *See attached algorithm for workflow*	Green team	28 may	SHC

Plan

List the tasks needed to set-up the ToC	Who (responsible)	When (completion date)	Where (location)
Overall workflow defined, including scope, key learnings and implementation plan. table of discipline key tasks to new process v2.docx workflow and swimlane v3.pdf	GT team	22 may	SHC
OT and SW roles and teaching aids developed https://albertahealthservices.sharepoint.com/sites/SFS-AlliedHealthSHCEducators/Shared%20Documents/Green%20Team%20competition/pre-capacity%20assessment%20improvements/learning%20resources/OT%20and%20SW%20learning%20resources/OT&SW%20bullet%20point%20workflow%20for%20desk%20reference%20cut%20out%20version.docx	Shauna and Tracy	28 May	SHC
MD role defined, collaboration with physician group on learning needs and resource development https://albertahealthservices.sharepoint.com/sites/SFS-AlliedHealthSHCEducators/Shared%20Documents/Green%20Team%20competition/pre-capacity%20assessment%20improvements/learning%20resources/physician%20resources%20for%20launch%20pdsa1/SHC_PhysicianCapacityAssessment_V5.pdf	Sean and Nancy	28 May	SHC
Metrics tracking and patient tracking put in place metrics tracker for GT competition.xlsx	Sean	24 May	SHC
Teaching to front line staff and MD's- small group, just in time and reference resources	GT team	31 may	SHC

Predict what will happen when the ToC is carried out	Measures to determine if predictions succeed
Overall staff satisfaction with streamlined process will be high	Red cap survey of satisfaction and seeking input on future changes
LOS from ALC initiate to Discharge/ALC W/L will reduce indicating less time patients spent medically stable but not yet appropriate for discharge.	ALC patient journey report will provide dates to reconcile time from capacity order to completion of ax and discharge barriers cleared as well as discharge date.

AHS Improvement Way (AIW) Template

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6. Pre-Capacity green team competition PDSA#2

Alberta Health Services

Plan, Do, Study, Act (PDSA) Worksheet

Project Title: South Health Campus Pre-Capacity assessment process improvement: Green Team competition

PDSA Cycle No.: 2   **Start Date:** June 28, 2024   **End Date:** July 24, 2024

Aim/Objective: Through streamlined communication and standardized processes we will improve our ability to resolve capacity concerns impacting patient discharge. Improved process and communication between stakeholders will reduce the frequency of formal pre-capacity assessments being ordered and reduce the time patients spend medically stable but with non-medical barriers to discharge. We will see this with reduced time spent at SHC once medically stable (total ALC days) and reduced time spend with non-medical barriers to discharge (ALC Z-Codes other than waitlisted for placement). This will reduce overall length of stay for our patients and free up beds for patients with active acute care needs, while improving staff satisfaction with the improved process.

Describe the Test of Change (ToC)	Who (responsible)	When (completion date)	Where (location)
We will apply the learnings from PDSA#1 to improve our Pre-capacity assessment process, workflow, patient findings and communications to further refine and improve out pre-capacity assessment process.	Green team	24 July	SHC

Plan

List the tasks needed to set-up the ToC	Who (responsible)	When (completion date)	Where (location)
Teaching resources finalized and just in time teaching completed for MD's and SW/OT	GT team	5 July	SHC
Clarification on patient recruitment-> who to include or add to the Green team project patient list	Sean	24 June	SHC
Initial patient data collection and review	Sean	24July	SHC
Ongoing metrics tracking	Team	24 July	SHC
Staff satisfaction survey development- deferred to PDSA#3	GT team	31 July	SHC
Staff Satisfaction survey release and response analysis- deferred to PDSA#3	Sean	15 Aug	SHC
GT Report Draft submission	Sean	5 July	SHC
Final data and discussion updates to GT Report Draft- deferred to PDSA#3	Team	Late Aug tbd	

Predict what will happen when the ToC is carried out	Measures to determine if predictions succeed
With better understanding of who to include in our project, patient finding will improve	Increased number of patients meeting our criteria added to our list for analysis.
Patient days spend with an ALC Z-Code (days from ALC initiate order until coded as ALC W/L) will reduce indicating less time patients spent medically stable but not yet appropriate for discharge.	ALC patient journey report will provide dates to reconcile time from capacity order to completion of ax and discharge barriers cleared as well as discharge date.
The volume of pre-capacity assessments ordered will reduce relative to the number of capacity concerns that our teams address as improved communication and alternative options for assessment and risk mitigation are better utilized.	Measure of formal Pre-capacity processes ordered/ pre-cap worksheets completed vs informal interventions to resolve capacity concerns. Ax via chart review of orders AND chart notes.

AHS Improvement Way (AIW) Template

SW, OT and MD will demonstrate improved utilization of the new process leading to improved patient care times as above	Staff check ins regarding process compliance, concerns and any changes needed to process maps and cues.

Do – Describe what actually happened during the ToC. Capture data/measurements, document problems and unexpected observations.

- 21 patients now added to project list, chart reviews indicate 19 of those patients had some from of capacity concern.
- 9 cases required OT&SW involvement to resolve the capacity concern and have been discharged allowing full analysis
- AH Team reports ongoing challenges with pre-cap orders including:
  - MD's not aware that the smart phrase allows selection of multiple domains from the drop-down list, so all domains requiring assessment/review are not included.
  - There is a second smart phrase about capacity that has been used by error. Nancy working to clarify.
  - Pre-cap orders placed when disposition location was not yet clear-> OT started pre-cap ax with understanding that patient was for placement and needed capacity ax to enact a PD, however family was still considering taking patient home, which would not require a capacity ax.
  - Staff still needing to cued physicians to use the smart phrase when entering a pre-cap ax
    - Staff needing to use this cue as opportunity to discuss what physician needs to move the case forward.
- Education for physician group has been a challenge with regular meetings cancelled over the summer, so training limited to emails and in the moment training by Nancy and OT/SW team as decision making cases arise.

Study – What were the results of the ToC. Analyze data/measurements, compare to predictions & summarize learnings.

- OT group has better understanding of who to add to patient list so most of the patients added are appropriate for our project- small group and 1:1 ongoing check ins ongoing-seem to be helping. Need to update teaching resources to reflect ongoing education
- The physician group appears to require some further education on use of the smart phrase (multiple selection option).
- *MD group needs ongoing education re: Requests for Moca/Other cognitive assessments to provide baseline for patient when they are still medically active or ETOH involved such that the assessments are not a valid baseline-need for*
- *ongoing discussion/education about informal assessment via functional assessments vs assessment tools that should be reserved for use under formal pre-capacity assessments, and tools best determined by OT based upon domains that need to be assessed.*
- Do We need to add to the workflow clarity on the reason pre-cap required or was the recent case where dispo was changed a coincidence and more representative of the need for those earlier discussions and education around maximizing risk mitigation strategies prior to moving towards pre-cap
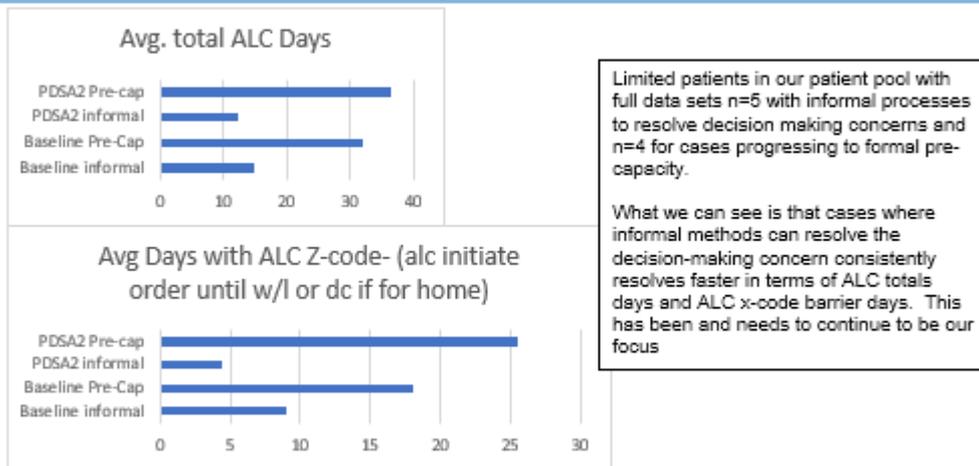
Data analysis to date: 9 patients discharged will full data sets; 10 patients that have been discharged or remain admitted but are now ALC waitlisted, so all non-medical barriers have been addressed.
- 4 formal pre-capacity assessments ordered, 6 cases where informal screening and risk mitigation was sufficient.
- Patient numbers are too low to draw many conclusions in terms of looking at patients that had informal methods to address capacity concerns vs formal pre-capacity assessment.

Median ALC days for all patients with capacity concerns
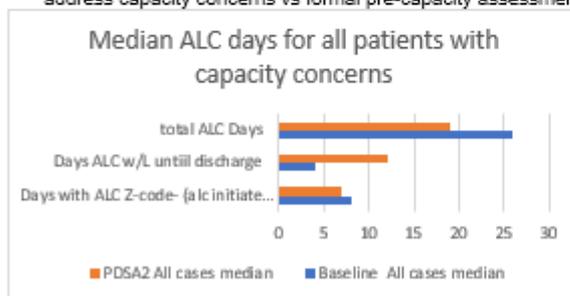
	Both median and Average analysis of total ALC days suggests that the new process is resulting in fewer total ALC days and fewer days with an ALC Z-Code.

AHS Improvement Way (AIW) Template

Avg. total ALC Days

PDSA2 Pre-cap	
PDSA2 informal	
Baseline Pre-Cap	
Baseline informal	

Avg Days with ALC Z-code- (alc initiate order until w/l or dc if for home)

PDSA2 Pre-cap	
PDSA2 informal	
Baseline Pre-Cap	
Baseline informal	

Limited patients in our patient pool with full data sets n=5 with informal processes to resolve decision making concerns and n=4 for cases progressing to formal pre-capacity.

What we can see is that cases where informal methods can resolve the decision-making concern consistently resolves faster in terms of ALC totals days and ALC x-code barrier days. This has been and needs to continue to be our focus

Act – Describe what modifications to the plan will be made for the next cycle from what you learned. Are you going to adopt, adapt or abandon?

- A need to clearly articulate what the decision-making assessment is needed for by the physician, would guide the OT to select an appropriate functional assessment, provide information on current functional abilities of the patient and help address the concern the physician has.
- Ongoing emphasis of early discussion and informal efforts to mitigate risk and resolve capacity concerns without the need for formal pre-capacity assessments.
- Ensure Physician group and just in time trainers are provided with the knowledge required to optimize application of the new process.
- Consider addition of additional cues to the physician decision tree to provide better context for informal vs formal pre-cap evaluations.

AHS Improvement Way (AIW) Template

7. Pre-Capacity green team competition PDSA#3

Alberta Health Services

Plan, Do, Study, Act (PDSA) Worksheet

Project Title: South Health Campus Pre-Capacity assessment process improvement: Green Team competition

PDSA Cycle No.: 3 **Start Date:** July 24, 2024 **End Date:** Sept 30, 2024

Aim/Objective: Through streamlined communication and standardized processes we will improve our ability to resolve capacity concerns impacting patient discharge. Improved process and communication between stakeholders will reduce the frequency of formal pre-capacity assessments being ordered and reduce the time medically stable patients spend waiting with non-medical barriers to discharge.

We will see this with reduced time spent at SHC once medically stable (total ALC days) and reduced time spend with non-medical barriers to discharge (ALC Z-Codes other than waitlisted for placement). This will reduce overall length of stay for our patients and free up beds for patients with active acute care needs, while improving staff satisfaction with the improved process.

Describe the Test of Change (ToC)	Who (responsible)	When (completion date)	Where (location)
We will apply the learnings from PDSA#2 to improve our Pre-capacity assessment process, workflow, patient finding and communications to further refine and improve out pre-capacity assessment process.	Green team	30 Sept	SHC

Plan

List the tasks needed to set-up the ToC	Who (responsible)	When (completion date)	Where (location)
Teaching resources refined and V2 provided to MD's and SW/OT	GT team	2 Aug	SHC
Key teaching points for physician group developed prior to teaching session	GT Team	7 Aug	SHC
Physician group lunch and learn/ ongoing 1:1 training	GT Team	12 Sept	SHC
Patient Data capture and reporting for GT final report	Sean	12 Aug	SHC
Finalize GT report	Team	21 Aug	SHC
Staff satisfaction survey development- survey prepared for inclusion in GT Report	GT team	16 Aug	SHC
Staff Satisfaction survey release and response analysis- ? Time to include results in GT project presentation (MD's might not be ready yet)	Sean	15 Oct	SHC
System control plan as manual chart review for cases is not sustainable	GT Team	16 Aug	SHC

Predict what will happen when the ToC is carried out	Measures to determine if predictions succeed
With refined education resources and further training to AH and physician groups, we will see improved uptake of early communication and pathway compliance	Staff and physician survey results- will not be available prior to GT presentations. Sustainable QI and how AH can impact- intro of the green team for AH.docx Green Team overview for stakeholders v1.docx OT and SW precapacity assessment referral v2.docx
LOS from ALC initiate to Discharge/ALC WL will reduce indicating less time patients spent medically stable but not yet appropriate for discharge.	ALC patient journey report will provide dates to reconcile time from capacity order to completion of ax and discharge barriers cleared as well as discharge date. ALC Legal code avg days will reduce month over month (more useful long term as initial Z-Coding has been inconsistent).
The volume of pre-capacity assessments ordered will reduce relative to the number of capacity concerns our teams address as improved communication and alternative	Measure of formal Pre-capacity orders will reduce month over month on report running.

AHS Improvement Way (AIW) Template

Alberta Health Services

options for assessment and risk mitigation are better utilized.	
Smart Phrase use for formal pre-capacity assessment requests will improve to 90%	OT orders report review when formal pre-cap requested
Need to look at IT upgrades to Connect Care or existing reporting options to improve system monitoring.	Report option: ALC days for patients that have an ALC Legal code. IT ticket for a specific report to monitor
Key points for MD education session identified for group teaching session	What are the key teaching points we want to relay to physicians about this process • Why risk mitigation and fn ax is beneficial before going pre-capacity • Clarity of OT fn ax and how different from formal pre-capacity • Talk early- what do you want, or discuss to clarify what you want to answer the question. • How to use smart phrase correctly In the order.

Do – Describe what actually happened during the ToC. Capture data/measurements, document problems and unexpected observations.

•

Study – What were the results of the ToC. Analyze data/measurements, compare to predictions & summarize learnings.

Act – Describe what modifications to the plan will be made for the next cycle from what you learned. Are you going to adopt, adapt or abandon?

AHS Improvement Way (AIW) Template

Appendix 8: AH Green Team Implementation survey skeleton for Rec-Cap

1. To help us better interpret results could you please indicate your discipline
   a. Drop down OT, SW, MD
   b. Some questions will be branched logic specific to AH

2. While working at SHC have you previously participated in patient care that involved resolving patient capacity concerns?
   a. Yes/No

3. Are you aware of the recent changes that our Green Team has been implementing to improve communication and more efficiently address patient capacity concerns as they occur.
   a. Yes/No branched logic
      i. If yes, question 4
      ii. if no education box on overview of changes, then question 4

4. As part of the roll out of the refined Pre-Capacity process we offered education in several formats, please rate how helpful you found the following education delivery methods:
   a. Matrix of delivery methods, Likert scale for choices- including N/A-I was not aware/provided of this resource
      i. Written resources
      ii. Flow diagrams
      iii. 1:1 just in time teaching
      iv. Formal group teaching
      v. Informal group discussion and Q&A's
      vi. Teaching and discussion from other members of the healthcare team

5. Have you been involved in patient care that included resolving a capacity concern since our new process was introduced in June 2024?
   a. Yes
   b. No

6. Do you feel the revised capacity resolution process is easier to understand and follow?
   a. VAS slider unable to follow process→ very clear strongly disagree to strongly agree

7. Do you feel the revised process to resolve patient capacity concerns will improve patient care compared to the old process
   a. Likert scale from doubtful (or not at all) to absolutely (completely)

8. How comfortable are you with using the revised pre-capacity process at SHC when the next patient capacity concern occurs?
   a. Slider VAS not comfortable to very comfortable

Appendix 9: Data summary for AH GT Capacity project

Decision making demographics	Baseline data	Pilot project
Number of capacity concern cases	23	16
managed informally- screening and risk mitigation	10	12
managed via formal pre-capacity process	13	4
Percent of capacity concern cases that progressed to formal Pre-Cap ax	57	25

Pre-capacity process measures	Baseline data n=13	Pilot project n=4
Por pre-cap cases # using smart phrase (pt medically stable and domains to ax clearly identified)	4	3
% using smart phrase	31	75
# Pre- cap worksheet tagged	na	2
% Pre-cap worksheet tagged	na	50

Impact on patient days	Baseline data	Pilot project	Change in Days
Avg ALC Z-Code days all patients with capacity concerns	14	11.2	-2.8
Avg ALC Z-Code days informal cases	9.2	4	-5.2
Avg ALC Z-Code days Pre-cap cases	17.7	25.5	+7.8
Avg ALC Days all cases	24.3	22.9	-1.4
Avg ALC days informal	15	12.2	-2.8
Avg ALC days pre-cap	31.5	36.3	+4.8

Critical success factors

Please select one or two of the below factors that you believe were most essential to ensure the success of your project changes.

People	Process	Resources	Context
☐ Patient involvement and/or appropriate information for patients - to raise awareness and understanding of intervention X **Staff engagement** X **MDT / Cross-department communication** ☐ Skills and capability of staff ☐ Team/service agreement that there is a problem and changes are suitable to trial (Knowledge and understanding of the issue) ☐ Support from senior organizational or system leaders	**X clear guidance / evidence / policy to support the intervention.** ☐ Incentivization of the strategy – e.g., QOF in general practice **X systematic and coordinated approach** ☐ clear, measurable targets ☐ long-term strategy for sustaining and embedding change developed in planning phase X Integrating the intervention into the natural workflow, team functions, technology systems, and incentive structures of the team/service/organization	☐ Dedicated time ☐ QI training / information resources and organization process / support ☐ Infrastructure capable of providing teams with information, data and equipment needed ☐ Research / evidence of change successfully implemented elsewhere ☐ Financial investment	☐ aims aligned with wider service, organizational or system goals. **X Links to patient benefits / clinical outcomes** **X Links to staff benefits** ☐ 'Permission' given through the organizational context, capacity and positive change culture.